

MW 01

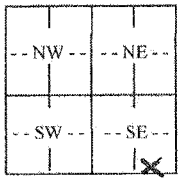
WATER WELL RECORD

Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: Fraction SW 1/4 SW 1/4 SW 1/4 1/4 Section Number 15 Township No. T 26 S Range Number R 24  E  W  
 County: FORD  
 Street/Rural Address of Well Location; if unknown, distance & direction from nearest town or intersection: If at owner's address, check here  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

2 WATER WELL OWNER: KUCH NITROGEN  
 RR#, Street Address, Box #: 11559 Hwy 30  
 City, State, ZIP Code: DODGE CITY KS 67801

3 LOCATE WELL WITH AN "X" IN SECTION BOX:  
  
 4 DEPTH OF COMPLETED WELL 122' ft.  
 Depth(s) Groundwater Encountered (1) 96' 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 6" in. to 122' 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 2" in. to 11.7" ft., Diameter ..... in. to ..... ft., Diameter ..... in. to ..... ft.  
 Casing height above land surface 36" in., Weight 0.682 lbs./ft., Wall thickness or gauge No. SCM 40  
 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 122' ft. to 117' ft., From ..... ft. to ..... ft.  
 From ..... ft. to ..... ft., From ..... ft. to ..... ft.  
 GRAVEL PACK INTERVALS: From 122' ft. to 114' 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 112' ft. to 0' 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  Sepage pit  Feedyard  Fertilizer storage  Oil well/gas well  
 Direction from well NORTH OF PLANT Distance from well 800' CHEMICAL PLANT

FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	2	Topsoil	62	63	clay
2	13	Fat clay	63	65	clay
13	14	Caliche	65	81	clay w/ caliche
14	40	Fat clay	81	82	caliche
40	53	Caliche	82	89	clay w/ sand
53	54	clay w/ sand	89	95	caliche
54	55	caliche w/ sand	95	102	sand w/ silt
55	59	clay w/ caliche	102	122	silt w/ sand
59	61	caliche	122	124	clay
61	62	clay	124	127	silt w/ sand

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) 5/18/11 and this record is true to the best of my knowledge and belief.  
 Kansas Water Well Contractor's License No. 793 This Water Well Record was completed on (mo/day/year) 9/9/11  
 under the business name of Cohen Pump Service by (signature) J. Arick

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>.

Borehole No. MW-01

Borehole Log

<b>Project No.:</b>	TXR0118	<b>Location:</b>	Dodge City, KS
<b>Client:</b>	Koch Nitrogen Company	<b>Coordinates:</b>	Not Yet Surveyed
<b>Logged By:</b>	Alex Rivera	<b>Borehole Diameter:</b>	6 inch
<b>Drilling Company:</b>	Major Drilling	<b>Site Datum:</b>	
<b>Drilling Method:</b>	Rotosonic	<b>Ground Surface Elevation:</b>	Not Yet Surveyed
<b>Well Material:</b>	Not Applicable	<b>Top PVC Casing Elevation:</b>	
		<b>Completion Date:</b>	18 May 2011

Depth (ft)	Water Level (ft)	Stratigraphy	Lithologic Description	Geologic Samples					Well Configuration	Comments
				Unified Soil Classification	Recovery (%)	Blowcount	PID (ppmv)	Soil Sample ID		
0-5			Topsoil, medium brown, dry							
5-10			Fat clay, dark to medium brown, moist, soft, medium plasticity Stiff, low plasticity, 40% caliche 10% caliche	CL	100					← Grout (0-112 ft bgs)
10-15					75					
15-20			Caliche, white, moist, 20% clay Fat clay, dark to medium brown, moist, stiff, low plasticity, 15% caliche Medium plasticity Medium brown, low plasticity, 40% caliche 20% caliche 5% caliche							
20-25					100					
25-30			Some sands, few silts	CL						
30-35					100					
35-40			Sandy clay, medium brown, low plasticity, very stiff							
40-45			40% caliche Caliche, some fine sands, white, moist, firm							
45-50			40% medium brown fine sands some pockets of medium brown sandy clay							
50-55			40% medium brown fine sand trace fine sands							
55-60			Clay with sand, medium brown, moist, low plasticity, soft	CL						
60-65			Caliche with sand, white, moist, hard Clay with caliche, light brown, moist, firm Clay, some fine sand, medium plasticity Caliche, some fine sands, white, dry, very hard	CL						
65-70			Clay, medium brown, dry, low plasticity, stiff Caliche, white, dry, very hard	CL	100					-Moderate rig chatter 55-65 ft bgs
70-75			Clay with caliche, medium brown, moist, firm, 60% clay-40% caliche	CL						
75-80			20% caliche							

Report: MASTER (TR0118); File: C:\USERS\ARIVERA\DESKTOP\KANSAS\KCOCH.GPJ - 7/19/2011

Borehole No. MW-01

Borehole Log

<b>Project No.:</b> TXR0118	<b>Location:</b> Dodge City, KS
<b>Client:</b> Koch Nitrogen Company	<b>Coordinates:</b> Not Yet Surveyed
<b>Logged By:</b> Alex Rivera	<b>Borehole Diameter:</b> 6 inch
<b>Drilling Company:</b> Major Drilling	<b>Site Datum:</b>
<b>Drilling Method:</b> Rotosonic	<b>Ground Surface Elevation:</b> Not Yet Surveyed
<b>Well Material:</b> Not Applicable	<b>Top PVC Casing Elevation:</b>
	<b>Completion Date:</b> 18 May 2011

Depth (ft)	Water Level (ft)	Stratigraphy	Lithologic Description	Geologic Samples				Well Configuration	Comments
				Unified Soil Classification	Recovery (%)	Blowcount	PID (ppmv)		
80			Clay with sand, trace silts, medium brown, moist, firm	CL	100				-Slight rig chatter 74-75 ft bgs
			30% caliche						
85			Caliche, white, dry, hard						
			Clay with sand, trace silts, medium brown, dry, firm	CL					
			Trace silts, light red-brown, moist, medium plasticity, soft						
90			Caliche, white, dry, hard		100				
95									
100			Sand with silt, trace clays, tan, moist	SP SM					
105			Silt with sand, trace clays, tan, moist, very fine sands		100				
110				ML					
115			Red-brown						← Bentonite pellet seal
120									← 5-ft well screen from 117-122 ft bgs; silica sand filter pack
125			Pockets of light green clays						
			Clay, trace gravel (yellow), very light green, moist, medium plasticity, soft	CL	100				
			Silt with sand, red-brown, dry	ML					
			Red, moist, trace light gray clays						
130			Some light gray clays						
			Clay, light gray, moist, medium plasticity, soft	CL					← Bentonite pellet backfill
			Very stiff						
135			Poorly graded sand, yellow, moist, very fine sands	SP					
			Shale, very dark gray, dry, very hard						
			Borehole depth 135.0 ft						- Moderate rig chatter from 133-135
140									
145									

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