



**CITY AND BOROUGH OF JUNEAU**  
**DRILLING LOG WELL 6**

<b>Driller</b>	Aquasource LLC.
<b>Method of Construction</b>	Air Rotary Drill
<b>Type of Fluids Used for Drilling</b>	None
<b>Location of Well</b>	59° 18' 26.44" N, 134° 23' 27.43" W
<b>Soils Log</b>	See attached gradations for Test Well TW-6-15 and Material Description of materials encountered below
<b>Depth of Casing</b>	80' Below Ground Surface
<b>Height of Casing Above Ground</b>	3' Above Ground Surface
<b>Depth and Type of Grouting</b>	25' Below Ground Surface, Bentonite Grout
<b>Depth of Screens</b>	80' to 115'
<b>Casing Diameter</b>	16" OD
<b>Casing Material</b>	ASTM A53 Steel Grade B
<b>Depth of Perforations or Openings in Casing</b>	None
<b>Well Development Method</b>	Air Lifting/Swabbing, Hydropuls While Pumping, Water Jetting While Pumping
<b>Total Depth of Well</b>	120' (Includes 5' Blank Tail Pipe attached to bottom of well screen)
<b>Depth to Static Water Level</b>	Varies from 3' to 8'
<b>Anticipated Use of the Well</b>	Public water supply, intermittent use
<b>Maximum Well Yield</b>	1,860 gpm
<b>Drawdown Test Results</b>	24-Hour Pump Test at 1,700 gpm, Drawdown=55.0'
<b>Pump Intake Depth and Performance Data</b>	Pump intake installed 67' below ground surface, Pump VFD curves are attached.

<b>Depth from Ground Surface</b>	<b>Material Description</b>
0 to 3'	Previously Constructed Building Pad
3' to 40'	Well graded sands and gravels with larger boulders, water encountered at about 6'
40' to 80'	Sandy Gravel interspersed with layers of silts and clays
80' to 115'	Coarse Sand, 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 3/19/2015

Location Juneau, AK

Reported Date 3/23/2015

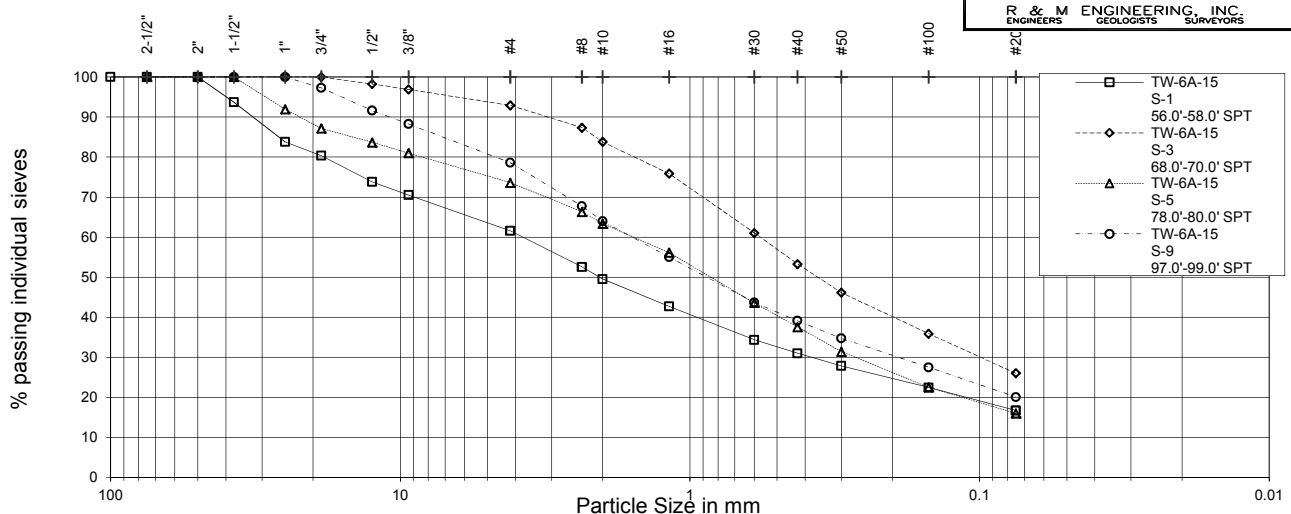
Material/Source TW-6A-15 Borehole

Tested by/date WMS 3/20/2015

Sampled by/date Jeff Weiss 3/18-19/2015

Moisture	9.1%		11.5%		11.5%		10.6%	
SIEVE SIZE	Percent passing	Required specs	Percent passing	Required specs	Percent passing	Required specs	Percent passing	Required specs
	<b>TW-6A-15 S-1 56.0'-58.0' SPT</b>		<b>TW-6A-15 S-3 68.0'-70.0' SPT</b>		<b>TW-6A-15 S-5 78.0'-80.0' SPT</b>		<b>TW-6A-15 S-9 97.0'-99.0' SPT</b>	
4 "								
3 "								
2 "	100							
1 1/2 "	94				100			
1 "	84				92		100	
3/4 "	80		100		87		97	
1/2 "	74		98		84		92	
3/8 "	71		97		81		88	
No 4	62		93		74		79	
No 8	53		87		66		68	
No 10	50		84		63		64	
No 16	43		76		56		55	
No 30	34		61		44		44	
No 40	31		53		38		39	
No 50	28		46		31		35	
No 100	23		36		23		28	
No 200	16.8		26.1		16.0		20.1	

Grain Size Distribution Curve



Cobbles and Gravel

Sand

Silt and Clay



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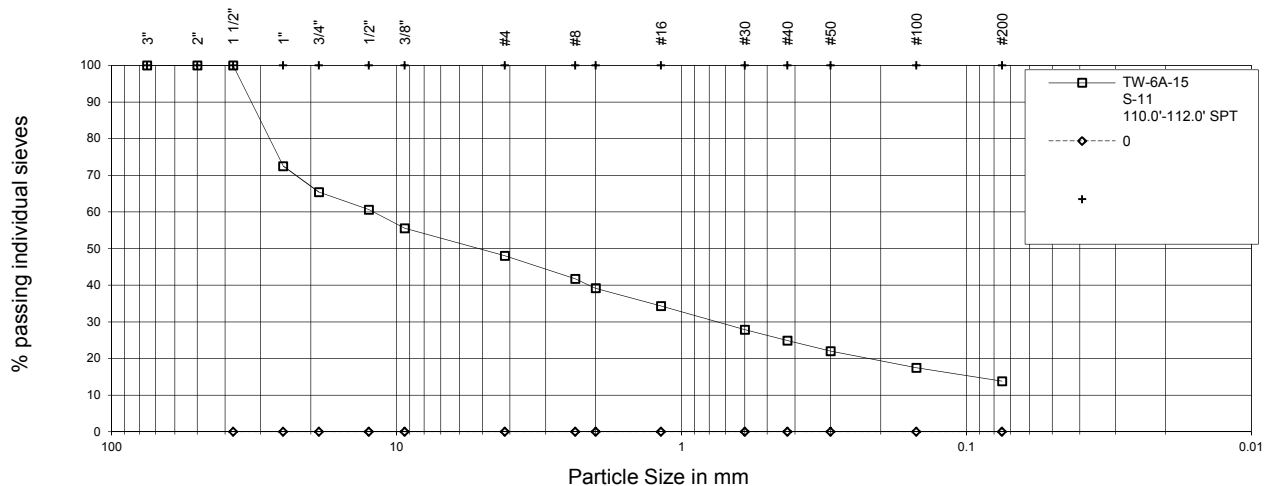
6205 GLACIER HIGHWAY JUNEAU, ALASKA 99801

## Sieve Analysis ASTM D422

Client	<u>Carson Dorn</u>	Project #	<u>151107</u>
Project	<u>Last Chance Basin 2014 Source Improvements</u>	Received Date	<u>3/19/2015</u>
Location	<u>Juneau, AK</u>	Reported Date	<u>3/23/2015</u>
Material/Source	<u>TW-6A-15 Borehole</u>	Tested by/date	<u>WMS 3/20/2015</u>
Sampled by/date	<u>Jeff Weiss 3/18-19/2015</u>		

Moisture	9.1%							
SIEVE SIZE	Percent passing	Required specs	Percent passing	Required specs	Percent passing	Required specs	Percent passing	Required specs
	<b>TW-6A-15 S-11 110.0'-112.0' SPT</b>							
4 "								
3 "								
2 "								
1 1/2 "	100							
1 "	72							
3/4 "	65							
1/2 "	61							
3/8 "	56							
No 4	48							
No 8	42							
No 10	39							
No 16	34							
No 30	28							
No 40	25							
No 50	22							
No 100	18							
No 200	13.8							

Grain Size Distribution Curve



Cobbles and Gravel	Sand	Silt and Clay
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Customer : ALASKA ROTEQ CORP  
Item number : CITY OF JUNEAU  
Service :  
Flowserve reference : 236294231  
Date : July 31, 2014

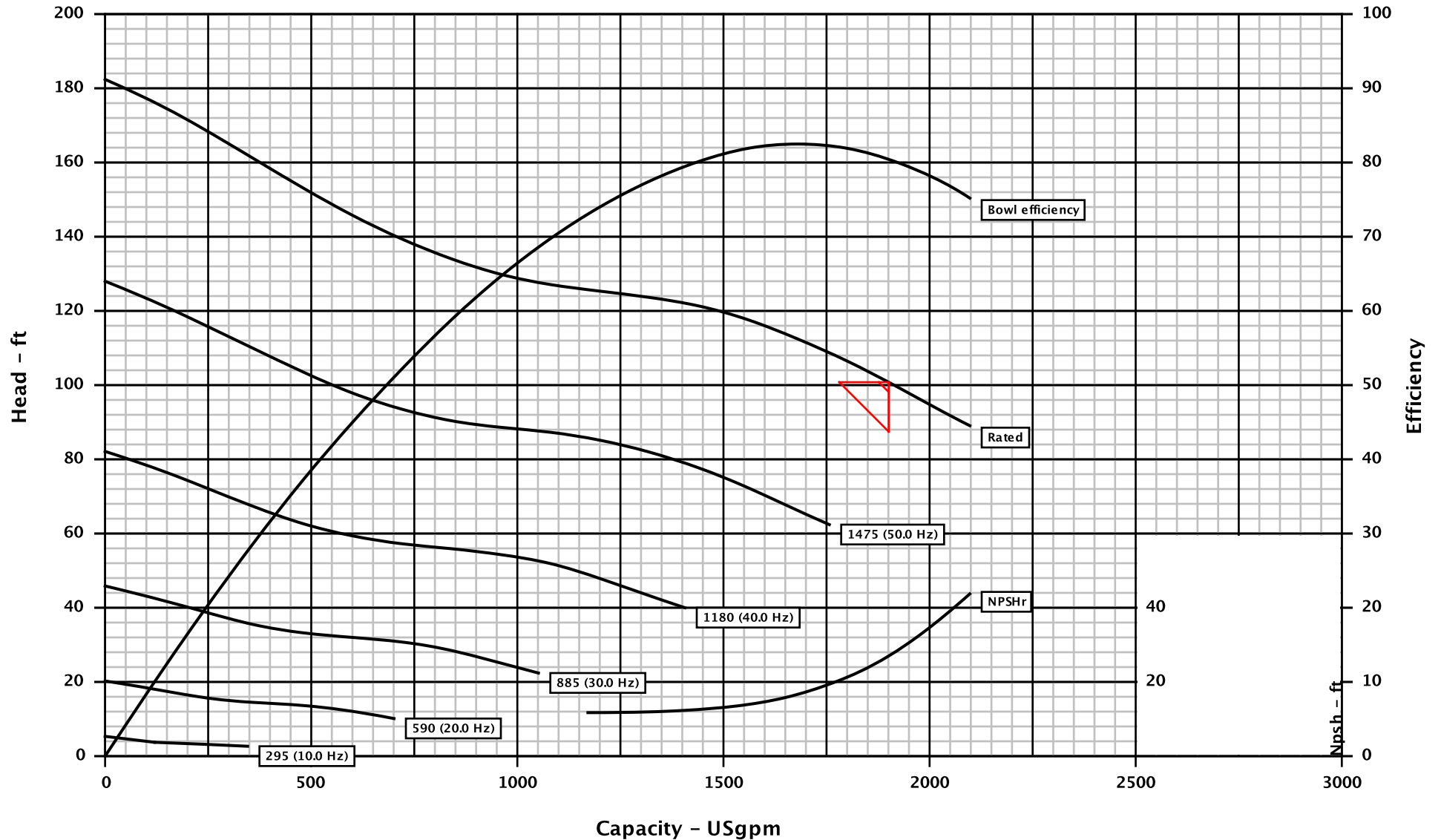


Capacity : 1900.0 USgpm  
Head : 100.00 ft

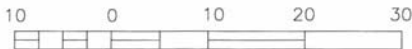
Specific gravity : 0.999  
Pump speed : 1760 rpm

Pump size & type : 12ENH  
Based on curve no. : EC-1390  
Number of stages : 2

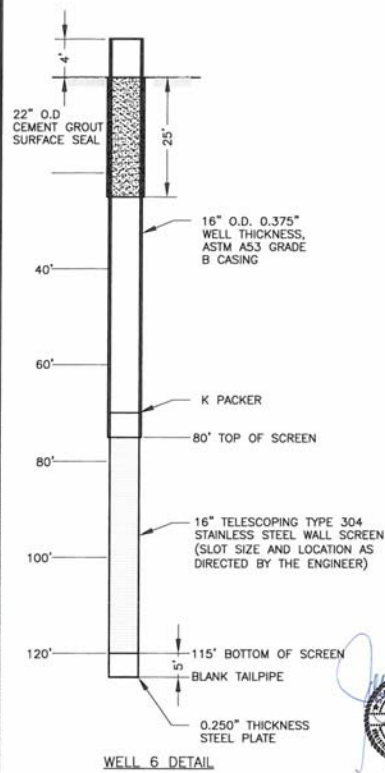
CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY.



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MACHINE FOR THE DRAWING  
MACHINE COMPANY ONLY  
AND DO NOT SUBSTITUTE FOR  
FIELD SURVEY



6900



**NEW WELL 6**  
SCREEN INTERVAL: 80 TO 115 FEET BGS (BELOW GROUND SURFACE)  
80 TO 115 FEET BGS SLOT SIZE: 0.080" (80 SLOT)  
SPECIFIC CAPACITY: 31 GPM/FT  
RECOMMENDED MAXIMUM WELL PRODUCTION RATE: 1,395 GPM

### ASBUILT

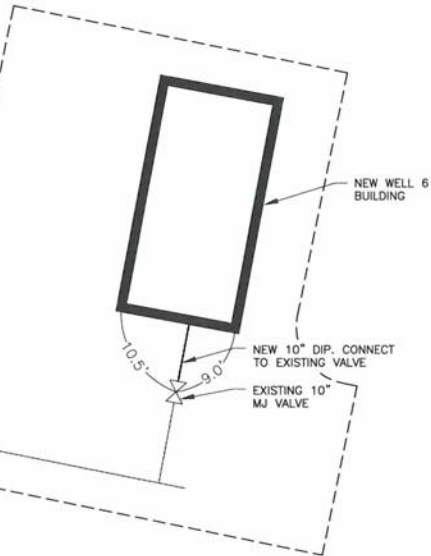
#### RECORD DRAWINGS

CONTRACTOR:  
ARRETE CONSTRUCTION  
DESIGN ENGINEER:  
CARSON DORN INC.  
To the best of my knowledge these drawings are a true and accurate representation of the project as constructed. Some of the record information shown on these drawings was provided by others. Use of the information contained in these Record Drawings should be field confirmed.

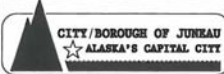


EXISTING 10" WATERLINE

8900



SCALE: GRAPHIC  
DESIGNED: JLD  
DRAWN: SDW  
CHECKED: JLD  
DATE: SEPT 2014



CITY AND BOROUGH OF JUNEAU  
LAST CHANCE BASIN 2014  
SOURCE IMPROVEMENTS  
CONTRACT No. E15-064



LAST CHANCE BASIN WELL NO. 6  
SITE PLAN

DRAWING  
C-3  
SHEET No.  
6 of 23