

MW 03

WATER WELL RECORD

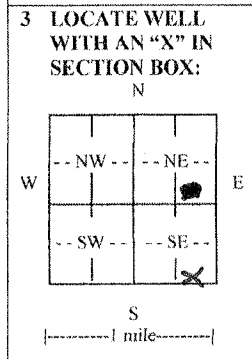
Form WWC-5

Division of Water Resources App. No.

1 LOCATION OF WATER WELL: County: FORD Fraction SW 1/4 SW 1/4 SW 1/4 Section Number 15 Township No. T 26 S Range Number R 24 E

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: Longitude: Elevation: Datum: 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: RR#, Street Address, Box #: KOCH NITROGEN 11559 Hwy 50 City, State, ZIP Code: DODGE CITY, KS 67801



3 LOCATE WELL WITH AN 'X' IN SECTION BOX: 4 DEPTH OF COMPLETED WELL 110' ft. Depth(s) Groundwater Encountered (1) 108' 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 110' 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 105' 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. 21.40. TYPE OF SCREEN OR PERFORATION MATERIAL: Steel, Stainless Steel, PVC, 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 110' ft. to 105' ft., From ft. to ft., From ft. to ft. GRAVEL PACK INTERVALS: From 110' ft. to 103' ft., From ft. to ft., From ft. to ft.

6 GROUT MATERIAL: Neat cement, Cement grout, Bentonite, Other. Grout Intervals: From 100' ft. to 0' ft., From ft. to 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 OF PLANT Distance from well 500'

Table with columns: FROM, TO, LITHOLOGIC LOG, FROM, TO, LITHO. LOG (cont.) or PLUGGING INTERVALS. Rows include Topsoil, Clay, Caliche, Clay w/ sand & caliche, Sand w/ clay & some caliche, Caliche, Sand, Silty sand, Sand, Silty sand w/ 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) 05/22/11 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 193. This Water Well Record was completed on (mo/day/year) 09/19/11 under the business name of Canoy Pump Service, Inc. by (signature) Dan Ay.

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.

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

Borehole No. MW-03

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>	22 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, brown, moist							
5-10			Clay, brown, moist, stiff, medium plasticity		100					← Grout (0-100 ft bgs)
10-15			15% caliche	CL						
15-25			Caliche clay, 50% caliche, 50% clay		75					
25-30			10% caliche, some fine sands							
30-35			Caliche, white, 20% brown clays, some fine sands, dry, firm							
35-40			Trace clays, few sands							
40-45			Clay with sand, 10% caliche, medium brown, moist, medium plasticity, soft, trace silts	CL						
45-50			Caliche, some fine sands, white, moist, firm							
50-55			Clay, 30% caliche, pale brown, moist, soft, medium plasticity	CL	100					
55-60			Poorly graded sand with silt and clay, medium brown, moist, 10% caliche	SP SM						
60-65			Clay with sand, 30% fine sands, medium brown, moist, low plasticity	CL						
65-70			Poorly graded sand with clay, 30% fine sands, red-brown, moist, trace silts	SP SC						
70-75			Caliche and clay, 50% caliche, 50% clay, pale brown, moist	CL						
75-80			Poorly graded sand with clay, 30% fine sands, 5% caliche, red-brown, moist, trace silts	SP SC						
80-85			Caliche and clay, 50% caliche, 50% clay, pale brown, moist	CL						
85-90			Poorly graded sand with clay, 20% fine sands, 5% caliche, red-brown, moist to dry	SP SC	100					
90-95			Caliche, some fine sands, white, moist, firm, trace pale brown clays							
95-100			Poorly graded sand, red-brown, moist to dry, fine sands	SP						
100-105			Caliche, some fine sands, white, moist, firm, trace pale brown clays							

Report: MASTER (TR0199); File: C:\USERS\ARIVERA\DESKTOP\KANSAS\KCOCH.GPJ; 7/19/2011

-Moderate rig chatter 55-65 ft bgs

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<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>	22 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, 30% very fine sands, pale brown, moist, low plasticity, stiff	CL					
85			Caliche, white, dry, hard, 30% pale brown clays		100				
90			Poorly graded sand, 30% clays, trace silts, medium brown, moist to dry, very fine sands, slightly cementitious	SP					- Intermittent chatter from 80-95 ft bgs
95			Silty sand, brown, moist, trace clays						
100			Wet	SM					
105			Poorly graded sand, 20% silts, brown, saturated, very fine sands	SP	100				← Bentonite pellet seal ← Hard drilling at 102 and 112 ft bgs
110			Silty sand, brown, wet, very fine sands	SM					← 5-ft well screen from 105-110 ft bgs; silica sand filter pack
115			Silt with clay, brown, moist	ML					
120			Clay, pale brown, moist to dry, trace caliche	CL					
125			Shale and clay, light gray, moist to dry, firm, unconsolidated						
			Orange to light gray, some clays						
			Light gray, dry, hard, consolidated		100				← Bentonite pellet backfill
			Red, dry, firm						
			Light gray, dry, hard, consolidated						
			Orange to pale yellow, weathered, moist						
			Sandstone, red, saturated						
			Borehole depth 125.0 ft						- Significant chatter from 121-123 ft bgs

Report: MASTER (TR0196); File: C:\USERS\ARIVER\DESKTOP\KANSAS\KCOCH.GPJ; 7/19/2011