

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

WATER WELL LOG Revised 08/18/2016

| Drilling Started: 3 / 13 / 2025 Complete                              |                       |                | Comple     | eted: <u>3 / 21 / 2025</u> Pump Install://   |  |  |  |
|---|-----------------------|----------------|------------|--|--|--|--|
| City/Borough  | Subdivis              | ion            | Block      | Lot Property Owner Name & Address  |  |  |  |
| North Slope Borough   |                       |                |            | Hilcorp Alaska LLC,  |  |  |  |
| Well location: Latitude 70.5  |                       |                |            | Longitude -149.8692  |  |  |  |
| Meridian <u>U</u> Townsl  | nip <u>013N</u> Ran   | ge <u>009E</u> | Sectior    | 0.05 , SW 1/4 of SE 1/4 of SW 1/4 of NE 1/4  |  |  |  |
| BOREHOLE DATA: (from g  |                       |                |            | Drilling method: Air rotary, Cable tool, Other   |  |  |  |
| Suggest T.M. Hanna's hydroge https://my.ngwa.org/NC Produ             |                       |                |            | Well use: ■Public supply, □Domestic, □Reinjection, □Hydrofracking  |  |  |  |
| nttps://my.ngwa.org/NCrodu  | <u>ct:id=a1030000</u> |                | epth       | ☐ Commercial, ☐ Observation/Monitoring, ☐ Test/Exploratory, ☐ Cooling,   |  |  |  |
|   |                       | <u>From</u>    | <u>To</u>  | ☐Irrigation/Agriculture, ☐Grounding, ☐Recharge/Aquifer Storage,  |  |  |  |
| gravel: medium, sandy   |                       | 0              | 44         | ☐ Heating, ☐ Geothermal Exploration, ☐ Other   |  |  |  |
| clay: silty, black  |                       | 44             | 56         | Fluids used:   |  |  |  |
| silt with gravel: wet, m  | nucky                 | 56             | 73         | Depth of hole: 91ft Casing stickup: 2.5ft  |  |  |  |
| water gravel: medium, s   | sandy                 | 73             | 91         | Casing type: A53B Steel Casing thickness: 322 inches Casing diameter: 8 inches Casing depth: 78 ft                               |  |  |  |
|   |                       |                |            | Liner type: Depth: ft Diameter:inches  |  |  |  |
|   |                       |                |            | Note:  |  |  |  |
|   |                       |                |            | Well intake opening type: ☐ Open end,☐ Open hole, ☐ Other screened   |  |  |  |
|   |                       |                |            | Screen type: stainless steel, Screen mesh size: .03  |  |  |  |
|   |                       |                |            | Screen start: 79  ft, Screen stop: 90  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): 24.9ft_on// Artesian well   |  |  |  |
|   |                       |                |            | Pumping level & yield: 6.6 feet after 17 hours at 150 gpm  |  |  |  |
|   |                       |                |            | Method of testing: submersible pump  |  |  |  |
|   |                       |                |            | Development method: air surge Duration:  |  |  |  |
|   |                       |                |            | Recovery rate: gpm   |  |  |  |
|   |                       |                |            | Grout type: bentonite Volume 650 lbs   |  |  |  |
| Include description or sketch of                                      | well location (in     | clude road     | names      | Depth: From 0 ft, To 13 ft   |  |  |  |
| buildings, etc.):   | well location (in     | cidde ioac     | a Hairies, | Final pump intake depth: ft Model: 160L10  |  |  |  |
|   |                       |                |            | Pump size: 10 hp Brand name: Goulds  |  |  |  |
|   |                       |                |            | Was well disinfected upon completion? Yes No   |  |  |  |
|   |                       |                |            | Method of disinfection:  |  |  |  |
|   |                       |                |            | Was water quality tested? Yes No   |  |  |  |
|   |                       |                |            | Water quality parameters tested:  Well driller name: Wayne Westberg  |  |  |  |
|   |                       |                |            | Company name: M-W Drilling, Inc.   |  |  |  |
|   |                       |                |            | Mailing address: PO Box 110389   |  |  |  |
| <u>†</u>  |                       |                |            | City: Anchorage State: AK Zip: 99511   |  |  |  |
|   |                       |                | Noth       | Phone number: ( <u>907</u> ) <u>345</u> - <u>4000</u>  |  |  |  |
| AS 41.08.020(b)(4) and AAC 11 copy of the well log be submitte        |                       |                |            | Driller's signature:   |  |  |  |
| Resources within 45 days of w   | ell completion.       | Well logs      |            | Date: / /  |  |  |  |
| be submitted using the online well log reporting system available at: |                       |                |            | Date:// Anchorage Municipal Code 15.55.060(I) and North Pole Ordinance 13.32.030(D) require                                      |  |  |  |
| https://dnr.alaska.gov/welts/   |                       |                |            | that a copy of this well log be submitted to the Development Services Department/City within <b>30 days of well completion</b> . |  |  |  |
| OR email electronic well logs to                                      |                       |                |            | City Permit Number: Date of Issue://   |  |  |  |
| dnr.water.reports@alaska.gov  |                       |                |            | Parcel Identification Number:  |  |  |  |

## M-W Drilling, Inc.

Job No.:25-103

## **GROUNDWATER WELL LOG**

| Well Owner:        | Hilcorp Alaska LLC                            | Use of Well: | Public |  |  |  |
|--------------------|---|--------------|--------|--|--|--|
| Site Description:  | Hilcorp Oliktok Point Production Pad, Well #4 |              |        |  |  |  |
| Legal Description: |   |              |        |  |  |  |
| Well Coordinates:  | Lat: 70.5100 Long: -149.8692                  |              |        |  |  |  |

### **CONSTRUCTION**

| Drill Method:                   | Air           | rotary        | Hole Size:   | 8"   |            |           | Well Depth:      | 93'             |  |
|---------------------------------|---------------|---------------|--|--|------------|-----------|------------------|-----------------|--|
| Casing Material                 | A53           | B steel       | Casing Size:   | 8"   | Wall:      | .322      | Cased to:        | 80.51'          |  |
|                                 |               |               |  |  |            |           |                  |                 |  |
| Well Completion: Open end:      |               | Screen: X     | Liner:   | Perfora  | ated:      | Method:   |                  |                 |  |
| Screen/Perforation Description: |               |               | 6" K-packer &  | 6" K-packer & riser pipe: 77.7' to 81.7'; 6" stainless steel 0.030 slot well |            |           |                  |                 |  |
|                                 |               | screen: 81.7' | screen: 81.7' to 92'; 6" tailpipe & butt plate: 92' to 93' |  |            |           |                  |                 |  |
|                                 |               |               |  |  |            |           |                  |                 |  |
| Grout Notes:                    | 13 sacks      | (50#ea) of    | 3/8" bentonite ch  | ips installed  | in anulu   | s betwee  | n 12" surface ho | ole & 8" casing |  |
|                                 | from grou     | and surface   | e to 13'   |  |            |           |                  |                 |  |
|                                 |               |               |  |  |            |           |                  |                 |  |
| Well Development: Air surge     |               |               |  |  |            |           |                  |                 |  |
| Well Disinfected: no Method:    |               |               | od:  |  |            |           |                  |                 |  |
| Yield Test at                   | 150 <b>GF</b> | M for         | 17 hour(s) with  | 6.6'   | of drawd   | down (DD  | ) from static le | vel (SWL).      |  |
| Method: Subr                    | nersible pu   | ımp           |  |  | Static W   | /ater Lev | el (SWL): 24.    | 9'              |  |
| Start Date:                     | 3/13          | Com           | Completion Date: 3/21/25                                   |  |            |           |                  |                 |  |
| Test Pump Date                  | 3/22          | Final Pump    | Final Pump Install Date: 3/21/25                           |  |            |           |                  |                 |  |
|                                 |               |               | Pump Insta   | Pump Installation Notes: Goulds 160L10 6" pump end & 10hp, 460v,             |            |           |                  |                 |  |
|                                 |               |               | 3ph  | motor inst   | alled in w | ell on 60 | of 3" HDPE pip   | e.              |  |

### **SLANT WELL LOG**

| Depth in feet from top of casing. |    | -   | Details of formations penetrated, size of material, color and miscellaneous details. |  |  |  |  |
|-----------------------------------|----|-----|--|--|--|--|--|
| 0                                 | TO | 2.5 | Casing Stick up  |  |  |  |  |
| 2.5                               | TO | 46  | Gravel: medium, sandy  |  |  |  |  |
| 46                                | TO | 58  | Clay: silty, black   |  |  |  |  |
| 55                                | TO | 75  | Silt with gravel: wet, mucky   |  |  |  |  |
| 75                                | TO | 93  | Water gravel: medium, sandy  |  |  |  |  |
|                                   |    |     |  |  |  |  |  |
|                                   |    |     | Note: Well drilled on 45° SLANT  |  |  |  |  |
|                                   |    |     | Measurements are true length, not true vertical                                      |  |  |  |  |
|                                   |    |     |  |  |  |  |  |
|                                   |    |     | Kris G. Westberg   |  |  |  |  |
|                                   |    |     | President, M-W Drilling, Inc.  |  |  |  |  |
|                                   |    |     | Alaska Gen Contr Lic #1000   |  |  |  |  |
|                                   |    |     |  |  |  |  |  |