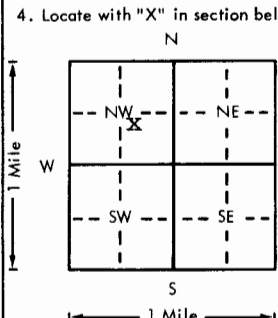


USE TYPEWRITER OR BALL POINT PEN-PRESS FIRMLY, PRINT CLEARLY.

WATER WELL RECORD
KSA 82a-1201-1215

Kansas Department of Health and Environment-Division of Environment
(Water well Contractors)
Topeka, Kansas 66620

*Jo Bw 8
11-1-79*

1. Location of well:		County Wichita	Fraction NW 1/4 SE 1/4 NW 1/4	Section number 24	Township number T 18 S R 37 E/W	Range number 37
2. Distance and direction from nearest town or city: Leoti go 1/4 south. Street address of well location if in city:			3. Owner of well: City of Leoti R.R. or street: City, state, zip code: Leoti, Kansas 67861			
4. Locate with "X" in section below: 		Sketch map: Approximately 200' ESE of city water tower which is located near the SW corner of the city park. The SW corner of the park is 1091' west of the NE corner of the S 1/2 of the NW 1/4 of Sec. 24, T18S, R37W, Wichita County, Kansas.		6. Bore hole dia. 5 in. Completion date _____ Well depth 1050 ft. 4-28-78		
5. Type and color of material		From		To		
Top soil		0		4		
Brown clay		4		12		
Tan clay		12		18		
Fine sandy clay		18		30		
Caliche, hard		30		48		
Brown clay, sandy, tight		48		102		
Fine to coarse sand and medium gravel with clay streaks		102		156		
Tan sandy clay		156		170		
Shale, gray-black		170		282		
Chalky limestone and chalky shale, dark gray		282		400		
Hard black shale, used pulldown		400		470		
Sandy shale		470		540		
Shale		540		662		
Sandy shale		662		756		
Sandy shale, loose		756		794		
Sandy shale with sandstone streaks		794		841		
Sandstone and sandy shale		841		859		
Sandy shale, limy to hard		859		882		
Sandstone and sandy shale, hard		882		970		
Black shale		970		1006		
Sandstone, medium, loose		1006		1040		
Blue gray shale		1040		1150		
Black shale, hard		1150		1180		
(Use a second sheet if needed)						
18. Elevation:		19. Remarks: <u>Casing Schedule</u>		20. Water well contractor's certification:		
Topography:		0 - 820 Casing		This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.		
Hill		820 - 860 Screen		<u>Layne-Western Co., Inc.</u> 102		
Slope		860 - 930 Casing		Business name License No.		
X Upland		930 - 970 Screen		Address <u>Garden City, Ks 67846</u>		
Valley		970 - 1010 Casing		Signed <u>[Signature]</u> Date <u>Oct 30</u>		
		1010 - 1050 Screen		Authorized representative		

7. Cable tool Rotary Driven Dug
 Hollow rod Jetted Bored Reverse rotary

8. Use: Domestic Public supply Industry
 Irrigation Air conditioning Stock
 Lawn Oil field water Other

9. Casing: Material PVC Height: Above or below
Threaded _____ Welded _____ Surface 12 in.
RMP _____ PVC Weight _____ lbs./ft.
Dia. 1 1/2 in. to 820 ft. depth Wall Thickness: inches or
Dia. _____ in. to _____ ft. depth; gage No. Schedule 40

10. Screen: Manufacturer's name _____
Field cut
Type Saw cut Dia. 1 1/2
Slot/gauze 1/16 Length 120
Set between See #19 ft. and _____ ft.
_____ ft. and _____ ft.
Gravel pack? Size range of material 1.9 mm

11. Static water level: _____ mo./day/yr.
360 ft. below land surface Date 5-4-78

12. Pumping level below land surfaces: Not Tested
_____ ft. after _____ hrs. pumping _____ g.p.m.
_____ ft. after _____ hrs. pumping _____ g.p.m.
Estimated maximum yield _____ g.p.m.

13. Water sample submitted: _____ mo./day/yr.
 Yes No Date _____

14. Well head completion:
 Pitless adapter 12 Inches above grade

15. Well grouted?
With: Neat cement Bentonite Concrete
Depth: From 0 ft. to 700 ft.

16. Nearest source of possible contamination: Unknown
ft. _____ Direction _____ Type _____
Well disinfected upon completion? Yes No

17. Pump: Not installed
Manufacturer's name _____
Model number _____ HP _____ Volts _____
Length of drop pipe _____ ft. capacity _____ g.p.m.
Type:
 Submersible Turbine
 Jet Reciprocating
 Centrifugal Other

18 37W 24
 T
 R
 S
 Sec
 1/4 1/4 N/W

TEST HOLE REPORT

Layne-Western Company, Inc.



WATER SUPPLY SERVICES SINCE 1924

TEST DRILLING • WATER WELLS • PUMPS
P. O. Box 686, W. Hwy. 50
Garden City, Kansas 67846

RECEIVED
DEC 20 1978
DIVISION OF ENVIRONMENTAL
ENGINEERING

Contract Name City of Leoti
Job No. K-867 Date 4-28-78
City Leoti State Kansas

TEST HOLE
No. 1-78

Driller Kent and Keeny

Location of Test Hole Approximately 200'
ESE of city water tower
which is located near the SW corner of
the city park. The SW corner of the
park is 109 1/2 W. of the NE corner of
the S 1/2 of the
1/4 NW 1/4 Sec. 24 of T. 18S
R. 37W, Wichita Co., Kansas

Elevation of Test Hole _____
Static Water Level 360'
Measured 4 May 78 Hours After Completion

From	To	Description of Strata	Water Bearin
0	4	Top soil	
4	12	Brown clay	
12	18	Tan clay	
18	30	Fine sandy clay	
30	48	Caliche, hard	
48	102	Brown clay, sandy, tight	
102	156	Fine to coarse sand and medium gravel with clay streaks	
156	170	Tan sandy clay	
170	282	Shale, gray-black	
282	400	Chalky limestone and chalky shale, dark gray	
400	470	Hard black shale, used pulldown	
470	540	Sandy shale	
540	662	Shale	
662	756	Sandy shale	
756	794	Sandy shale, loose	
794	841	Sandy shale with sandstone streaks	
841	859	Sandstone and sandy shale	
859	882	Sandy shale, limey to hard	
882	970	Sandstone and sandy shale, hard	
970	1006	Black shale	

Wichita Co. T18S R37W Sec 24 NW 1/4 SE 1/4 NW 1/4

Remarks:

TEST HOLE REPORT

Layne-Western Company, Inc.



RECEIVED

DEC 29 1978

WATER SUPPLY SERVICES SINCE 1924

TEST DRILLING • WATER WELLS • PUMPS
P. O. Box 686, W. Hwy. 50
Garden City, Kansas 67846

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES

Contract Name City of Leoti

Job No. K-867 Date 4-28-78

City Leoti State Kansas

TEST HOLE
No. 1-78

Driller Kent and Keeny

Location of Test Hole Approximately 200' ESE of city water tower which is located near the SW corner of the city park. The SW corner of the park is 1091' W. of the NE corner of the S₂ of the

Elevation of Test Hole _____

Static Water Level 360'

Measured 4 May 78 Hours After Completion

1/4 NW 1/4 Sec. 24 of T 18S R 37W, Wichita Co., Kansas

From	To	Description of Strata	Water Bearing
1006	1040	Sandstone, medium, loose	
1040	1150	Blue gray shale	
1150	1180	Black shale, hard	

Wichita Co. T18S R37W Sec 24 NW 1/4 SE 1/4 NW 1/4

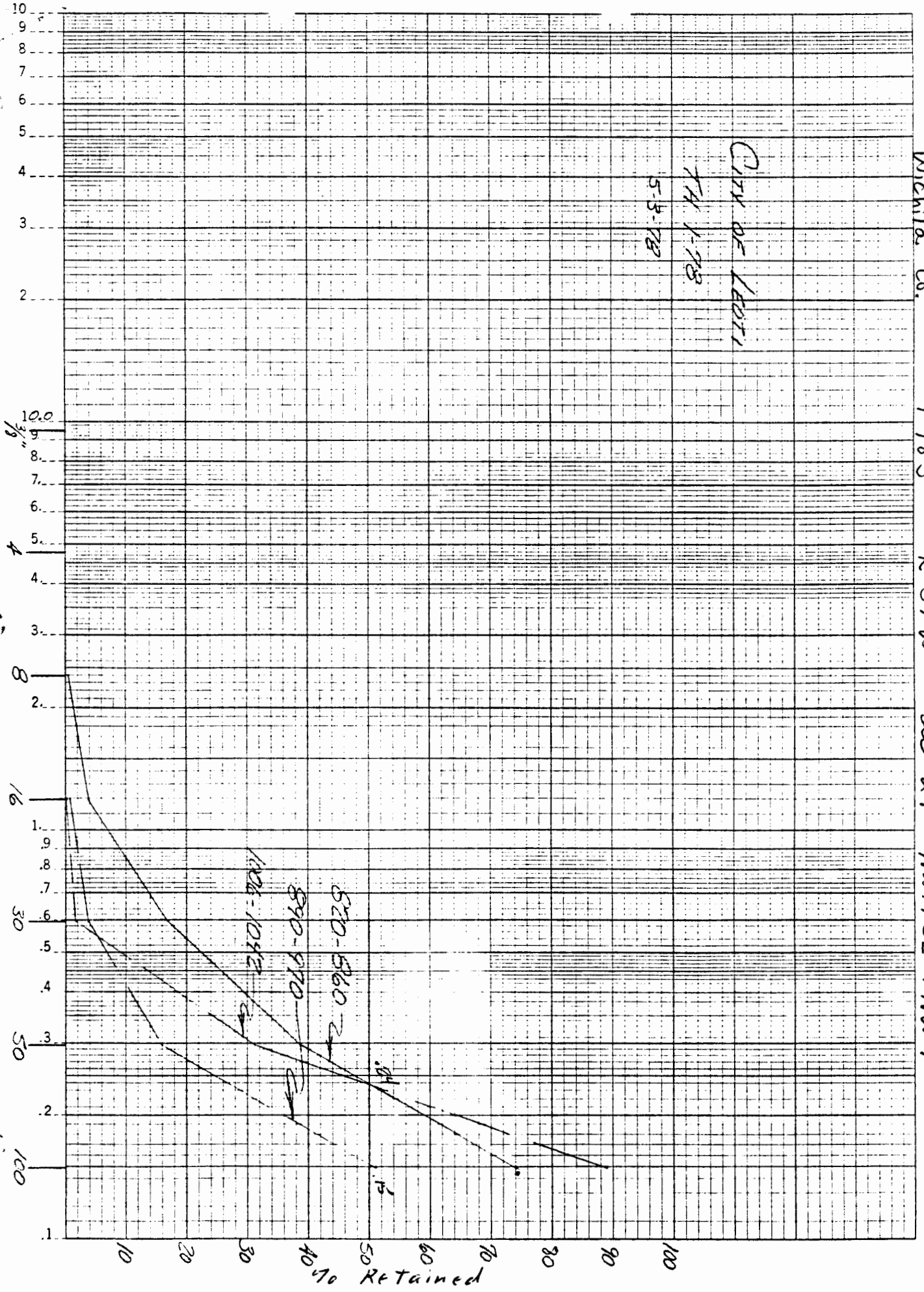
Remarks: Pumped water sample with perforations from 820' to 860', 930' to 970' and 1010' to 1050'. (58 hours pumping.) 800 lbs Bentonite in gravel from 700' to 10'.

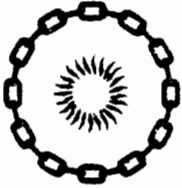
Wichita Co. T18S R 37W Sec 24 NW 1/4 SE 1/4 NW 1/4

CITY OF LEOTI
MAY 1 1978
5-5-78

46 5493

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ANALYTICAL & RESEARCH CHEMISTS & BIOLOGISTS

A DIVISION OF WILSON & COMPANY, ENGINEERS & ARCHITECTS

528 NORTH NINTH • SALINA, KANSAS 67401 • LAB: (913) 825-7186 OFFICE: (913) 827-0433

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LABORATORY REPORT

DIVISION OF ENVIRONMENT
OF KANSAS

Client: Layne Western Co.
P. O. Box 686
Garden City, Kansas 67846

File No.: 78-9501
Date: 12 May 1978
Date Received: 5 May 1978
Lab. No.: A7805-74
Material: Well Water
City of Leoti, Kansas
TH 1-77

Submitted by: Above
Received by: MLK
Analyst: CAC, BKS, BTF

Wichita Co.
T 185
R 37 W
Sec 24
NW 1/4 SE 1/4 NW 1/4

Parameter

Specific conductance, μ mhos/cm	1,790
Phenolphthalein Alkalinity, mg/l as CaCO ₃	12
Total Alkalinity, mg/l as CaCO ₃	311
Carbonate Alkalinity, mg/l as CaCO ₃	24
Bicarbonate Alkalinity, mg/l as CaCO ₃	287
Carbonate, mg/l as CO ₃	14
Bicarbonate, mg/l as HCO ₃	350
Hydroxide, mg/l as OH	0
Carbon Dioxide, mg/l as CO ₂	2.5
Chloride, mg/l as Cl	63
Sulfate, mg/l as SO ₄	500
Fluoride, mg/l as F	3.0
Phosphate, mg/l as PO ₄	0.09
pH	8.45
Total Hardness, mg/l as CaCO ₃	24
Calcium Hardness, mg/l as CaCO ₃	13
Magnesium Hardness, mg/l as CaCO ₃	10.7

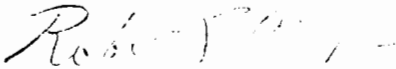


City of Leoti, Ks
TH 1-77
Page 2

Calcium, mg/l	5.3
Magnesium, mg/l	2.6
Sodium, mg/l	365
Potassium, mg/l	5.8
Iron, mg/l	0.17
Manganese, mg/l	<0.1
Copper, mg/l	<0.1
Silica, mg/l as SiO ₂	13
Nitrate as NO ₃	0.22
pH _s	8.41
Stability Index	8.37
Saturation Index	0.04

All analyses were performed on samples as received and in accordance with accepted methods of the Water Quality Office, Environmental Protection Agency.

WILSON LABORATORIES



Robert L. Meyer
Chief Chemist

Wichita Co. T185 R370 See 24 NW 1/4 SE 1/4 NW 1/4