



STATE OF ALASKA 68114
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND & WATER
Alaska Hydrologic Survey

WATER WELL LOG Revised 08/18/2016

Drilling Started: 6 / 28 / 2018 Completed: 7 / 12 / 2018 Pump Install: / /

City/Borough	Subdivision	Block	Lot	Property Owner Name & Address
Matanuska-Susitna Borough				Fort Greely AK,

Well location: Latitude _____ Longitude _____
Meridian F _____ Township 011S Range 010E Section 23 _____ 1/4 of _____ 1/4 of _____ 1/4 of _____ 1/4

BOREHOLE DATA: (from ground surface)
Suggest T.M. Hanna's hydrogeologic classification system*
https://my.ngwa.org/NC_Product?id=a185000000BYub3AAD

	Depth	
	From	To
Gravel	0	80
Small sandy gravel with clay	80	100
Gravel, large	100	160
Hard gravel	160	300
Wet coarse gravel	300	320
Gravel and water - 50gpm estimated	320	340
Gravel, boulders and water - 100gpm estimated	340	360
Silty gravel and water - 300gpm estimated	360	380
Silty gravel and water - 400gpm estimated	380	400

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,
☐ Heating, ☐ Geothermal Exploration, ☐ Other _____

Fluids used: _____
Depth of hole: 400 _____ ft Casing stickup: 2 _____ ft
Casing type: Steel _____ Casing thickness: 0.25 _____ inches
Casing diameter: 8 _____ inches Casing depth: _____ ft
Liner type: _____ Depth: _____ ft Diameter: _____ inches
Note: _____

Well intake opening type: ☒ Open end, ☐ Open hole, ☐ Other open end
Screen type: _____, Screen mesh size: _____
Screen start: _____ ft, Screen stop: _____ ft, Perforated ☐ Yes ☒ No
Perforation description: _____ Perf from: _____ ft, Perf
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): 300 _____ ft on 7 / 3 / 2018 Artesian well ☐
Pumping level & yield: 400 _____ feet after 1 _____ hours at 400 _____ gpm
Method of testing: Air lift
Development method: Air surge _____ Duration: 1.5 hours
Recovery rate: 400 _____ gpm

Grout type: Bentonite _____ Volume 2 ft^3 _____
Depth: From 0 _____ ft, To 20 _____ ft

Include description or sketch of well location (include road names, buildings, etc.):

Final pump intake depth: 380 _____ ft Model: _____
Pump size: 40 _____ hp Brand name: National _____

Was well disinfected upon completion? ☐ Yes ☒ No
Method of disinfection: _____
Was water quality tested? ☐ Yes ☒ No
Water quality parameters tested: _____

Well driller name: _____
Company name: ARCTIC DRILLING INC. _____
Mailing address: _____
City: _____ State: AK Zip: _____
Phone number: () - -

Driller's signature: _____
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 Development Services Department/City within 30 days of well completion.

City Permit Number: _____
Date of Issue: / /
Parcel Identification 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:

<https://dnr.alaska.gov/welts/>

OR email electronic well logs to

dnr.water.reports@alaska.gov

ARCTIC DRILLING, INC.

P.O. BOX 58317

FAIRBANKS, ALASKA 99711

Phone: (907) 451-8706 Fax: (907) 452-4465

DEPARTMENT OF NATURAL RESOURCES**DIVISION OF MINING, LAND & WATER****WATER WELL RECORD**Drilling Started: 6 / 28 / 18, Completed: 7 / 12 / 18

Legal Description:		BLOCK	LOT	Property Owner Name & Address: TWUA F2018-097 Fort Greely Contractor Lay down yard/ Material Site	
City/Borough:	Subdivision:				
Ft Greely					
Meridian <u>Fairbanks</u> Township <u>11</u> Range <u>10</u> Section <u>23</u> , SE <u>1/4</u> of <u>1/4</u> of <u>1/4</u> of <u>1/4</u>					
BOREHOLE DATA: (from ground surface)		Depth		Drilling method: ☐ Air rotary, ☐ Cable tool ☐ Other _____	
Material: Type, Color & wetness		From To		Well use: ☐ Public supply, ☒ Domestic, ☐ Other _____	
Gravel	0	80		Depth of hole: _____ ft, Casing stickup: <u>2</u> ft	
Small sandy gravel with clay	80	100		Casing type: <u>STEEL</u> Thickness <u>.250</u> inches	
				Casing diameter: <u>8</u> inches Casing depth <u>400</u> ft	
Gravel, large	100	160		Liner type: _____ Diameter: _____ inches Depth: _____ ft	
Hard Gravel	160	300		Static water (from top of casing): <u>300</u> ft on <u>7</u> / <u>3</u> / <u>18</u>	
Wet Coarse Gravel	300	320		Pumping level & yield: <u>400</u> feet after <u>1</u> hours at <u>400</u> gpm	
Gravel and water, 50 gpm, est.	320	340		Recovery rate: <u>400</u> gpm, Method of testing: <u>AIR LIFT</u>	
Gravel, boulders and water, 100 gpm est	340	360		Development method: <u>AIR SURGE</u> Duration: <u>1.5 HOURS</u>	
Silty gravel and water, 300 gpm est.	360	380		Well intake opening type: ☒ Open end ☐ Open hole	
Silty gravel and water, 400 gpm est.	380	400		☐ Screened; Start: _____ ft, Stopped _____ ft	
				Screen type: _____ Slot/mesh size _____	
				☐ Perforated; Start: _____ ft, Stopped _____ ft	
				Start: _____ ft, Stopped _____ ft	
				Note: _____	
				Grout type: <u>bentonite</u> Volume <u>2</u> cf	
				Depth; from <u>0</u> ft, to <u>20</u> ft	
				Pump intake depth: <u>380</u> ft	
				Pump size <u>40 HP/460v</u> hp Brand name <u>National</u>	
				Was well disinfected upon completion? ☐ Yes ☒ No	
				Method of disinfection: _____	
				Driller comments/ disclaimers: Flow rate tests indicated flow rate at well outlet of 270-285 gallons per minute. Results are attached in this document.	
				Well driller name: <u>Dan Brotherton</u>	
				Company name: <u>ARCTIC DRILLING, INC.</u>	
				Mailing address: <u>P.O. BOX 58317</u>	
				City: <u>FAIRBANKS</u> State: <u>AK</u> Zip <u>99711</u>	
				Phone number: (<u>907</u>) <u>451</u> - <u>8706</u>	
				Drillers signature: _____	
				Date: <u>7</u> / <u>3</u> / <u>18</u>	

State law requires that a copy of this well log be submitted to the state of Alaska within 45 days. **CITY OF ANCHORAGE ONLY**

(Alaska statutes: 38.05.020, 38.05.035, 41.08.020, 46.15.020 and regulations 11 AAC 93.140.)

DNR/DIVISION OF MINING, LAND & WATER
550 West 7th Ave., Suite 900A
ANCHORAGE AK 99501-3577

Phone (907)269-8503, Fax (907) 269-8947

The City of Anchorage requires that a copy of this log be sent to the city within 60 days and a copy of this log be sent to the owner of the property on which the well is located within 30 days.

REQUIRED BY THE CITY OF ANCHORAGE ONLY:

Permit Number: _____

Date of Issue: _____ / _____ / _____

Parcel Identification Number: _____ - _____ - _____

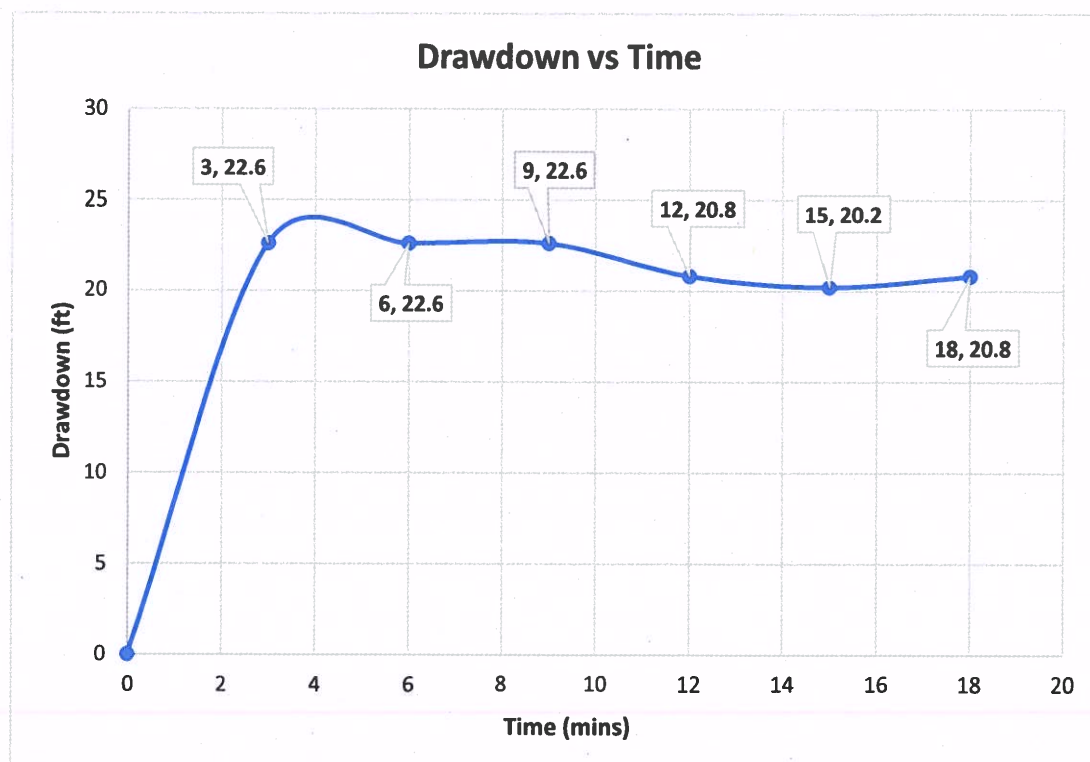
Is well located at approved permit location? ☐ Yes ☐ No

Temporary Well Testing Info.**7-12-18**

On July 12th Brice with USACE Mike Augustin measured flow rate at pump outlet and water levels/drawdown at well. Results are shown below, static water level was measured at 288 feet, well drawdown stabilized at ~ 308' below ground surface level.

Table 1: Drawdown Info.

Static Water Level (ft)	Time (mins)	Drawdown (ft)
288	0	0
—	3	22.6
	6	22.6
	9	22.6
	12	20.8
	15	20.2
	18	20.8



As shown in the previous figure, the well stabilized at ~ 308' after pumping at a rate of $Q = 270$ gpm for at least 12 mins.