

MW 24

WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: <u>FORD</u> Fraction <u>SE 1/4 SE 1/4 NW 1/4</u> 1/4 Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here ☒		Section Number <u>22</u>	Township No. T <u>26</u> S	Range Number R <u>24</u> ☐ E ☒ W	
2 WATER WELL OWNER: <u>KOCH NITROGEN</u> RR#, Street Address, Box #: <u>11559 Hwy 50</u> City, State, ZIP Code : <u>DODGE CITY, KS 67801</u>		Global Positioning System (GPS) information: Latitude: (in decimal degrees) Longitude: (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			
3 LOCATE WELL WITH AN "X" IN SECTION BOX: N W NW NE E SW X SE S [-----] 1 mile [-----]	4 DEPTH OF COMPLETED WELL <u>161'</u> ft. Depth(s) Groundwater Encountered (1)..... <u>157'</u> ft. (2)..... ft. (3)..... ft. WELL'S STATIC WATER LEVEL..... ft. below land surface measured on mo/day/yr..... Pump test data: Well water was..... ft. after..... hours pumping..... gpm EST. YIELD..... gpm. Well water was..... ft. after..... hours pumping..... gpm Bore Hole Diameter <u>6"</u> in. to <u>161'</u> 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 <u>2"</u> in. to <u>156'</u> ft., Diameter in. to ft., Diameter in. to ft. Casing height above land surface..... <u>36"</u> in., Weight <u>0.682</u> lbs./ft., Wall thickness or gauge No. <u>SC440</u> 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 <u>161'</u> ft. to <u>156'</u> ft., From ft. to ft. From ft. to ft., From ft. to ft. GRAVEL PACK INTERVALS: From <u>161'</u> ft. to <u>154'</u> 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 <u>151'</u> ft. to <u>0'</u> 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 <u>CHEMICAL PLANT</u> Direction from well <u>SOUTH OF PLANT</u> Distance from well <u>2,100'</u>					
FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	5	Topsoil	103	115	Silt
5	44	Clay	115	126	Silt w/ clay
44	55	caliche	126	143	sandy silt
55	59	clay w/ silt	143	155	silt stone
59	75	Sandy silt w/ caliche	155	158	sandy silt
75	77	clay w/ silt	158	161	Silt w/ clay
77	95	sandy silt	161	165	Silt stone
95	97	Silt w/ clay	165	190	Shale
97	101	silt			
101	103	clay			
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) <u>04/16/2011</u> and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. <u>193</u> This Water Well Record was completed on (mo/day/year) <u>09/19/2011</u> under the business name of <u>Cahoy Pump Service, Inc.</u> by (signature) <u>Dan Cahoy</u>					
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

Original Returned to Sender
for Correction Date: 9-26-11

Borehole No. MW-24

Borehole Log

Project No.: TXR0118	Location: Dodge City, KS
Client: Koch Nitrogen Company	Coordinates: Not Yet Surveyed
Logged By: Alex Rivera	Borehole Diameter: 6 inch
Drilling Company: Major Drilling	Site Datum:
Drilling Method: Rotasonic	Ground Surface Elevation: Not Yet Surveyed
Well Material: Not Applicable	Top PVC Casing Elevation:
	Completion Date: 26 June 2011

Depth (ft)	Water Level (ft)	Stratigraphy	Lithologic Description	Geologic Samples				Well Configuration	Comments
				Unified Soil Classification	Recovery (%)	Blowcount	PID (ppmv)		
			Topsoil, brown, dry, loose						
5			Clay, 10-20% fine gravel caliche, dark brown, dry, firm, stiff, low to medium plasticity	CL	75				
10									
15			Clay, dark brown, moist, firm, medium to high plasticity	CH					
20			Trace caliche, few silts, dry						
25			Medium to high plasticity		90				
30			Clay, 20% fine gravel caliche, brown, dry, stiff Trace caliche	CL					
35			Dry, firm, medium plasticity						
40			Some silts, low plasticity 20% caliche						
45			Clay with silt, 40% silts, trace fine gravel caliche, stiff, low plasticity	CL ML					
			Caliche with clay, pale brown to white, dry, hard		100				
			40% very fine sands						

Borehole No. MW-24

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Borehole Log

Project No.:	TXR0118	Location:	Dodge City, KS
Client:	Koch Nitrogen Company	Coordinates:	Not Yet Surveyed
Logged By:	Alex Rivera	Borehole Diameter:	6 inch
Drilling Company:	Major Drilling	Site Datum:	
Drilling Method:	Rotosonic	Ground Surface Elevation:	Not Yet Surveyed
Well Material:	Not Applicable	Top PVC Casing Elevation:	
		Completion Date:	26 June 2011

Depth (ft)	Water Level (ft)	Stratigraphy	Lithologic Description	Geologic Samples				Well Configuration	Comments
				Unified Soil Classification	Recovery (%)	Blowcount	PID (ppmv)		
55			Clay with silt, trace caliche, light brown, moist to dry, firm	CL					Moderate rig chatter due to hard drilling from 45-55 ft bgs; fluid return observed
60			Sandy silt with caliche, pale brown dry, stiff						
65				ML	100				
70			Trace caliche						
75			Clay with silt, trace very fine sands, brown, moist, soft, low to medium plasticity	CL					
			Sandy silt, light brown, dry, hard, moderate cementation	ML					
80									
85				ML	100				
90			Medium brown to light brown, stiff						
95			Light brown						
			Silt with clay, brown, firm, dry	MH					
			Silt, some clays, greenish gray, dry, stiff	ML					

Borehole No. MW-24

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Borehole Log

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Drilling Company:	Major Drilling	Site Datum:	
Drilling Method:	Rotosonic	Ground Surface Elevation:	Not Yet Surveyed
Well Material:	Not Applicable	Top PVC Casing Elevation:	
		Completion Date:	26 June 2011

Depth (ft)	Water Level (ft)	Stratigraphy	Lithologic Description	Geologic Samples					Well Configuration	Comments
				Unified Soil Classification	Recovery (%)	Blowcount	PID (ppmv)	Soil Sample ID		
105			Clay, trace silts, pale brown, dry, firm, low plasticity	CL	100					-Drilling fluid return observed from 95-115 ft bgs
110			Silt, trace clays, trace fine gravel caliche, pale brown to greenish gray, dry, firm 30% caliche, some fine sands, hard.	ML						
115			Some sands, pale brown to white, hard, moderate cementation		100					
120			Silt with clay, some very fine sands, pale brown to gray brown, dry, firm	ML						
125			Few sands, light brown to brown, dry, stiff Medium brown to grayish brown, moist to dry, firm	ML						
130			Sandy silt, brown, moist, soft, very fine sands		100					
135			Dry, firm							
140			Trace caliche Some clays, grayish brown, moist to dry, soft	ML						
145			Trace caliche, dry, firm		100					-Moderate rig chatter due to hard drilling from 145-155 ft bg
			Siltstone, 40% very fine sands, pale brown, dry, hard							

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Drilling Method: Rotosonic	Ground Surface Elevation: Not Yet Surveyed
Well Material: Not Applicable	Top PVC Casing Elevation:
	Completion Date: 26 June 2011

Depth (ft)	Water Level (ft)	Stratigraphy	Lithologic Description	Geologic Samples				Well Configuration	Comments
				Unified Soil Classification	Recovery (%)	Blowcount	PID (ppmv)		
155			Sandy silt, brown, moist, soft, very fine sands	ML	100				Bentonite pellet seal
160			Silt with clay, trace fine gravel caliche, brown, moist to wet, soft	MH					5-ft well screen from 155.5 - 160.5 ft bgs; silica sand filter pack
			Siltstone, some very fine sands, pale brown, dry, stiff						
165			Shale, trace yellow and dark gray fine gravel, dark red, dry, stiff to hard						
170					50				
175									
180					50				Bentonite pellet backfill
185									
190			Borehole depth 190.0 ft		75				- Hard drilling; significant rig chatter from 165-190 ft bgs
195									