

EXHIBIT A - WATER WELL LOG

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
MINING, LAND, WATER HYDROLOGIC SURVEY
WATER WELL LOG
Drilling Started: 7/25/17 Completed: 7/29/17

UPDATED WELL LOG RECIEVED FROM CONTRACTOR 6/2/22
-A. Conrad

City/Borough:	Subdivision/USS:	Block	Lot	Property Owner Name & Address:
Pilot Station				City of Pilot Station
Meridian	Township	Range	Section	¼ of ¼ of ¼ of ¼
Lat: N	Long: W	NAD: 27 OR 83	Elevation:	
BOREHOLE DATA: (from ground surface)				Drilling Method: <u>Air rotary</u> Cable tool, Other
Depth				Well use: <u>Public supply</u> , Domestic, Other
Material: Type, Color & wetness From To				
Muck		0-10'	Depth of hole: <u>280'</u> ft, Casing stickup: <u>3</u> ft	
Schist		10-18'	Casing type: <u>Steel</u> Thickness _____ inches	
Rock/Schist		18-25'	Casing diameter: <u>6" .5"</u> inches Casing depth <u>260</u> ft	
Rock		25-280'	Liner type: _____ Diameter: _____ inches Depth: _____ ft	
				Static water (from top of casing): <u>66</u> ft on <u>7/30/17</u>
				Pumping level & yield: _____ feet after _____ hours at _____ gpm
				Recovery rate: _____ gpm, Method of testing: _____
				Development method: <u>APC</u> Duration: <u>8 hrs.</u>
				Well intake opening type: Open end, Open hole
				Screened; Start: <u>260'</u> ft, Stopped <u>280'</u> ft
				Screen type: <u>Stainless</u> Slot/mesh size <u>.020</u>
				Perforated; Start: _____ ft, Stopped _____ ft
				Start: _____ ft, Stopped _____ ft
				Note:
				Grout type: <u>Baco</u> Volume _____
				Depth; from _____ ft, to <u>20'</u> ft
				Pump intake depth: <u>200'</u> ft
				Pump size <u>4" / 5hp</u> hp, Brand name: <u>Grundfos</u>
				Was well disinfected upon completion? <u>Yes</u> No
				Method of disinfection: <u>Chlorination</u>
				Driller
				comments/disclaimers: _____
				Well driller name: <u>Timberline Excavation</u>
				<u>John Ray</u>
				Company Name: <u>Po Box 24923</u>
				Mailing Address: _____
				City: <u>Fairbanks</u> State: <u>AK</u> Zip: <u>99707</u>
				Phone Number: <u>907 322 3606</u>
				Drillers Signature: <u>[Signature]</u>

Water encountered @ 160' well was drilled to 280' to reach satisfactory production.

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City/Borough:	Subdivision/USS:	Block	Lot	Property Owner Name & Address:
Pilot Station				City of Pilot Station
Meridian _____	Township _____	Range _____	Section _____	1/4 of _____ 1/4 of _____ 1/4 of _____ 1/4
Lat: N _____	Long: W _____	NAD: 27 OR 83	Elevation: _____	
BOREHOLE DATA: (from ground surface)				Drilling Method: <u>Air rotary</u> , Cable tool, Other _____
Depth _____				Well use: <u>Public supply</u> , Domestic, Other _____
Material: Type, Color & wetness From _____ To _____				
Muck		0-10'	Depth of hole: <u>280'</u> ft, Casing stickup: <u>3</u> ft	
Schist		10-18'	Casing type: <u>Steel</u> Thickness _____ inches	
Rock/Schist		18-25'	Casing diameter: <u>6"</u> inches Casing depth _____ ft	
Rock		25-280'	Liner type: _____ Diameter: _____ inches Depth: _____ ft	
				Static water (from top of casing): <u>66</u> ft on <u>7/30/17</u>
				Pumping level & yield: _____ feet after _____ hours at _____ gpm
				Recovery rate: _____ gpm, Method of testing: _____
				Development method: <u>APR</u> Duration: <u>8 hrs.</u>
				Well intake opening type: Open end, Open hole
				Screened; Start: <u>180'</u> ft, Stopped <u>200'</u> ft
				Screen type: <u>Stainless</u> Slot/mesh size _____
				Perforated; Start: _____ ft, Stopped _____ ft
				Start: _____ ft, Stopped _____ ft
				Note: _____
				Grout type: <u>Baroid</u> Volume _____
				Depth; from <u>0</u> ft, to <u>20'</u> ft
				Pump intake depth: <u>200'</u> ft
				Pump size <u>4"</u> hp, Brand name: <u>Goulds</u>
				Was well disinfected upon completion? <u>Yes</u> , No
				Method of disinfection: <u>Chlorination</u>
				Driller comments/disclaimers: _____
				Well driller name: <u>Timberline Excavation</u>
				<u>John Ray</u>
				Company Name: <u>Po Box 24823</u>
				Mailing Address: _____
				City: <u>Fairbanks</u> State: <u>AK</u> Zip: <u>99707</u>
				Phone Number: <u>907 322 3666</u>
				Drillers Signature: <u>[Signature]</u>

Water encountered @ 160' well was drilled to 280' to reach satisfactory production.

Timberline Excavation, Inc.

Pilot Station Well D Test Pumping results
7-30-2017 Thru 8-01-2017
24 hour test

Test pump set at 180' for this test. Note (test
and drags s

Initial pumping was started at 75 GPM and lasted for the first 5 minutes

Every Minute for ten minutes

Water Level in feet		Water Level		(45 GPM)
1	66	6	109	
2	68	7	104	
3	90	8	104	
4	112	9	104	
5	115	10	104	

Every 2 minutes for 10 minutes @ 45 GPM

Water Level	
2	104
4	104
6	104
8	104
10	104.5

Every 5 minutes for 40 minutes @

Water Level	
5	106
10	104
15	104
20	103

Every 10 minutes for 1 hr. @ 40-42 GPM

Water Level	
10	102
20	102
30	102

Water Level	
40	102
50	102
60	102

Every 30 min for the remainder of the test @ 40-42 GPM

Water Level		Water Level		Water Level	
30	102	8	102	1530	102
1	102	830	102	16	102
130	102	9	102	1630	102
2	102	930	102	17	102
230	102	10	102	1730	102
3	102	1030	102	18	102
330	102	11	102	1830	102
4	102	1130	102	19	102
430	102	12	102	1930	102
5	102	1230	102	20	102
530	102	13	102	2030	102
6	102	1330	102	21	102
630	102	14	102	2130	102
7	102	1430	102	22	102

730

102

15

102

After test pumping was performed at 40 GPM the pump was ran at a full flow rate of approx. 65 GPM resulting in the water level to drop to 120' and stabilized. Within minutes of the pump being turned off the water level had already returned to 80 feet and climbing. No further testing was done.

pump entered into the 5" well screen pipe
lightly due to pull cable and well wire.)

40-42 GPM

Water Level	
25	103
30	103
35	103
40	102