FILE NAME: Station Record AK 008.doc

LAST UPDATED: 8/28/23

**PRUDHOE BAY, ALASKA**

### WEST DOCK HIGH

### Station Record

**STATION:** AK008, WEST DOCK HIGH (008)

|  |  |  |  |
| --- | --- | --- | --- |
| **PROJECT MANAGER:**  Phone:  FAX:  E-mail: | C.A. Seybold  USDA NRCS  Federal Bldg., Rm. 152  Lincoln, NE 68508  (402) 437-4132  (402) 437-5336  cathy.seybold@lin.usda.gov | F. E. Nelson  Department of Geography  University of Delaware  Newark, Delaware 19711  (302) 831-0852  (302) 831-6654  fnelson@udel.edu | K. M. Hinkel  Department of Geography  University of Cincinnati  Cincinnati, Ohio 45221-0131  513-556-3430  513-556-3370  71042.2643@compuserve.com |

**LOCATION:** Prudhoe Bay, Alaska, on the ARCO oil field near West Dock.

GPS (08/13/01): 70° 22’ 13.4” N

148° 34’ 07.1” W

30 ft elevation

GPS (06/23/02): 70° 22’ 13.5” N

148° 34’ 06.9” W

41 ft elevation

GPS (08/21/03): 70° 22’ 13.4” N

148° 34’ 06.9” W

6 ft elevation

GPS (08/19/04): 70° 22’ 13.4” N

148° 34’ 06.9” W

1 ft elevation

GPS (08/16/05): 70° 22’ 13.4” N

148° 34’ 07.2” W

5 ft elevation

GPS (08/10/08): 70° 22’ 13.4” N

148° 34’ 06.9” W

3 ft elevation

GPS (08/17/09): 70° 22’ 13.4” N

148° 34’ 07.1” W

3 ft elevation

GPS (08/11/10): 70° 22’ 13.4” N

148° 34’ 06.9” W

8 ft elevation (7 ft)

GPS (08/9/12): 70° 22’ 13.3” N

148° 34’ 07.0” W

11 ft elevation

**INSTRUMENTATION:**

Summary

| Quantity | Description | Comments |
| --- | --- | --- |
| 1 | Campbell ENC 16/18 enclosure. | Installed 2001 Supplied by Fritz Nelson |
| 1 | Campbell 6-ft tripod | Installed 2001 Supplied by Fritz Nelson |
| (1) | Campbell CR10X-1M datalogger SN: X17921. Wiring panel SN: 10181. | Installed 2001; Removed 2008 |
| 1 | Campbell CR1000 and Wiring Panel | Installed 2008 |
| (1) | Campbell CSM1-XT card storage module SN: E3400. | Installed 2001 Removed 2003 |
| 1 | Campbell Storage module SM4M | Installed 2003 |
| 1 | Campbell PS12LA power supply SN: 17116. | Installed 2001 |
| (1) | 7 Ah battery | replaced 2003, removed 2005 |
| 1 | 12 Ah battery | Installed 2005, replaced 2012 |
| 1 | Campbell Solar panel. | Installed 2001 Supplied by Fritz Nelson |
| 2 | LiCor LI200X solar radiation sensors | Installed 2001 one pointed downward for albedo |
| (1) | REBS Q\*7.1 net radiometer (SN:00259 and SN:Q06144) | Installed 2001; Removed 2006; re-installed 2007; Removed 2008 |
| 1 | CNR2 net radiometer (SN: 070005) | Installed 2008 |
| (1) | MetOne wind sensor | Installed 2001, replaced 2006; remove 2007 |
| 1 | R.M. Young wind sensor | Installed 2007 |
| 1 | Campbell 107 air temperature sensor | Installed 2001 |
| 1 | Campbell gill shield radiation sensor for 107 | Installed 2001 |
| 4 | MRC soil temperature probes | Supplied by Fritz Nelson, one installed 2001; three installed 2002. |

**HISTORY:**  August 14, 2001: Station initiated. A Campbell Scientific CR10X datalogger along with a Campbell CSM1-XT Card Storage Module, and a Campbell PS12LA power supply, were located inside of a Campbell ENC16/18 enclosure. Instrumentation consists of a Campbell 107 air temperature sensor mounted at 2 m, two Licor LI200X solar radiation sensors, one pointing up and one pointing down for albedo, a MetOne wind sensor, and a Q7 net radiometer. One MRC probe was installed. The rest will be installed in June 2002. They weren’t installed due to problems with the drill. Datalogger was set to Alaska Savings Time. The datalogger program, *westdock* v. 1.00, was downloaded to the CR10. Measurements are made at 20-minute intervals and averaged and recorded every hour. The enclosure was mounted on a 6-ft tripod. Power is supplied by a Campbell (SolarX) MSX10 solar panel, mounted on the tripod.

June 23, 2002: Repaired animal damage to MRC probe lead (foxes chewed through one of the wires). Downloaded data to palmtop. Li Battery V = 3.1264V. Datalogger ID set to 8. Completed installation of the three MRC probes that were not installed last year. Everything seems to be working OK.

August 21, 2003: Downloaded data. Downloaded updated program to get maximum wind speed. Added storage module SN: 3477. Added two desiccant. Replaced power supply—12V,7ah. Reset clock—was about 25 min ahead. Everything seems to be working OK. Used black tape to re-tape the net radiometer. Tripod stacks were out of the ground 1-2 inches—could not push them back in. White conduit was located underneath the radiometer.

August 19, 2004: Downloaded data from storage module. Added storage module SN:3470. Added two desiccant. Station clock was about 3.5 min ahead. Did not reset clock. Everything seems to be working OK. Tripod stacks were out of the ground 3 inches—pushed them back in. White conduit was located underneath the radiometer. MRC probes were above the soil surface—#1 was 6 cm, #2 was 6 cm, #3 was 10 cm, and #4 was 8 cm above soil surface. Photos were taken of each probe. Watch corrosion on wind speed instrument.

August 16, 2005: The globe on the bottom side was slightly damaged and was unable to replace it; the screws were stripping. Leveled net radiometer. Wind sensor looked okay; showing signs of corrosion, could hear some slight noise from wind speed sensor, but appeared to be turning with ease. Next year replace wind sensor. Downloaded data from data logger and swapped storage modules. Added storage module SN:3467. Station clock was 3 min behind. Replaced 7 Ah battery with a 12 Ah battery. Everything seemed to be working OK. Added two desiccant packs. MRC probes were above the soil surface—#1 was 7 cm, #2 was 6 cm, #3 was 9 cm, and #4 was 9 cm above soil surface.

August 18, 2006: Arrived at about 2:20 PM. The globe on the bottom side was chewed and the top was damaged; the screws were stripping; tried to use WD40; could not get loosen screws; the cable was chewed in two places, severed in one place. Wind speed sensor was sqeaking; wind speed was reading zero; bad cable. Replaced wind sensor and cable. Swapped storage modules. Station clock was 5 min ahead; reset clock. Everything else seemed to be working OK. Added two desiccant packs. MRC probes were above the soil surface—#1 was 5 cm, #2 was 4 cm, #3 was 7 cm, and #4 was 7 cm above soil surface (measured from ground surface to middle of MRC cable insertion point).

August 19, 2006: Arrived at about 6:30 PM. Removed the net radiometer from the station for repair. Re-install net radiometer for next time.

August 13, 2007: Downloaded data from logger to palm. Swapped storage modules. Replaced the MetOne wind sensor with an R.M. Young wind sensor. Re-installed the net radiometer. The two U-bolts were missing. Took one U-bolt from the other station and used zip-ties and black tape to secure the net radiometer. Need to bring two U-bolts for next time. Downloaded new program to datalogger. The new program takes into account the R.M. Young wind sensor. Station clock was 8 min ahead; reset clock. Lithium battery was 3.124 V. Everything else seemed to be working OK. Extra globes, gaskets, and screws were left in the enclosure. Added two desiccant packs. MRC probes were above the soil surface—#1 was 6 cm, #2 was 5 cm, #3 was 9 cm, and #4 was 10 cm above soil surface (measured from ground surface to middle of MRC cable insertion point).

August 10, 2008: Arrived at station at about 3:15 PM. The CR10X datalogger was replaced with a CR1000 datalogger to accommodate a new net radiometer (CNR2). Removed CR10X (lithium battery was 3.15 V) and storage module and downloaded at the Hotel. Installed a CNR2 net radiometer and removed the old Rebs net radiometer. The globes were in tacked and not dented. The radiometer was slightly off level. Reset the clock. Everything else seemed to be working OK. MRC probes were above the soil surface—#1 was 6 cm, #2 was 5.5 cm, #3 was 9.5 cm, and #4 was 11 cm above soil surface (measured from ground surface to middle of MRC cable insertion point).

August 11, 2008: Put silicone sealant on connection between net radiometer and power cord, and between net radiometer and post.

August 17, 2009: Downloaded data from CR1000. Everything seemed to be working okay. Checked reference values on the MRC probes—all okay. Could not get the desiccant compartment opened on the CNR2 net radiometer. Stripped one of the screws and lost one. Replace for next time (screws and desiccant). The radiometer was level. Station clock was okay. MRC probes were above the soil surface—#1 was 6.5 cm, #2 was 5.0 cm, #3 was 10 cm, and #4 was 11 cm above soil surface (measured from ground surface to middle of MRC cable insertion point). MRC vegetation sensor #3 was pushed back into the surface veg. Added one desiccant pack. Extra CNR2 desiccant (3) and U-bolts (2) were left in the enclosure. Air temp was 3.5°C.

August 11, 2010: Downloaded data from CR1000 with RECON. Everything seemed to be working okay. Attempted to replace desiccant on the CNR2 net radiometer, but was unable to get screws out. The net radiometer was tilted down; re-leveled. Station clock was 20 s difference. Lithium battery was 3.4 volts; battery was 13.9 volts. Wind sensor looked good with no noise. MRC probes were above the soil surface—#1 was 7 cm, #2 was 5.5 cm, #3 was 9.5 cm, and #4 was 12.5 cm above soil surface (measured from ground surface to middle of MRC cable insertion point). Extra CNR2 desiccants (2) are in the enclosure. Air temp was 4.7°C, wind speed was 12 mph, and was foggy.

August 9, 2012: Downloaded data from CR1000 with RECON. Everything seemed to be working okay. The net radiometer was level. Station clock was 25 seconds behead. Lithium battery was 3.4 volts; battery was 13.6 volts. Replaced the battery; battery voltage was 12.9 volts. Wind sensor looked good with some noise; replaced bearings. Wiped off pyronometer sensors; top sensor was slightly off center. MRC probes were above the soil surface—#1 was 7.5 cm, #2 was 4.5 cm, #3 was 9 cm, and #4 was 13.5 cm above soil surface (measured from ground surface to middle of MRC cable insertion point). Extra CNR2 desiccants (2) are in the enclosure. Air temp was 13.5°C, wind speed was 6-7 mph, and was overcast. Pushed the tripod rebar stakes back in a couple of inches.

August 9, 2014: Downloaded data from CR1000 with RECON. Station clock was 4 min behind. Top radiometer was almost perfect, so left as was. MRC probes were above the soil surface—#1 was 10.5 cm, #2 was 8 cm, #3 was 11.5 cm, and #4 was 18 cm (measured from ground surface to top of MRC probe).

August 11, 2015: AEK. 2:30 pm. Radiometer was almost exactly level but tweaked a very little bit. Downloaded data from CR1000 with RECON. MRC probes were above the soil surface—#1 was 11 cm, #2 was 9 cm, #3 was 14.5 cm, and #4 was 19 cm (measured from ground surface to top of MRC probe).

August 11, 2016: Downloaded data from CR1000 to RECON. The PVC tube was off, but it was duct taped back on. There was a dead caribou calf nearby, so lucky nothing else was damaged.

August 10, 2017: Downloaded data from CR1000 to RECON.

August 8, 2018: Downloaded data onto RECON. MRC probe #1 height = 12.5 cm; MRC probe #2 height = 10 cm; MRC probe #3 height = 16 cm; MRC probe #4 height = 23.5 cm. Net radiometer was level.

August 9, 2019: Downloaded data onto RECON. All 4 probes were solid

MRC probe #1 height = 13 cm, 13 cm, 13.5 cm, 14.5 cm

MRC probe #2 height = 10 cm, 12.5 cm, 10 cm, 12.5 cm

MRC probe #3 height = 32 cm, 32 cm, 24 cm, 22 cm

MRC probe #4 height = 36 cm, 14 cm, 14 cm, 13 cm: probe was in water

Net radiometer was leveled.

August 9, 2021: Downloaded data onto RECON. All 4 probes were solidly in the ground. MRC #1 height = 16 cm, MRC #2 height = 12.5 cm, MRC #3 height = 21 cm, and MRC #4 height = 30 cm. Net radiometer was leveled.

August 8, 2022: Downloaded data onto RECON. There was no new data, ended on 3/16/2021. Possibly all of it didn’t get downloaded. MRC #1 height = 16 cm, MRC #2 height = 13 cm, MRC #3 height = 18 cm, and MRC #4 height = 28 cm.

August 7, 2023: Downloaded data onto RECON. MRC #1 height = 15 cm, MRC #2 height = 12 cm, MRC #3 height = 18.5 cm, and MRC #4 height = 28 cm. Net radiometer was leveled.

**DATA:**

DATALOGGER OUTPUT:

| COL | OUTPUT | UNITS | LOCATION | SENSOR | COMMENTS |
| --- | --- | --- | --- | --- | --- |
| 1 | Station ID | N/A | N/A | Campbell CR10 | 008 |
| 2 | Year | N/A | N/A | Campbell CR10 |  |
| 3 | Day | N/A | N/A | Campbell CR10 |  |
| 4 | Time | N/A | N/A | Campbell CR10 | AK savings time |
| 5 | Battery | Volts | Enclosure | Campbell CR10 |  |
| 6 | Int Temp | °C | Datalogger | Campbell CR10 |  |
| 7 | Air Temp | °C | Air 2 m | Campbell 107 |  |
| 8 | Solar Rad | W/m2 | Air 2 m | LiCor LI200X pyranometer | Facing up |
| 9 | Solar Rad | W/m2 | Air 2 m | LiCor LI200X pyranometer | Facing down |
| 10 | Net Rad | W/m2 | Air ½ m | REBS Q\*7.1 net radiometer |  |
| 11 | Net Rad | mV | Air ½ m | REBS Q\*7.1 net radiometer |  |
| 12 | Wind | mph | Air 2 m | MetOne | Speed |
| 13 | Wind | deg | Air 2 m | MetOne | Direction |
| 14 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | vegetation |
| 15 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 0 cm |
| 16 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 5 cm |
| 17 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 10 cm |
| 18 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 15 cm |
| 19 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 20 cm |
| 20 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 25 cm |
| 21 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 30 cm |
| 22 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 35 cm |
| 23 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 45 cm |
| 24 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 70 cm |
| 25 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 95 cm |
| 26 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | 120 cm |
| 27 | Soil Temp | °C |  | MRC Temperature Probe #1 | Reference value |
| 29 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | vegetation |
| 29 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 0 cm |
| 30 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 5 cm |
| 31 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 10 cm |
| 32 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 15 cm |
| 33 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 20 cm |
| 34 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 25 cm |
| 35 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 30 cm |
| 36 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 35 cm |
| 37 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 45 cm |
| 38 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 70 cm |
| 39 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 95 cm |
| 40 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | 120 cm |
| 41 | Soil Temp | °C |  | MRC Temperature Probe #2 | Reference value |
| 42 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | vegetation |
| 43 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 0 cm |
| 44 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 5 cm |
| 45 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 10 cm |
| 46 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 15 cm |
| 47 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 20 cm |
| 48 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 25 cm |
| 49 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 30 cm |
| 50 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 35 cm |
| 51 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 45 cm |
| 52 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 70 cm |
| 53 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 95 cm |
| 54 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | 120 cm |
| 55 | Soil Temp | °C |  | MRC Temperature Probe #3 | Reference value |
| 56 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | vegetation |
| 57 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 0 cm |
| 58 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 5 cm |
| 59 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 10 cm |
| 60 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 15 cm |
| 61 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 20 cm |
| 62 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 25 cm |
| 63 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 30 cm |
| 64 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 35 cm |
| 65 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 45 cm |
| 66 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 70 cm |
| 67 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 95 cm |
| 68 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | 120 cm |
| 69 | Soil Temp | °C |  | MRC Temperature Probe #4 | Reference value |
| 70 | Max Wind | mph | Air 2 m | MetOne | Hourly max 10-s |
| 71 | Max Air Temp | °C | Air 2 m | Campbell 107 | Hourly max 10-s |
| 72 | Min Air Temp | °C | Air 2 m | Campbell 107 | Hourly min 10-s |

DATALOGGER OUTPUT: After 8/13/2007

| COL | OUTPUT | UNITS | LOCATION | SENSOR | COMMENTS |
| --- | --- | --- | --- | --- | --- |
| 1 | Station ID | N/A | N/A | Campbell CR10 | 007 |
| 2 | Year | N/A | N/A | Campbell CR10 |  |
| 3 | Day | N/A | N/A | Campbell CR10 |  |
| 4 | Time | N/A | N/A | Campbell CR10 | AK savings time |
| 5 | Battery | Volts | Enclosure | Campbell CR10 | Hourly ave |
| 6 | Lith Battery | Volts | Datalogger | Campbell CR10 | Hourly min |
| 7 | Int Temp | °C | Datalogger | Campbell CR10 |  |
| 8 | Air Temp | °C | Air 2 m | Campbell 107 | Hourly average |
| 9 | Max Air Temp | °C | Air 2 m | Campbell 107 | Hourly max 10-s |
| 10 | Min Air Temp | °C | Air 2 m | Campbell 107 | Hourly min 10-s |
| 11 | Solar Rad | W/m2 | Air 2 m | LiCor LI200X pyranometer | Facing up |
| 12 | Albedo | W/m2 | Air 2 m | LiCor LI200X pyranometer | Facing down |
| 13 | Net Rad | W/m2 | Air ½ m | REBS Q\*7.1 net radiometer |  |
| 14 | Net Rad | mV | Air ½ m | REBS Q\*7.1 net radiometer |  |
| 15 | Wind | mph | Air 2 m | R.M. Young | Speed |
| 16 | Wind | deg | Air 2 m | R.M. Young | Direction |
| 17 | Max Wind | mph | Air 2 m | R.M. Young | Hourly max 10-s |
| 18 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 19 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 20 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 21 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 22 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 23 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 24 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 25 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 26 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 27 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 28 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 29 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 30 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 31 | Soil Temp | °C |  | MRC Temperature Probe #1 | Reference value |
| 32 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 33 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 34 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 35 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 36 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 37 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 38 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 39 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 40 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 41 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 42 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 43 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 44 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 45 | Soil Temp | °C |  | MRC Temperature Probe #2 | Reference value |
| 46 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 47 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 48 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 49 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 50 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 51 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 52 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 53 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 54 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 55 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 56 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 57 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 58 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 59 | Soil Temp | °C |  | MRC Temperature Probe #3 | Reference value |
| 60 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 61 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 62 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 63 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 64 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 65 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 66 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 67 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 68 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 69 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 70 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 71 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 72 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 73 | Soil Temp | °C |  | MRC Temperature Probe #4 | Reference value |

DATALOGGER OUTPUT: After 8/10/2008

| COL | OUTPUT | UNITS | LOCATION | SENSOR | COMMENTS |
| --- | --- | --- | --- | --- | --- |
| 1 | Time Stamp | N/A | N/A | Campbell CR1000 |  |
| 2 | Record No. | N/A | N/A | Campbell CR1000 |  |
| 3 | Year | N/A | N/A | Campbell CR1000 |  |
| 4 | Day | N/A | N/A | Campbell CR1000 | Julian day |
| 5 | Hour | N/A | N/A | Campbell CR1000 | AK savings time |
| 6 | Battery | Volts | Enclosure |  | Hourly ave |
| 7 | Lith Battery | Volts | Datalogger | Campbell CR1000 | Hourly min |
| 8 | Int Temp | °C | Datalogger | Campbell CR1000 |  |
| 9 | Air Temp | °C | Air 2 m | Campbell 107 | Hourly average |
| 10 | Max Air Temp | °C | Air 2 m | Campbell 107 | Hourly max 10-s |
| 11 | Min Air Temp | °C | Air 2 m | Campbell 107 | Hourly min 10-s |
| 12 | Solar Rad | W/m2 | Air 2 m | LiCor LI200X pyranometer | Facing up |
| 13 | Albedo | W/m2 | Air 2 m | LiCor LI200X pyranometer | Facing down |
| 14 | Net Rad Short | W/m2 | Air ½ m | CNR2 net radiometer |  |
| 15 | Net Rad Long | W/m2 | Air ½ m | CNR2 net radiometer |  |
| 16 | Wind Speed | mph | Air 2 m | R.M. Young |  |
| 17 | Wind Direction | deg | Air 2 m | R.M. Young |  |
| 18 | Max Wind | mph | Air 2 m | R.M. Young | Hourly max 10-s |
| 19 | Wind Speed m | m/s | Air 2 M | R.M. Young |  |
| 20 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 21 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 22 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 23 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 24 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 25 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 26 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 27 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 28 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 29 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 30 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 31 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 32 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #1 | In polygon |
| 33 | Soil Temp | °C |  | MRC Temperature Probe #1 | Reference value |
| 34 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 35 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 36 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 37 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 38 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 39 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 40 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 41 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 42 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 43 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 44 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 45 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 46 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #2 | Ridge |
| 47 | Soil Temp | °C |  | MRC Temperature Probe #2 | Reference value |
| 48 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 49 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 50 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 51 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 52 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 53 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 54 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 55 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 56 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 57 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 58 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 59 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 60 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #3 | Trough |
| 61 | Soil Temp | °C |  | MRC Temperature Probe #3 | Reference value |
| 62 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 63 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 64 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 65 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 66 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 67 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 68 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 69 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 70 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 71 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 72 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 73 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 74 | Soil Temp | °C | Soil 0 cm | MRC Temperature Probe #4 | In polygon |
| 75 | Soil Temp | °C |  | MRC Temperature Probe #4 | Reference value |

DATA PROCESSING ALGORITHMS:

Vitel Hydra Probe soil moisture, temperature, complex dielectric constant, electrical conductivity, and salinity are determined from the raw data (four voltages), and a calibration option (1, 2, or 3), depending on the soil texture, with a program supplied by Vitel, Inc. Option 2 (silt) is used here.

DATA STORAGE AND ACCESS:

Processed data are available on the USDA NRCS NSSC Internet home page at [http://www.wcc.nrcs.usda.gov](http://www.wcc.nrcs.usda.gov/). Data are in Excel files organized by calendar year. Each file consists of a page containing all downloaded data for that year with the following column headings: ID (site), YEAR, DAY OF YEAR, HOUR, TIME, DATE, BATT VOLT (battery voltage), INT TEMP °C (datalogger temperature), Air TEMP °C, SOLAR RADIATION IN W/m2, SOLAR RADIATION OUT W/m2, NET RAD W/m2, NET RAD mV, WIND mph, WIND dir, MRC1 veg °C, MRC2 0 cm °C, MRC3 0 cm °C, MRC4 0 cm °C, MRC5 0 cm °C, MRC6 0 cm °C, MRC7 0 cm °C, MRC8 0 cm °C, MRC9 0 cm °C, MRC10 0 cm °C, MRC11 0 cm °C, MRC12 0 cm °C, MRC13 0 cm °C, MRC ref, MRC1 veg °C, MRC2 0 cm °C, MRC3 0 cm °C, MRC4 0 cm °C, MRC5 0 cm °C, MRC6 0 cm °C, MRC7 0 cm °C, MRC8 0 cm °C, MRC9 0 cm °C, MRC10 0 cm °C, MRC11 0 cm °C, MRC12 0 cm °C, MRC13 0 cm °C, MRC ref, MRC1 veg °C, MRC2 0 cm °C, MRC3 0 cm °C, MRC4 0 cm °C, MRC5 0 cm °C, MRC6 0 cm °C, MRC7 0 cm °C, MRC8 0 cm °C, MRC9 0 cm °C, MRC10 0 cm °C, MRC11 0 cm °C, MRC12 0 cm °C, MRC13 0 cm °C, MRC ref, MRC1 veg °C, MRC2 0 cm °C, MRC3 0 cm °C, MRC4 0 cm °C, MRC5 0 cm °C, MRC6 0 cm °C, MRC7 0 cm °C, MRC8 0 cm °C, MRC9 0 cm °C, MRC10 0 cm °C, MRC11 0 cm °C, MRC12 0 cm °C, MRC13 0 cm °C, MRC ref.

**SOILS:**

CLASSIFICATION:

**LANDSCAPE:**

SLOPE:

ASPECT:

ELEVATION:

**VEGETATION:** Moss, grass, and small annual flowers.

GROUND COVER:

CANOPY COVER:

**COMMENTS:** Add proper coefficients for net radiometer to datalogger program (hopefully this was done in 2003). The original REBS net radiometer (that was installed in 2001, SN:00259) has correction factors of 9.07 Wm-2 mV-1 (pos) and 11.01 Wm-2 mV-1 (neg). The coefficients for the REBS net radiometer that was installed in 2007 are C.F. pos: 9.09 Wm-2 mV-1, C.F. neg: 11.18 Wm-2 mV-1 (SN:Q06144).

**NOTES FOR NEXT STATION VISIT:** Routine maintenance.