

| Location:             | CO              | Site:                       | SPL Melt                      | Date:                          | 20250205                     |                                  |                      |                                  |   |
|-----------------------|-----------------|-----------------------------|-------------------------------|--------------------------------|------------------------------|----------------------------------|----------------------|----------------------------------|---|
| Time:                 | 1322            | Observers:                  | S. Kinney<br>E. H. C.         | Interval board SWE measurement |                              |                                  |                      |                                  |   |
| Precip Rate           | None            | Very Light<br>(0.5 cm / hr) | Light<br>(1 cm / hr)          | Moderate<br>(5 cm / hr)        | Heavy<br>(10 cm / hr)        | Depth (cm)                       | SWE (mm)             | Density (kg/m <sup>3</sup> )     | Evidence of melt resulting in SWE loss? (Y/N) |
| Precip Type           | Rain            | Snow                        | Graupel                       | Hail                           | Rain/Snow                    | Sample A                         | Sample B             | Sample C                         |   |
| Sky                   | Clear           | Few<br>(< 1/4 of sky)       | Scattered<br>(1/4-1/2 of sky) | Broken<br>(> 1/2 of sky)       | Overcast<br>(complete cover) | Ground condition                 | Frozen               | Smooth<br>(< 5 cm)               | Moist   |
| Wind                  | Calm<br>(0 mph) | Light<br>(1 - 16 mph)       | Moderate<br>(17 - 25 mph)     | Strong<br>(26 - 38 mph)        | Extreme<br>(> 38 mph)        | Ground roughness                 | Rough<br>(5 - 20 cm) | Rugged<br>(> 20 cm)              |   |
| Tree Canopy           | No trees        | Sparse<br>(5 - 20%)         | Open<br>(20 - 70%)            | Closed<br>(> 70%)              | Ground Vegetation            | Bare                             | Grass                | Shrub                            | Deadfall                                      |
| Instrument            | Y/N             | SN                          | Instrument                    | Y/N                            | SN                           | Additional Comments              |                      | Height of Ground Vegetation (cm) |   |
| Digital LWC           | Y               |                             | Snow Scope                    | Y                              |                              | Weather                          |                      |                                  |   |
| Stratigraphy pictures | Y               |                             | Tyke Probe                    | N                              |                              |                                  |                      |                                  |   |
| Standard ram          | Y               |                             | SMP                           | N                              |                              | CT3 RP<br>CT3 RP<br>Ectop<br>Pit |                      |                                  |   |
| Powder Ram            | Y               |                             | Force Ram                     | Y                              |                              |                                  |                      |                                  |   |
| Slush Ram             | Y               |                             | Force Snow Scope              | Y                              |                              |                                  |                      |                                  |   |
| HS Transects          | Y               |                             | Snow Scope Transects          | N                              |                              |                                  |                      |                                  |   |
| Pit Pictures          | Y               |                             | SSA / NIR Box                 | Y                              | 101                          | HS Clem Costarke                 |                      |                                  |   |
| Other                 |                 |                             |                               |                                |                              |                                  |                      |                                  |   |





Ram Penetrometer Field Data Sheet

| Location:                      | CJ                |   |           |      |                      | Tube weight       | T                           | kg |      |
|--------------------------------|-------------------|---|-----------|------|----------------------|-------------------|-----------------------------|----|------|
| Site:                          | JPL Met           |   |           |      |                      | Hammer weight     | H                           | kg |      |
| Associated pit/transect/point: | JPLMET 20250205   |   |           |      |                      | Number of falls   | n                           |    |      |
| Date:                          | 20250205          |   |           |      |                      | Fall height       | f                           | cm |      |
| Observer:                      | E. McLucas Kinney |   |           |      |                      | Location of point | p                           | cm |      |
| UTME:                          | UTMN:             |   | Zone:     |      | $RN = T + H + nfH/p$ |                   |                             |    |      |
| Ram type:                      | STD/Pow           |   | Ram mass: |      | kg                   |                   | $RR = 9.81 (T + H + nfH/p)$ |    |      |
| T                              | H                 | n | f         | p    | T                    | H                 | n                           | f  | p    |
| 1                              | 0                 | 0 | 0         | 0    | 0.1                  | 0.1               | 2                           | 10 | 31   |
| 1                              | 0.5               | 0 | 0         | 0    |                      |                   |                             |    | 32   |
|                                |                   | 3 | 1         | 2    |                      |                   |                             |    | 33   |
|                                |                   | 3 | 5         | 3    |                      |                   |                             |    | 34   |
|                                |                   | 5 | 5         | 4    |                      |                   | 1                           | 10 | 35   |
|                                |                   | 2 | 5         | 5    |                      |                   | 2                           | 10 | 36.5 |
|                                |                   | 1 | 5         | 6.6  |                      |                   | 1                           | 10 | 37   |
|                                |                   |   |           |      |                      |                   |                             |    | 38   |
| 0.1                            | 0.                | 0 | 0         | 2    |                      |                   |                             |    | 39   |
| 0.1                            | 0.1               | 0 | 0         | 2    |                      |                   |                             |    | 40   |
|                                |                   | 5 | 1         | 3    |                      |                   | 2                           | 10 | 41.5 |
|                                |                   | 1 | 5         | 4    |                      |                   | 1                           | 10 | 42   |
|                                |                   | 2 | 5         | 5.5  |                      |                   |                             |    | 43   |
|                                |                   | 1 | 5         | 6.5  |                      |                   |                             |    | 44   |
|                                |                   |   |           | 7.5  |                      |                   |                             |    | 45   |
|                                |                   |   |           | 8    |                      |                   | 2                           | 10 | 46   |
|                                |                   |   |           | 9    |                      |                   |                             |    | 47   |
|                                |                   |   |           | 10   |                      |                   | 1                           | 10 | 48   |
|                                |                   |   |           | 11   |                      |                   | 2                           | 10 | 49   |
|                                |                   | 2 | 5         | 12   |                      |                   |                             |    | 50   |
|                                |                   |   |           | 13   |                      |                   |                             |    | 51   |
|                                |                   |   |           | 14   |                      |                   |                             |    | 52   |
|                                |                   |   |           | 15   |                      |                   | 6                           | 10 | 53   |
|                                |                   | 3 | 5         | 16   |                      |                   | 4                           | 20 | 54   |
|                                |                   | 2 | 10        | 17   |                      |                   |                             |    | 55   |
|                                |                   | 1 | 10        | 18   |                      |                   | 5                           | 20 | 56   |
|                                |                   | 2 | 10        | 19.5 |                      |                   |                             |    | 57   |
|                                |                   | 1 | 10        | 20   |                      |                   | 3                           | 20 | 58   |
|                                |                   |   |           | 21   |                      |                   |                             |    | 59   |
|                                |                   | 2 | 10        | 22   |                      |                   | 2                           | 20 | 60   |
|                                |                   | 1 | 10        | 23   |                      |                   | 3                           | 20 | 61   |
|                                |                   | 2 | 10        | 24   |                      |                   | 2                           | 20 | 61.5 |
|                                |                   |   |           | 25   |                      |                   |                             |    |      |
|                                |                   | 1 | 10        | 26   |                      |                   |                             |    |      |
|                                |                   | 2 | 10        | 27   |                      |                   |                             |    |      |
|                                |                   |   |           | 28   |                      |                   |                             |    |      |
|                                |                   | 1 | 10        | 29   |                      |                   |                             |    |      |
|                                |                   | 2 | 10        | 30   |                      |                   |                             |    |      |

Notes:

| Location (regional scale) |         | Site (study plot) |         | Transects  |         | Date     | Time    |     |  |  |
|---------------------------|---------|-------------------|---------|------------|---------|----------|---------|-----|--|--|
| Co                        |         | JPLnet            |         | TPLA       |         | 20250205 | Start   | End |  |  |
| Observer(s)               |         | Wx Description    |         |            |         |          |         |     |  |  |
| Evelyn Skinner            |         | Sct No Wind W60   |         |            |         |          |         |     |  |  |
| Transect A                |         |                   |         | Transect B |         |          |         |     |  |  |
| Point                     | HS (cm) | Point             | HS (cm) | Point      | HS (cm) | Point    | HS (cm) |     |  |  |
| 0                         | 75      | 31                | 75      | 0          | 65      | 31       |         |     |  |  |
| 1                         | 76      | 32                | 69      | 1          | 66      | 32       |         |     |  |  |
| 2                         | 74      | 33                | 70      | 2          | 63      | 33       |         |     |  |  |
| 3                         | 49      | 34                | 76      | 3          | 74      | 34       |         |     |  |  |
| 4                         | 76      | 35                | 71      | 4          | 71      | 35       |         |     |  |  |
| 5                         | 71      | 36                | 75      | 5          | 54      | 36       |         |     |  |  |
| 6                         | 68      | 37                | 76      | 6          | 27      | 37       |         |     |  |  |
| 7                         | 70      | 38                | 65      | 7          | 60      | 38       |         |     |  |  |
| 8                         | 63      | 39                | 43      | 8          | 66      | 39       |         |     |  |  |
| 9                         | 74      | 40                | 73      | 9          | 74      | 40       |         |     |  |  |
| 10                        | 70      | 41                | 70      | 10         | 74      | 41       |         |     |  |  |
| 11                        | 74      | 42                | 76      | 11         | 72      | 42       |         |     |  |  |
| 12                        | 63      | 43                | 71      | 12         | 58      | 43       |         |     |  |  |
| 13                        | 73      | 44                | 72      | 13         | 44      | 44       |         |     |  |  |
| 14                        | 64      | 45                | 75      | 14         | 90      | 45       |         |     |  |  |
| 15                        | 50      | 46                | 74      | 15         | 65      | 46       |         |     |  |  |
| 16                        | 61      | 47                | 71      | 16         | 67      | 47       |         |     |  |  |
| 17                        | 70      | 48                | 74      | 17         | 68      | 48       |         |     |  |  |
| 18                        | 74      | 49                | 78      | 18         | 74      | 49       |         |     |  |  |
| 19                        | 68      | 50                | 72      | 19         | 53      | 50       |         |     |  |  |
| 20                        | 44      | 51                | 67      | 20         |         | 51       |         |     |  |  |
| 21                        | 68      | 52                | 66      | 21         |         | 52       |         |     |  |  |
| 22                        | 71      | 53                | 54      | 22         |         | 53       |         |     |  |  |
| 23                        | 62      | 54                | 66      | 23         |         | 54       |         |     |  |  |
| 24                        | 77      | 55                | 75      | 24         |         | 55       |         |     |  |  |
| 25                        | 69      | 56                | 75      | 25         |         | 56       |         |     |  |  |
| 26                        | 69      | 57                | 75      | 26         |         | 57       |         |     |  |  |
| 27                        | 71      | 58                | 75      | 27         |         | 58       |         |     |  |  |
| 28                        | 71      | 59                | 74      | 28         |         | 59       |         |     |  |  |
| 29                        | 60      | 60                | 53      | 29         |         | 60       |         |     |  |  |
| 30                        | 64      |                   | 37      | 30         |         |          |         |     |  |  |

| Location (regional scale) |         | Site (study plot) |                      | Transects |         | Date     | Time    |     |  |  |
|---------------------------|---------|-------------------|----------------------|-----------|---------|----------|---------|-----|--|--|
| CO                        |         | JPL Met           |                      | Radar 1/2 |         | 20250205 | Start   | End |  |  |
| Observer(s)               |         | Wx Description    |                      |           |         |          |         |     |  |  |
| S. Kinney<br>E. McIve     |         | BKN No Mod Mar    |                      |           |         |          |         |     |  |  |
| 1436 Transect A 1438      |         |                   | 1438 Transect B 1441 |           |         |          |         |     |  |  |
| Point                     | HS (cm) | Point             | HS (cm)              | Point     | HS (cm) | Point    | HS (cm) |     |  |  |
| 0                         | 68      | 31                |                      | 0         | 59      | 31       |         |     |  |  |
| 1                         | 65      | 32                |                      | 1         | 65      | 32       |         |     |  |  |
| 2                         | 62      | 33                |                      | 2         | 70      | 33       |         |     |  |  |
| 3                         | 64      | 34                |                      | 3         | 71      | 34       |         |     |  |  |
| 4                         | 69      | 35                |                      | 4         | 69      | 35       |         |     |  |  |
| 5                         | 62      | 36                |                      | 5         | 66      | 36       |         |     |  |  |
| 6                         | 65      | 37                |                      | 6         | 68      | 37       |         |     |  |  |
| 7                         | 65      | 38                |                      | 7         | 69      | 38       |         |     |  |  |
| 8                         | 65      | 39                |                      | 8         | 69      | 39       |         |     |  |  |
| 9                         | 63      | 40                |                      | 9         | 69      | 40       |         |     |  |  |
| 10                        | 65      | 41                |                      | 10        | 67      | 41       |         |     |  |  |
| 11                        | 60      | 42                |                      | 11        | 69      | 42       |         |     |  |  |
| 12                        | 67      | 43                |                      | 12        | 69      | 43       |         |     |  |  |
| 13                        | 68      | 44                |                      | 13        | 67      | 44       |         |     |  |  |
| 14                        | 68      | 45                |                      | 14        | 66      | 45       |         |     |  |  |
| 15                        | 66      | 46                |                      | 15        | 66      | 46       |         |     |  |  |
| 16                        |         | 47                |                      | 16        | 68      | 47       |         |     |  |  |
| 17                        |         | 48                |                      | 17        | 69      | 48       |         |     |  |  |
| 18                        |         | 49                |                      | 18        | 64      | 49       |         |     |  |  |
| 19                        |         | 50                |                      | 19        |         | 50       |         |     |  |  |
| 20                        |         | 51                |                      | 20        |         | 51       |         |     |  |  |
| 21                        |         | 52                |                      | 21        |         | 52       |         |     |  |  |
| 22                        |         | 53                |                      | 22        |         | 53       |         |     |  |  |
| 23                        |         | 54                |                      | 23        |         | 54       |         |     |  |  |
| 24                        |         | 55                |                      | 24        |         | 55       |         |     |  |  |
| 25                        |         | 56                |                      | 25        |         | 56       |         |     |  |  |
| 26                        |         | 57                |                      | 26        |         | 57       |         |     |  |  |
| 27                        |         | 58                |                      | 27        |         | 58       |         |     |  |  |
| 28                        |         | 59                |                      | 28        |         | 59       |         |     |  |  |
| 29                        |         | 60                |                      | 29        |         | 60       |         |     |  |  |
| 30                        |         |                   |                      | 30        |         |          |         |     |  |  |

| Location (regional scale) |         | Site (study plot) |                        | Transects |         | Date     | Time    |     |  |  |
|---------------------------|---------|-------------------|------------------------|-----------|---------|----------|---------|-----|--|--|
|                           |         |                   |                        | JPL 1/2   |         | 20250205 | Start   | End |  |  |
| Observer(s)               |         | Wx Description    |                        |           |         |          |         |     |  |  |
| E. Mulv S. Kinney         |         | Scr No M60 Mor    |                        |           |         |          |         |     |  |  |
| 1448 Transect A-1 1451    |         |                   | 1442 Transect B-2 1446 |           |         |          |         |     |  |  |
| Point                     | HS (cm) | Point             | HS (cm)                | Point     | HS (cm) | Point    | HS (cm) |     |  |  |
| 0                         | 64      | 31                |                        | 0         | 6       | 31       |         |     |  |  |
| 1                         | 71      | 32                |                        | 1         | 39      | 32       |         |     |  |  |
| 2                         | 75      | 33                |                        | 2         | 98      | 33       |         |     |  |  |
| 3                         | 70      | 34                |                        | 3         | 53      | 34       |         |     |  |  |
| 4                         | 68      | 35                |                        | 4         | 61      | 35       |         |     |  |  |
| 5                         | 65      | 36                |                        | 5         | 69      | 36       |         |     |  |  |
| 6                         | 66      | 37                |                        | 6         | 61      | 37       |         |     |  |  |
| 7                         | 68      | 38                |                        | 7         | 61      | 38       |         |     |  |  |
| 8                         | 65      | 39                |                        | 8         | 51      | 39       |         |     |  |  |
| 9                         | 69      | 40                |                        | 9         |         | 40       |         |     |  |  |
| 10                        | 73      | 41                |                        | 10A       | 35      | 41       |         |     |  |  |
| 11                        | 60      | 42                |                        | 11B       | 38      | 42       |         |     |  |  |
| 12                        | 71      | 43                |                        | 12C       | 29      | 43       |         |     |  |  |
| 13                        | 67      | 44                |                        | 13D       | 22      | 44       |         |     |  |  |
| 14                        | 69      | 45                |                        | 14E       | 56      | 45       |         |     |  |  |
| 15                        | 70      | 46                |                        | 15F       | 49      | 46       |         |     |  |  |
| 16                        | 63      | 47                |                        | 16G       | 30      | 47       |         |     |  |  |
| 17                        | 67      | 48                |                        | 17H       | 38      | 48       |         |     |  |  |
| 18                        | 67      | 49                |                        | 18I       | 35      | 49       |         |     |  |  |
| 19                        | 70      | 50                |                        | 19J       | 41      | 50       |         |     |  |  |
| 20                        | 69      | 51                |                        | 20        |         | 51       |         |     |  |  |
| 21                        | 67      | 52                |                        | 21        |         | 52       |         |     |  |  |
| 22                        |         | 53                |                        | 22        |         | 53       |         |     |  |  |
| 23                        |         | 54                |                        | 23        |         | 54       |         |     |  |  |
| 24                        |         | 55                |                        | 24        |         | 55       |         |     |  |  |
| 25                        |         | 56                |                        | 25        |         | 56       |         |     |  |  |
| 26                        |         | 57                |                        | 26        |         | 57       |         |     |  |  |
| 27                        |         | 58                |                        | 27        |         | 58       |         |     |  |  |
| 28                        |         | 59                |                        | 28        |         | 59       |         |     |  |  |
| 29                        |         | 60                |                        | 29        |         | 60       |         |     |  |  |
| 30                        |         |                   |                        | 30        |         |          |         |     |  |  |