



STATE OF ALASKA 45714
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND & WATER
Alaska Hydrologic Survey

WATER WELL LOG Revised 08/18/2016

Drilling Started: / / Completed: 12 / 22 / 1974 Pump Install: / /

City/Borough	Subdivision	Block	Lot	Property Owner Name & Address
Municipality of Anchorage	NA		NA	Municipality Of Anchorage AK,

Well location: Latitude 61.1824188 Longitude -149.71701
Meridian S Township 013N Range 002W Section 30, NW 1/4 of SW 1/4 of SW 1/4 of SW 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
OVERBURDEN	0	0
GRAVEL	0	19
BROWN CLAY LITTLE GRAVEL	19	22
BROWN SILT	22	30
BROWN GRAVELLY TILL	30	35
BROWN SILTY TILL	35	43
SILTY GRAVELLY TILL	43	55
LOOSE HEAVING SAND AND GRAVEL	55	63
CEMENTED GRAVEL BROWN CLAY	63	65
SAND AND GRAVEL	65	65
CEMENTED GRAVEL BROWN CLAY	65	69
SAND AND GRAVEL HEAVING	69	74
GRAVELLY RED CLAY	74	98
GRAVELLY GREENISH CLAY	98	117
GRAY GREEN GRAVELLY TILL	117	162
CEMENTED GRAVEL	162	183

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

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: 183 ft Casing stickup: ft

Casing type: Casing thickness: inches

Casing diameter: 8 inches Casing depth: 79.8 ft

Liner type: Depth: ft Diameter: inches

Note:

Well intake opening type: ☐ Open end, ☐ Open hole, ☒ Other

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): 57 ft on / / Artesian well ☐

Pumping level & yield: feet after 24 hours at 310 gpm

Method of testing:

Development method: Duration:

Recovery rate: gpm

Grout type: Volume

Depth: From ft, To ft

Final pump intake depth: 69.8 ft Model:

Pump size: 50 hp Brand name:

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: CLEMENSON DRILLING

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

WELL 25

45714

WELL DATA

Location Military Well #1
Structure Block Size O.D. 12'6" x 15'6"
Well Drilled By Clemenson Date 12/22/74
Well Put In Service - Date 6/30/74
Well Depth 79.8' Casing Depth 79.8' Casing Size 8"

Static Level 57' Draw Down 9' Air Line Depth 62'
Pump Name Peerless Pump Size 50 HP 6"
Column Size 6" Column Depth 69.8'
GPM Rated 660 GPM Sustained ~~660~~ 600
Pressure Tank Size NONE Pressure 40 to 56 PSI
Power Phase 3 Power Voltage 480
Chlorinator - Gas X Liquid Size Gals.
Air Compressor Size No
Other

/dt

September 30, 1974

AS-BUILT REPORT
WATER WELL AT MILITARY WELL SITE #1

TOTAL DEPTH: 183 feet
CASING SIZE: 8 inch
LOCATION: S.W. 1/4, Sec. 30, T 13 N., R 2 W., S.M., Alaska
(See Attached Sketch)
DRILLER: Clemenson Drilling
OWNER: Central Alaska Utilities, Inc.

The contractor moved a cable tool rig on the site October 15, 1973, and began drilling October 17, 1973. This well was started with 26' - 3" of 10" surface casing at which point drilling continued with 8" casing to a total depth of 183 feet. At this location resistance was met and determined to be bed rock and the drilling was terminated. The casing was driven to depth 172'. Drilling was completed on November 5, 1973.

The principle aquifer was determined to be between 69' and 74'. The driller could not get a good bail test at the time of drilling due to heaving materials (up to 5') in the casing. The aquifer later proved out in the pump test. The only other sources of water recorded were at 60' and 65'. They both had good bail tests, but the aquifers were not very thick and since they are all likely interconnected, attention was given to just the one between 69' and 74'.

The well was screened with 10' - 9" of 8" U.O.P. Johnson Co. stainless steel screen with 200 slot throughout the entire length. The screen has a bail bottom and lead packer top. The screen is installed between 63' - 11" and 74' - 8" and the casing was pulled back to 68' to expose the bottom 6' - 8" of the screen. In preparation for the screen the 8" casing was backfilled with coarse, clean gravel to 80', cut with a shaped charge at 75' and removed. Backfill was then completed and the screen installed.

In preparation for test pumping, 38-1/2 hrs. of development time was expended surging and bailing the well. The pump test was accomplished with a 4" turbine pump with the intake set at approximately 66'. The 24 hr. test was conducted on November 19 and 20, 1973, at a rate of 310 + gpm. See the attached drawdown and recovery curves for additional information on the pump-test.

Attached is a summary of materials and conditions recorded during the drilling. The complete set of drilling logs is available in the job file at DOWL Engineers.

John E. Paulson

John E. Paulson

JP

SUMMARY

DRILLING LOG OF MILITARY WELL #1

<u>DEPTH (ft.)</u>	<u>MATERIALS</u>
0 - 1/2	Overburden
1/2 - 19	Gravel
19 - 22	Brown clay, little gravel
22 - 30	Brown silt
30 - 35	Brown gravelly till
35 - 43	Brown silty till, little gravel
43 - 55	Silty gravelly till
55 - 63	Loose heaving sand & gravel (60', bailed 70 gpm, negligible draw-down)
63 - 65	Cemented gravel, brown clay
65 - 65 1/2	Sand & gravel (65', bailed 60 gpm for 10 min., 1'-7" draw-down, static level 44')
65 1/2 - 69	Cemented gravel, brown clay
69 - 74	Sand & gravel, heaving
74 - 98	Gravelly red clay, hard drilling
98 - 117	Gravelly-greenish clay
117 - 162	Gray-green gravelly till
162 - 183	Cemented gravel, gray-black material at 183' and drill bit starting to stick.

TIME-DRAWDOWN CURVE
MILITARY EXPLORATORY SITE #1
24 HOUR PUMP TEST
10:00 A.M. NOV. 19, 1973 TO NOV. 20, 1973
8" WELL; 310 GPM
CLEMENSON DRILLING

