23211

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

WATER WELL LOG Revised 08/18/2016

Drilling Started: ___/___/_____ Completed: 11 / 9 / 1993 Pump Install: ___/___/_____

City/Borough	Subdivision	Block	Lot	Property Owner Name & Address
Municipality of Anchorage				US DOD, AIR FORCE, ELMENDORF AFB ,HOSPITAL ,

Well location: Latitude 61.23294799999999 **Longitude** -149.742537
Meridian S Township 013N Range 003W Section 12 , NE 1/4 of SE 1/4 of SW 1/4 of NW 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	Depth To
Loose sand & gravel w/cobbles	0	25
Streaks of grey silt in gravel	25	30
Silty sand &gravel w/occasional cobbles	30	70
Grey cemented hard pan	70	82
Silty sand and gravel, some runny sand (fine)	82	107
brown/grey medium hard pan	107	116
Cleaner medium sand and gravel	116	117
Very silty gravel	117	125
Coarse gravel cobbles wet	125	126
Medium sand w/ traces of small gravel	126	128
Heavier silt w/cemented conglomerate	128	135
Silty sand gravel w/ cobbles	135	140
Grey silty sand and gravel wet	140	172
Tight grey /brown hard pan	172	185
Silty gravel,wet,cleaner sand water streak	185	201
gravelly silts	201	211
Silty gravel w/ water	211	219

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

North

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: 278 ft Casing stickup: _____ft
Casing type: _____ Casing thickness: _____ inches
Casing diameter: _____ inches Casing depth: 278 ft
Liner type: _____ Depth: _____ ft Diameter: _____inches
Note: FULL CASE

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): _____ ft on___/___/_____ Artesian well ☐
Pumping level & yield: _____ feet after _____ hours at _____ gpm
Method of testing:_____
Development method:_____ Duration: _____
Recovery rate: _____ gpm

Grout type: _____ Volume _____
Depth: From _____ft, To _____ft

Final pump intake depth: _____ ft Model: _____
Pump size: _____ 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: DENALI DRILLING .....
Mailing address:.....
City: _____ State: AK Zip: _____
Phone number: (_____) _____- _____
Driller's signature: _____
Date: _____/_____/_____

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

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: _____-_____-_____

*Guide for Using the Hydrogeologic Classification System for Logging Water Well Boreholes by Thomas M. Hanna NGWA Press

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Appendix B

RECEIVED
DEC 12 1994

Driller's Log

WATER WELL RECORD
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
Division of Geological & Geophysical Surveys

PW-1

ALASKA DNR/DIV OF WATER

Drilling Permit No. _____
A.D.L. No. _____

LOCATION OF WELL (Please complete either 1a, 1b or 1c.)

1a Borough	Subdivision	Lot	Block	1b ¼ qtrs —of—of—of—	Section No.	Township N☐ S☐	Range E☐ W☐	Meridian

1c DISTANCE AND DIRECTION FROM ROAD INTERSECTIONS

Street Address and Area of Well Location

3. OWNER OF WELL:
Address: Corp of Engineers
Elmendorf Medical Facility
Elmendorf AFB, Alaska

2. WELL LOG Material Type	Feet Below Surface Top	Bottom
loose sand & gravel w/ cobbles	0	25
streaks of grey silt in gravel	25	30
silty sand & gravel w/occassional cobbles	30	70
grey, cemented hard pan	70	82
silty S & G, some runny sand (fine)	82	107
brn/grey med. hard pan	107	116
cleaner med. S & G (wet)	116	117
very silty gravel	117	125
coarse gravel, cobbles, (wet)	125	126
med. sand w/ traces of sm. gravel	126	128
heavier silt w/cemented conglomerate	128	135
silty S & G w/ cobbles	135	140
grey silty S & G, wet	140	172
tight grey/brn hard pan	172	185
silty gravel (wet)	185	201
cleaner sand H_2O strk. @ 190-191		
gravelly silts	201	211
silty gravel) w/ H_2O @ 217	211	219
very silty conglomerate w/ cobbles	219	230
H_2O S & G, cleaner	230	231
med. gravelly silt	231	237
very thick & creamy silt	237	240
grey/brn. gravelly silt	240	259
tight, grey/blk. silt w/sm. gravel pieces	259	264
grey clay w/ seams of coal	264	280

4. WELL DEPTH: (final) 280 ft.

5. DATE OF COMPLETION 11 - 9 - 93

6. ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Auger ☐ Jetted ☐ Bored ☐ Other:

7. USE: ☐ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Recharge ☐ Commerical ☐ Test Well ☐ Other: cooling well

8. CASING: ☐ Threaded ☒ Welded
diam. 24 in. to 145 ft. Depth Weight ___ lbs / ft
diam. 20 in. to 280 ft. Depth Stickup 2 ft.

9. FINISH OF WELL:
Type: n/a Diameter: _____
Slot/Mesh Size: _____ Length: _____
Set between _____ ft. and _____ ft.
Backfilling n/a Gravel pack _____

10. STATIC WATER LEVEL: n/a ft. / / Date
☐ Above or ☐ Below land surface
Equipment used: _____

11. PUMPING LEVEL below land surface and YIELD n/a
_____ ft. after _____ hrs. pumping _____ g.p.m.
_____ ft. after _____ hrs. pumping _____ g.p.m.

12. GROUTING Well Grouted: ☐ Yes ☐ No n/a
Material: ☐ Neat Cement ☐ Other: _____

13. PUMP: (if available) HP n/a
Length of Drop Pipe _____ ft. capacity _____ g.p.m.
☐ Subm. ☐ Jet ☐ Centrifical ☐ Other

14. REMARKS:

15. Water Temperature ____ ° ☐ F ☐ C

16. WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief;

Denali Drilling, Inc. (Registered Business Name)
1495 (Contract License Number)

Address: 6000 A Street, Anchorage, Alaska 99518-1815

Signed: _____ (Authorized Representative) Date: 11-10-93

USGS Local No. SB13-3-12BCDA

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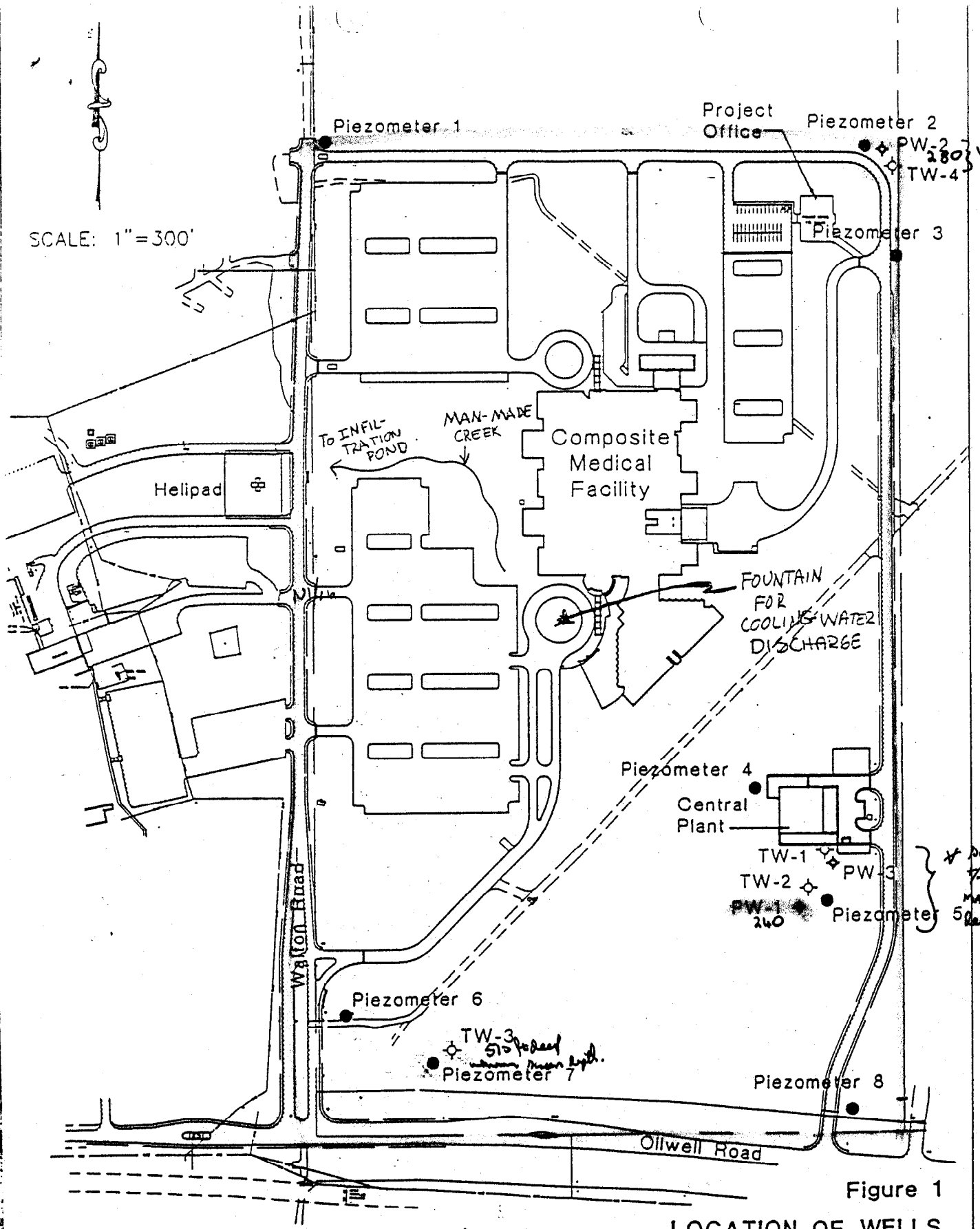

Figure 1

LOCATION OF WELLS

DOWL ENGRS / HOSPITAL WELLS / ELMENDORF AFB

OJECT NO 963-5289 AutoCAD FILEwells97.dwg DATE 6/20/97 DRAWN Dowl APPROVED Golder Associates

ATTACHMENTS

SB 13-3-12 BCDA