## KOLAR Document ID: 1676975

# WATER WELL RECORD (WWC-5)

KOLAR DOC ID

Correction

Original Record

WELL ID\_\_\_\_\_ Change in Well Use

#### LOCATION OF WATER WELL

Latitude	Longitude	Section	Township	Range	E W	Fraction	1⁄4	1⁄4	1⁄4
Datum	Elevation	County							

#### WATER WELL OWNER

Name	
Business	
Address	
Well location	
at owner's address	
CONCERNICE	

#### CONSTRUCTION

Borehole interval:	Borehole diameter:		
fromtoft.	in.		
fromtoft.	in.		
Casing height above land su	rface:in.		
If casing height is less th has a variance been app	an 12 in. roved?* Yes No		
*variance not required for or environmental reme	or monitoring diation wells		
Casing type:			
Blank casing interval:	ft. toft.		
Blank casing diameter:	in.		
Casing joints:			
Weight:lbs	s/ft.		
Wall thickness or gauge	no.:		
Blank casing interval:	ft. toft.		
Blank casing diameter:	in.		
Casing joints:			
Weight:lbs	s/ft.		
Wall thickness or gauge	no.:		
Grout interval: ft. to	oft.		
Grout material:			
Grout interval: ft. to	oft.		
Grout material:			
Screen / perforation material	:		
Screen / perforation opening	gs:		
Screen / perforation intervals	S:		
Fromft. to	_ft.		
Slot size unit			
Fromft. to	_ft.		
Slot size unit			
Gravel pack intervals:			
Gravel pack not used:	Gravel size in		
From ft. to	ft.		
Gravel pack not used:	Gravel size in		
From ft. to	ft.		

#### WELL WATER USE

COMPLETION					
Depth of completed well:ft.					
Depth(s) groundwater encountered:					
(1) ft.; (2) ft.;					
(3) ft.; (4) dry well					
Static water level in well: ft.					
measured below land surface on (mm/dd/yy):					
measured above land surface on (mm/dd/yy):					
Estimated yield: gpm					
Water level was: ft. afterhours					
pumping gpm					
Pump installed? Yes No					
Water well disinfected? Yes No					
Date disinfected (mm/dd/yy):					

NEAREST SOURCE OF PO	DIENTIAL CONT	AMINA	ATIOI
Source:			
Distance from well:	Direction from well:		
Source description:			
Source:			
Distance	Direction		
from well:	from well:		
Source description:			
No potential source within 100 feet.	of contamination	on	
PERMIT & ID NUMBERS	(AS REQUIRED	))	
DWR Application No.:			
KDHE / EPA Project C	ode:		
Site Name			
Site maine:			

#### Lease Name & Well #: \_\_\_\_\_\_ # of boreholes: \_\_\_\_\_\_ # of dewatering wells: \_\_\_\_

County Permit: Yes No Permit ID: \_

# Aquifer, if known:

EDOM	то	
FROM	10	

#### COMMENTS

#### CONTRACTOR'S OR LANDOWNERS CERTIFICATION

This water well was constructed	reconstructed	pursuant to the stated water well			
contractor's license and was complet	I certify that this record is true to				
the best of my knowledge and belief. This water well record was completed on					
under the business name of		,			
Kansas Water Well Contractor's Lice	nse No	under the authority of the designated			
person as defined in K.A.R. 28-30-20	j) and signed and c	ertified by the electronic signature of the			
designated person at its submittal:					
Send one copy to WATER WELL OWNER	and retain one for you	r records. Fee of \$5.00 for each constructed well			
KANSAS DEPAR	TMENT OF HEALTH	AND ENVIRONMENT			

Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka KS 66612-1367 (785) 296-3565 | K.S.A. 82a-1212 | v2022c

Form	WWC5.2 - Water Well Record	
Doc ID	1676975	
Well Owner	City of Olathe, KS	
Contractor	Layne Christensen Company #102	

# Lithology

From	То	Lithology Intervals
0	1	topsoil
1	13	clay,brown
13	28	sand,very fine
28	30	sand,fine to medium,brown
30	31	clay,brownish,gray
31	34	sand,fine to medium,clayey,brown
34	36	clay,gray
36	45	sand,fine to medium,gray
45	57	sand,fine to medium,gray,with coarse
57	60	limestone,unknown,brown

#### Layne Christensen Company <u>[ayne</u> 620 South 38th Street TEST HOLE REPORT Kansas Citv. KS 66106 A GRAFITE COMMON 913-321-5000 OWNER: City of Olathe, KS TEST HOLE JOB NO: 1101528 DATE: 02/20/21 NO: \_\_\_\_\_VW-2A Olathe STATE: KS DRILLER: R. Bowles CITY: TEST HOLE LOCATION: 52' east and 12' south of permanent well stake Distance and direction from permanent landmark or previous test hole. MARSH APPROXIMATE STATIC WATER LEVEL: MUD PIT FUNNEL FROM то VISCOSITY LOSS (FEET) (FEET) (INCHES) (SEC) FORMATION LOG Topsoil 0 1 Brown clay 1 17 17 24 Very fine sand 24 27 Fine/med brown sand 27 29 Same with clay Medium/fine brown sand 29 33 31 3" 33 34 Gray clay 34 36 Medium/coarse with fines 36 38 Gray clay 61 6" Medium/coarse with fines and gravel, cobbles 48-50, cobbles, boulders 38 32 Through out 53-58 Brown limestone 64 61

SIZE MUD PIT: LENGTH	:
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10' **WIDTH:** 3' **DEPTH:** 

COMMENTS:



Layne 620 S. 38th Street KC KS 66106

Re: Project: Olathe Vertical Wells Description: Well Sand Sample Sampled By Client Project #: C10-16-191 Report #: K39713 Original Dry: 643.5 Location: Well 2A Depth: 40-45

## **Report Of Test Results**

Gradation ASTWC-130/AASTTO 1-27						
		Cumulative				
Sieve size	Opening (mm)	Retained	% Retained	% Passing		
1/2"	12.5	0	0	100		
3/8"	9.5	0.0	0	100		
No. 4	4.75	29.7	5	95		
No. 8	2.36	137.3	21	79		
No. 16	1.180	408.3	63	37		
No. 30	0.600	549.0	85	15		
No. 50	0.300	577.2	90	10		
No. 100	0.150	599.0	93	7		
No. 200	0.075	609.4	94.7	5.3		

Gradation ASTM C-136/AASHTO T-27

Thank you for your continued interest in Kansas City Testing & Engineering, LLC

## Respectfully Submitted Kansas City Testing & Engineering, LLC

Sam Coulson, PE Lab Manager



Layne 620 S. 38th Street KC KS 66106

Re: Project: Olathe Vertical Wells Description: Well Sand Sample Sampled By: Client Project #: C10-16-191 Report #: K39713 Original Dry: 766.4 Location: Well 2A Depth: 45-50'

## **Report Of Test Results**

Gradation ASTM C-130/AASTTO 1-27						
		Cumulative				
Sieve size	Opening (mm)	Retained	% Retained	% Passing		
1/2"	12.5	0	0	100		
3/8"	9.5	2.8	0	100		
No. 4	4.75	116.6	15	85		
No. 8	2.36	329.5	43	57		
No. 16	1.180	604.5	79	21		
No. 30	0.600	702.0	92	8		
No. 50	0.300	723.9	94	6		
No. 100	0.150	739.1	96	4		
No. 200	0.075	747.7	97.6	2.4		

Gradation ASTM C-136/AASHTO T-27

Thank you for your continued interest in Kansas City Testing & Engineering, LLC

#### Respectfully Submitted Kansas City Testing & Engineering, LLC

Sam Coulson, PE Lab Manager



Layne 620 S. 38th Street KC KS 66106

Re: Project: Olathe Vertical Wells Description: Well Sand Sample Sampled By: Client Project #: C10-16-191 Report #: K39713 Original Dry: 933.5 Location: Well 2A Depth: 50-55'

## **Report Of Test Results**

Gradation ASTING-130/AASTITO 1-27					
		Cumulative			
Sieve size	Opening (mm)	Retained	% Retained	% Passing	
1/2"	12.5	5.3	1	99	
3/8"	9.5	62.3	7	93	
No. 4	4.75	334.1	36	64	
No. 8	2.36	562.7	60	40	
No. 16	1.180	771.9	83	17	
No. 30	0.600	859.5	92	8	
No. 50	0.300	880.1	94	6	
No. 100	0.150	898.0	96	4	
No. 200	0.075	907.6	97.2	2.8	

Gradation ASTM C-136/AASHTO T-27

Thank you for your continued interest in Kansas City Testing & Engineering, LLC

## Respectfully Submitted Kansas City Testing & Engineering, LLC

Sam Coulson, PE Lab Manager



Layne 620 S. 38th Street KC KS 66106

Re: Project: Olathe Vertical Wells Description: Well Sand Sample Sampled By Client Project #: C10-16-191 Report #: K39713 Original Dry: 814.9 Location: Well 2A Depth: 55-60'

## **Report Of Test Results**

Gradation ASTRIC-130/AASTTO 1-27					
		Cumulative			
Sieve size	Opening (mm)	Retained	% Retained	% Passing	
1/2"	12.5	0	0	100	
3/8"	9.5	41.1	5	95	
No. 4	4.75	276.1	34	66	
No. 8	2.36	436.9	54	46	
No. 16	1.180	673.8	83	17	
No. 30	0.600	766.7	94	6	
No. 50	0.300	782.0	96	4	
No. 100	0.150	792.0	97	3	
No. 200	0.075	797.7	97.9	2.1	

Gradation ASTM C-136/AASHTO T-27

Thank you for your continued interest in Kansas City Testing & Engineering, LLC

#### Respectfully Submitted Kansas City Testing & Engineering, LLC

Sam Coulson, PE Lab Manager



Layne 620 S. 38th Street KC KS 66106

Re: Project: Olathe Vertical Wells Description: Well Sand Sample Sampled By: Client Project #: C10-16-191 Report #: K39713 Original Dry: 592.0 Location: Well 2A Depth: 60-65'

## **Report Of Test Results**

		Cumulative			
Sieve size	Opening (mm)	Retained	% Retained	% Passing	
1/2"	12.5	0	0	100	
3/8"	9.5	26.2	4	96	
No. 4	4.75	133.0	22	78	
No. 8	2.36	266.7	45	55	
No. 16	1.180	477.9	81	19	
No. 30	0.600	560.5	95	5	
No. 50	0.300	572.3	97	3	
No. 100	0.150	579.5	98	2	
No. 200	0.075	583.7	98.6	1.4	

Gradation ASTM C-136/AASHTO T-27

Thank you for your continued interest in Kansas City Testing & Engineering, LLC

#### Respectfully Submitted Kansas City Testing & Engineering, LLC

Sam Coulson, PE Lab Manager





## WELL SCREEN FLOW CALCULATION City of Olathe, KS Well VW-2 3/1/2021

KNOWN PARAMETERS:	
1. Screen Diameter:	36 inches
2. Screen Length:	10 feet
<ol><li>Open Area of Johnson Screen</li></ol>	548.00 in²/lf
0.090" Slot Wire Wrap Hi-Q Screen	
4. Maximum Allowable Entrance	0.1 ft/sec
Velocity of Water Entering	
Well Screen:	
1 Percent Blockage of Open	50 %
Area by Gravel Pack	50 /0
<b>y</b> - <b>···</b>	

#### STANDARD FLOW CALCULATION FORMULA: Q = VA

#### WHERE: Q = FLOW RATE PER FOOT OF SCREEN, GPM $Q_{MAX}$ = MAXIMUM TOTAL ALLOWABLE FLOW RATE, GPM V = VELOCITY OF WATER ENTERING THE SCREEN, FT/SEC A = OPEN AREA OF THE SCREEN, FT<sup>2</sup>

Q = VA

 $Q = \begin{bmatrix} 0.1 \text{ ft/sec} \end{bmatrix} \begin{bmatrix} 548.0 \text{ in}^2/\text{lf} \end{bmatrix} \begin{bmatrix} 0.5 \text{ for blockage} \end{bmatrix}$   $Q = \begin{bmatrix} 0.1 \text{ ft/sec} \end{bmatrix} \begin{bmatrix} 274.0 \text{ in}^2/\text{lf} \end{bmatrix}$   $Q = \begin{bmatrix} 0.1 \text{ ft/sec} \end{bmatrix} \begin{bmatrix} 60 \text{ sec/min} \end{bmatrix} \begin{bmatrix} 274.0 \text{ in}^2/\text{lf} \end{bmatrix} \begin{bmatrix} 1 \text{ ft}^2/ 144 \text{ in}^2 \end{bmatrix} \begin{bmatrix} 7.48 \text{ gal/ft}^2 \end{bmatrix}$  Q = 85.4 gpm/lf of screen  $Q_{MAX} = \begin{bmatrix} 85.4 \text{ gpm/lf of screen} \end{bmatrix} \begin{bmatrix} 10 \text{ lf of screen} \end{bmatrix}$   $Q_{MAX} = \begin{bmatrix} 85.4 \text{ gpm/lf of screen} \end{bmatrix}$ 





Z:\CLIENTS\WTR\OLATHEKS\110372\_VERTICALWELLS\DESIGN\CADD\PROC\PROD\_DWGS\110372\_D002 - GENERAL ARRANGEMENT.DWG

	TABLE 1 - WELL DETAILS							
NORTHING	EASTING	SURFACE ELEVATION (FEET AMSL)	ESTIMATED DEPTH TO BEDROCK (FEET BELOW GROUND SURFACE)	BOREHOLE DIAMETER (INCHES)	WELL CASING AND SCREEN DIAMETER (INCHES)	WELL SCREEN LENGTH (FEET)	DESIGN MAXIUM PUMPING RATE (GPM)	
251,411.646	2,185,797.143	787.73	73	60.0	36.0	12.0	950.0	
251,597.450	2,186,149.783	780.24	62	60.0	36.0	10.0	800.0	
251,557.000	2,186,523.000	782.00	63	60.0	36.0	10.0	600.0	
250,984.000	2,186,241.000	787.00	64	60.0	36.0	8.0	500.0	
252,032.000	2,185,831.000	781.00	64	60.0	36.0	11.0	940.0	
	* COORDINATE	ES PROVIDED A	RE IN THE STATE PLANE CO	ORDINATE SY	/STEM, NAD83, KANSA	AS NORTH, FIPSZO	NE 1501, WITH UNIT	51