

# STATE OF ALASKA BEPARTMENT OF NATURAL RESOURCES DIVISION OF MINING, LAND & WATER Alaska Hydrologic Survey

WATER WELL LOG Revised 08/18/2016

City Of Pilot Station	-			eted: _7 / 29 / 2017 Pump Install://		
Methoda	City/Borough Subdivi	sion	Block	Lot Property Owner Name & Address		
More   March				City Of Pilot Station,		
Drilling method:	Well location: Latitude 61.94060089999999	)	•	Longitude <u>-162.88219740000002</u>		
Suggest T.M. Hanna's hydrogeologic cleastification system   https://my.ngwa.org/NC	Meridian S Township 021N Ra	nge <u>074W</u>	Section	n <u>05 , SE 1/4 of NE 1/4 of SW 1/4 of NE 1/4</u>		
Commercial   Observation/Monitoring   Trest/Exploratory   Cooling						
Commercial_  _Despation/Monitoring_  _  lest/Exploratory_   Cooling_	Suggest T.M. Hanna's hydrogeologic classif	ication sy	stem*	Well use: ■Public supply, □Domestic, □Reinjection, □Hydrofracking		
Muck Schist 10 18 Rock/schist 10 18 Pepth of hole: 280  ft	nttps://my.ngwa.org/NCProduct:/id=a100000			☐ Commercial, ☐ Observation/Monitoring, ☐ Test/Exploratory, ☐ Cooling,		
Schist 10 18 25  Rock 25 280 25 280 25 280 25 280 26 26 26 27 280 27 280 27 280 280 280 280 280 280 280 280 280 280			•	☐Irrigation/Agriculture,☐Grounding,☐Recharge/Aquifer Storage,		
Depth of hole: 280	Muck	0	10			
Casing type; steel	Schist	10	18	Fluids used:		
Casing type:	Rock/schist	18	25			
Liner type:				Casing type: steel Casing thickness: inches		
Mole:   Well intake opening type:Open end _Open holeOtherscreened	NOCK	25	200			
Well intake opening type:Open endOpen hole, _Otherscreened						
Screen type: Stainless _ Screen mesh size: .02 Screen start: 260						
Screen start: 260 ft, Screen stop: 280 ft, Perforated ves \ No Perforation description: Perf from: ft, Perf to: ft to: ft, Perf from: ft, Ferf from: ft, Fer						
Perforation description:						
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): _66ft _on _730/ _2017 _ Artesian well				· ·		
Gravel packed \[ Yes \] No Gravel start: \[ ft, Gravel stop: \] ft Note:  Static water (from top of casing): \( \frac{66}{60} \) ft on \( 7 \) / 30 \( 2017 \) Artesian well \[ \] Pumping level & yield: \[ feet after \] hours at \( \frac{65}{90} \) pm Method of testing: \[ Development method: \( Air \) Recovery rate: \[ gpm \]  Grout type: \( \frac{1}{90} \) Brand \( \frac{1}{10} \) To \( \frac{20}{10} \) ft \[ \frac{1}{10} \] To \( \frac{1}{10} \) Model: \[ \frac{1}{10} \] Pumping level & yield: \[ feet after \] hours at \( \frac{65}{90} \) pm Method of testing: \[ Development method: \( \frac{1}{10} \) Duration: \( \frac{8}{10} \) Brand \( \frac{1}{10} \) To \( \frac{1}{10} \) ft \[ \frac{1}{10} \] To \( \frac{1}{10} \) To \( \frac{1}{10				· · · · · · · · · · · · · · · · · · ·		
Note:  Static water (from top of casing): 66						
Pumping level & yield:feet afterhours at 65 _ gpm   Method of testing:						
Pumping level & yield:feet afterhours at 65 _ gpm   Method of testing:				Static water (from top of casing): 66 ft on 7 / 30 / 2017 Artesian well		
Development method; Air Duration: 8 Recovery rate:gpm Grout type: Baroid Volume Depth: From 0ft, To 20ft    Include description or sketch of well location (include road names, buildings, etc.):						
Recovery rate:gpm Grout type: Baroid				Method of testing:		
Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) buildings, etc.):  Include description or sketch of well location (Include road names) be purposed for the Medical Includes the Me				Development method: Air Duration: 8 Duration: 8		
Depth: From O ft, To 20 ft  Include description or sketch of well location (include road names) buildings, etc.):    Final pump intake depth:ft   Model:				Crout type: Baroid Volume		
Final pump intake depth:ft Model:				Depth: From 0 ft To 20 ft		
AS 41.08.020(b)(4) and AAC 11 AAC 93.140(a) require that a copy of the well log be submitted using the online well log reporting system available at:  https://dnr.alaska.gov/welts/  OR email electronic well logs to  dnr.water.reports@alaska.gov  Pump size:hp Brand name:	Include description or sketch of well location (in	nclude road	names,	Final nump intake depth: ft Model:		
Was well disinfected upon completion? Yes No  Method of disinfection: Chlorination  Was water quality tested? Yes No  Water quality parameters tested:  Well driller name:  Company name: TIMBERLINE EXCAVATION INC.  Mailing address:  City: State: Ak Zip:  Phone number: ()  City: State: Ak Zip:  Phone number: ()  Date:/  Anchorage Municipal Code 15.55.060(I) and North Pole Ordinance 13.32.030(D) require that a copy of this 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:  https://dnr.alaska.gov/welts/  OR email electronic well logs to  dnr.water.reports@alaska.gov  Parcel Identification Number:						
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				City Permit Number: Date of Issue://		
Quide for Uning the Hydrogenlogic Classification System for Logging				Parcel Identification Number:		

#### **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/ V

City/Borough: Subdivision/USS: Block Lot Property Owner Name & Address: Pilot Station Meridian Township Range Section 1/4 of 14 of Lat: N Long: W NAD: 27 OR 83 Elevation: BOREHOLE DATA: (from ground surface) Drilling Method: Air rotary Cable tool, Other Well use: Public supply, Domestic, Other Material: Type, Color & wetness From Depth of hole: 7 ft, Casing stickup: Casing type: Thickness
Casing diameter (2.15 5 inches Casing diameter) ft 0-10 Casing type: 61 / 5" Inche
Casing diameter: Diameter: inches inches Casing depth 260 ft 10-18 inches Depth: Static water (from top of casing): \_\_\_\_\_\_\_ft on \_7/30/17 Pumping level & yield: \_\_\_ feet after hours at Recovery rate: gpm, Method of testing: 25-280 Development method: Duration: Well intake opening type: Open end, Open hole ft, Stopped 280' Open end, Screened; Start: 260' Screen type: Stainless Slot/mesh size . 020 Perforated; Start: ft, Stopped ft Start: ft, Stopped ft Note: 6" CASING Grout type: Baroin Volume Start: 0 ft Stopped: 180 ft Depth; from ft 5" CASING Pump intake depth: 200 ' Start: 180 ft Stopped: 260 ft Pump size 4º/5hp hp, Brand name: Was well disinfected upon completion? Ves. Method of disinfection: Chronismie Driller comments/disclaimers: Well driller name: Timberlive Excavator John GLAY Company Name: 18 18 09 24823 Mailing Address: City: parabates State: NC Zip: 99 767 Phone Number: 907
Drillers Signature:

Enterne Encourtered @ 160' well was disted to 280' to Real Satisfactury production.

#### **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

City/Borough:	Subdivision/USS:	Block	Lot	Property Owner Name & Address:
Pilot Station				City of Pilot Station
Meridian	Township	Ra	nge	Section,¼ of¼ of¼ of¼
	Long: W			NAD: <u>27</u> OR <u>83</u> Elevation:
Depth	ATA: (from groun Color & wetness		e) <u>rom</u>	Drilling Method: Air rotary, Cable tool, Other Well use: Public supply, Domestic, Other
Muck		0-	10	Depth of hole: 280 ft, Casing stickup: 3 ft
Schist		10-	18.	Casing type: Thickness inches Casing diameter: inches Casing depth ft Liner type: Diameter: inches Depth: ft
Rock/SC	hist	18.	25	Static water (from top of casing): 66 ft on 7/30/17 Pumping level & yield: feet after hours at gpm
Rock		25	- 280	Recovery rate:gpm, Method of testing:  Development method: Duration: &
				Well intake opening type:  Screened; Start: / 60 ft, Stopped 200 ft  Screen type: Start: ft, Stopped ft  Start: ft, Stopped ft  Note:  Grout type: Start: Volume  Depth; from ft, to 20 ft
				Pump intake depth: 200 hp, Brand name: 600 ds
				Was well disinfected upon completion? Yes, No Method of disinfection:
				Driller comments/disclaimers:
				Well driller name: Timberlive Excavation Tohn Ray
				Company Name: Po Box 24823  Mailing Address: City: Phone Number: 907 322 3464  Drillers Signature:

water encontral @ 160' well was dolled to 280' to Real 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

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

Every Minute f	or ten minutes
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Water Level in feet		Water Level			
1	66	6	109	(45 GPM)	
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 @

Lvciyoiiii	14165 101 101
	Water Level
5	106
10	104
15	104
20	103

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

1	Water Level	Water Level
10	102	40 102
20	102	50 102
30	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