

STATE OF ALASKA 69654 DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINING, LAND & WATER Alaska Hydrologic Survey

WATER WELL LOG Revised 08/18/2016

Drilling Started:// Com			Comple	leted: <u>3 / 26 / 2015</u> Pump Install://					
City/Borough Subdivisi		ion	Block	Lot	Name & Address				
City & Borough of Juneau					City	And	Borough Of Juneau Ak		
Well location: Latitude 58.3076439				Longitude -134.39386					
Meridian <u>C</u> Townsh	nip <u>041S</u> Rang	ge <u>067E</u>	Section	n <u>13</u> , <u>SW</u> 1/4 of <u>SE</u> 1/4 of <u>SW</u> 1/4 of <u>SW</u> 1/4					
BOREHOLE DATA: (from ground surface) Suggest T.M. Hanna's hydrogeologic classification system* https://my.ngwa.org/NC				Drilling method: ■Air rotary, □Cable tool, □Other Well use: ■Public supply, □Domestic, □Reinjection, □Hydrofracking □Commercial, □Observation/Monitoring, □Test/Exploratory, □Cooling,					
			☐ Irrigation/Agriculture, ☐ Grounding, ☐ Recharge/Aquifer Storage,						
Previously constructed building pad 0 3				Heating, Geothermal Exploration, Other					
Well graded sands and gravels with larger boulders, water	ter encountered at about 6'	3	30	Fluids used:ft Casing stickup: 4ft					
Sandy gravel interspersed with layers	of silts and clays	30	80	-	Casing stickup. 4nt Casing thickness: inches				
Coarse sand, water satu	uration	80	90		ches Casing depth: 80 ft				
Sandy gravel, water s	aturation	90	103	_	ft Diameter:inches				
Sand, water saturation		103	113	Note:					
Sandy gravel, water s	aturation	113	135	Well intake opening type: Open end, Open hole, Other screened					
,				Screen type:, Screen mesh size:					
				Screen start: ft, Screen stop: ft, Perforated Yes Perforation description: Perf from:					
				to:ft, Perf from: ft, Perf to: ft					
				Gravel packed Yes No Gravel start: ft , Gravel stop: ft					
				Note:					
				Static water (from top of casing): 3 ft on// Artesian well					
				Pumping level & yield: 14 feet after 24 hours at 1600 gpm					
			Method of testing:						
			Development method: See well log Duration: Recovery rate: gpm						
			Grout type: Volume						
							ft, Toft		
Include description or sketch of well location (include road names,			d names,	Final pump intake depth: ft Model:					
buildings, etc.):				Pump size:		hp	Brand name:		
				Was well di	sinfected up	on comp	oletion? Yes No		
				Method of d					
				Was water	Was water quality tested? Yes No				
				Water quality parameters tested:					
					Well driller name: Company name: AQUASOURCE LLC				
			•				State: AV Zin-		
North				City: State: <u>AK</u> Zip: Phone number: ()					
AS 41.08.020(b)(4) and AAC 11 AAC 93.140(a) require that a copy of the well log be submitted to the Department of Natural Resources within 45 days of well completion . Well logs may									
be submitted using the online well log reporting system available at:				Anchorage M	lunicipal Code	e 15.55.06	60(I) and North Pole Ordinance 13.32.030(D) require		
https://dnr.alaska.gov/welts/				that a copy of within 30 day			itted to the Development Services Department/City		
OR email electronic well logs to				City Permit Number: Date of Issue://					
dnr.water.reports@alaska.gov				Parcel Identification Number:					

CITY AND BOROUGH OF JUNEAU DRILLING LOG NEW WELL 4

(Not currently used, constructed for future replacement of existing Well 4)

Driller	Aquasource LLC.				
Method of Construction	Air Rotary Drill				
Type of Fluids Used for Drilling	None				
Location of Well	59° 18' 27.52" N, 134° 23' 43.95" W				
C. H. L.	See attached gradations for Test Well TW-4-15 and Material				
Soils Log	Description of materials encountered below				
Depth of Casing	80' Below Ground Surface				
Height of Casing Above Ground	4' Above Ground Surface				
Depth and Type of Grouting	25' Below Ground Surface, Bentonite Grout				
Depth of Screens	80' to 125'				
Casing Diameter	16" OD				
Casing Material	ASTM A53 Steel Grade B				
Depth of Perforations or Openings in	None				
Casing	None				
Wall Dayslanment Mathed	Air Lifting/Swabbing, Hydropuls While Pumping, Water Jettin				
Well Development Method	While Pumping				
Total Depth of Well	Air Lifting/Swabbing, Hydropuls While Pumping, Water Jet While Pumping 130' (Includes 5' Blank Tail Pipe attached to bottom of we				
Total Depth of Well	screen)				
Depth to Static Water Level	Varies from 3' to 8'				
Anticipated Use of the Well	Public water supply, intermittent use				
Maximum Well Yield	6,840 gpm				
Drawdown Test Results	24-Hour Pump Test at 1,600 gpm, Drawdown=14.0'				
Pump	No Pump Installed				

Depth from Ground Surface Material Description

0 to 3'	Previously Constructed Building Pad
3' to 30'	Well graded sands and gravels with larger boulders, water
3 10 30	encountered at about 6'
30' to 80'	Sandy Gravel interspersed with layers of silts and clays
80' to 90'	Coarse Sand, water saturation
90' to 103'	Sandy Gravel, water saturation
103' to 113'	Sand, water saturation
113' to 135'	Sandy Gravel, water saturation

James L. Dorn P.E. Carson Dorn Inc.



R & M ENGINEERING, INC. ENGINEERS GEOLOGISTS SURVEYORS

6205 GLACIER HIGHWAY JUNEAU, ALASKA 99801

Sieve Analysis ASTM D422

Client Carson Dorn Project # 151107

Project Last Chance Basin 2014 Source Improvements Received Date 3/25/2015

Location Juneau, AK Reported Date 3/26/2015

Material/Source TW-4-15 Borehole Tested by/date WMS 3/26/2018

Sampled by/date Jeff Weiss 3/24-25/2015

Moisture	11.6%		12.1%		7.8%		10.2%	
SIEVE SIZE	Percent passing		Percent passing		Percent passing		Percent passing	Requ
	TW-4-15 S-8 58.0'-59.0' SPT	specs	TW-4-15 S-11 77.0'-79.0' SPT	specs	TW-4-15 S-13 89.0'-90.0' SPT	specs	TW-4-15 S-19 118.0'-120.0' SPT	ired
4 " 3 " 2 "								
1 1/2 " 1 "	100 91				100		100 95	
3/4 "	85		100		97		95 85	
1/2 " 3/8 "	82 76		99 98		68 61		79 75	
No 4	65 54		90 76		46 37		59 46	
No 8 No 10	49		76		34		43	
No 16 No 30	41 31		61 48		29 23		37 29	
No 40	28		42		20		26	
No 50 No 100	25 20		38 31		18 13		24 19	
No 200	15.5		23.7		10.0		13.8	



