

Observers: jed

Center for Snow and Avalanche Studies

Profile # 1

Time: 1300

Snowpack Profile

Date: 1/14/20

Location: SASP

Elev. 11,060'

Aspect: SE

Boot Pen: 25 cm

∠: 1 °

Air T: -4 °C

Sky: 0

Precip: nil

Wind: mod

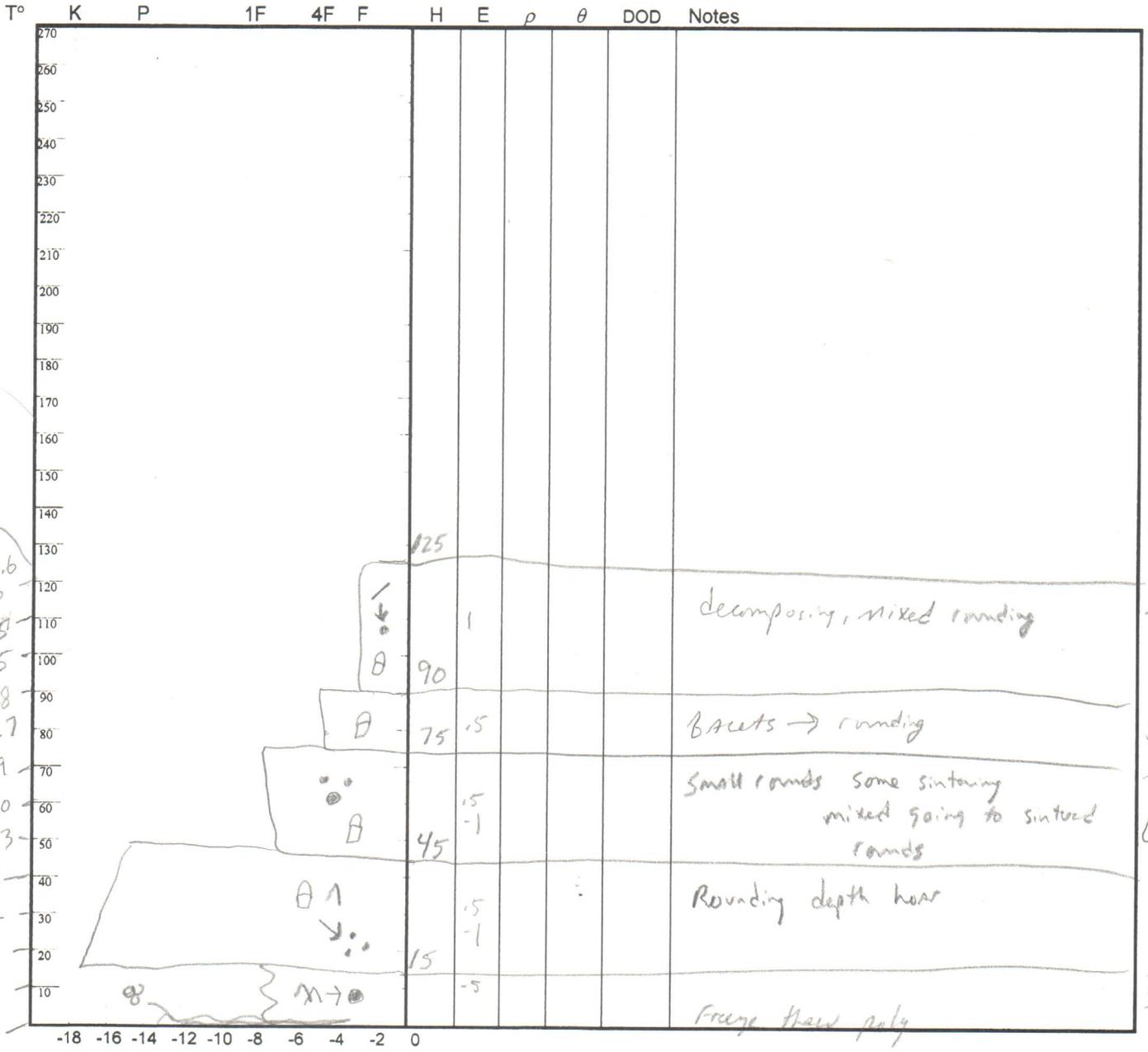
Prior Pit: # -; 1/1

Total Snowpack SWE: 335 mm H₂O

HS Norm: 1.25 m

Mean ρ: 268 kg/m³

Notes: No visible dust



SWE
 —
 30
 —
 57
 —
 69
 —
 72
 —
 63
 44

Notes:

335

Observers: JD, RD

Center for Snow and Avalanche Studies

Profile # 2

Time: 12:30 MST

Snowpack Profile

Date: 02/11/2020

Location: SASP

Elev. 11,600 ft. Aspect: SE

Boot Pen: 37 cm \angle : 2 °

Air T: -4.2 °C Sky: ☉

Precip: NIL

Wind: calm

Prior Pit: # 1; 1/14/2020

Total Snowpack SWE: 482 mm H₂O

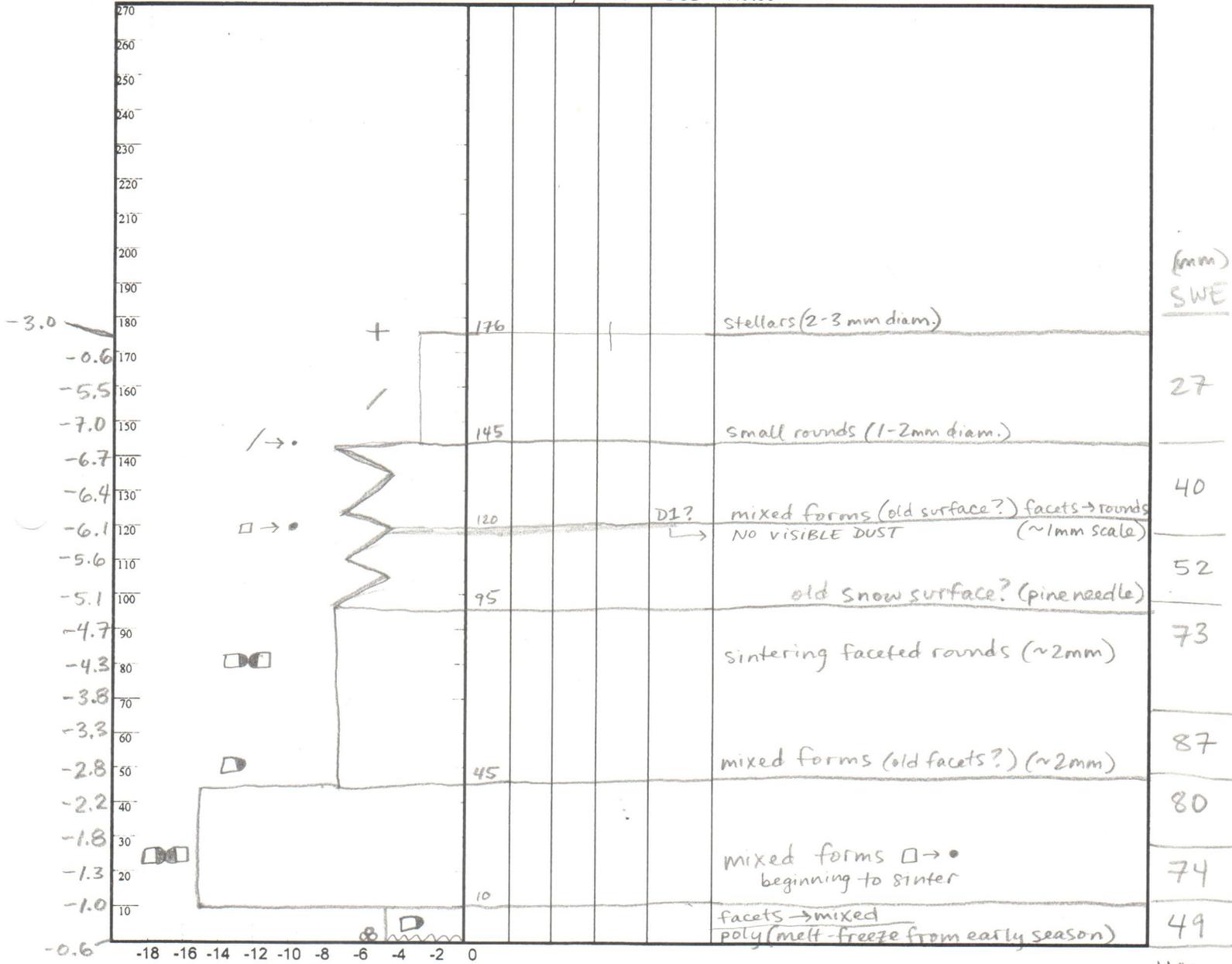
HS Norm: 1.75 m

Mean ρ : 275

kg/m³ Notes: _____

possible DI AT 1.2 m

T° K P 1F 4F F H E ρ θ DOD Notes



Notes:

Blank lined area for handwritten notes.

Observers: JD, AR

CODOS Snowpack Profile

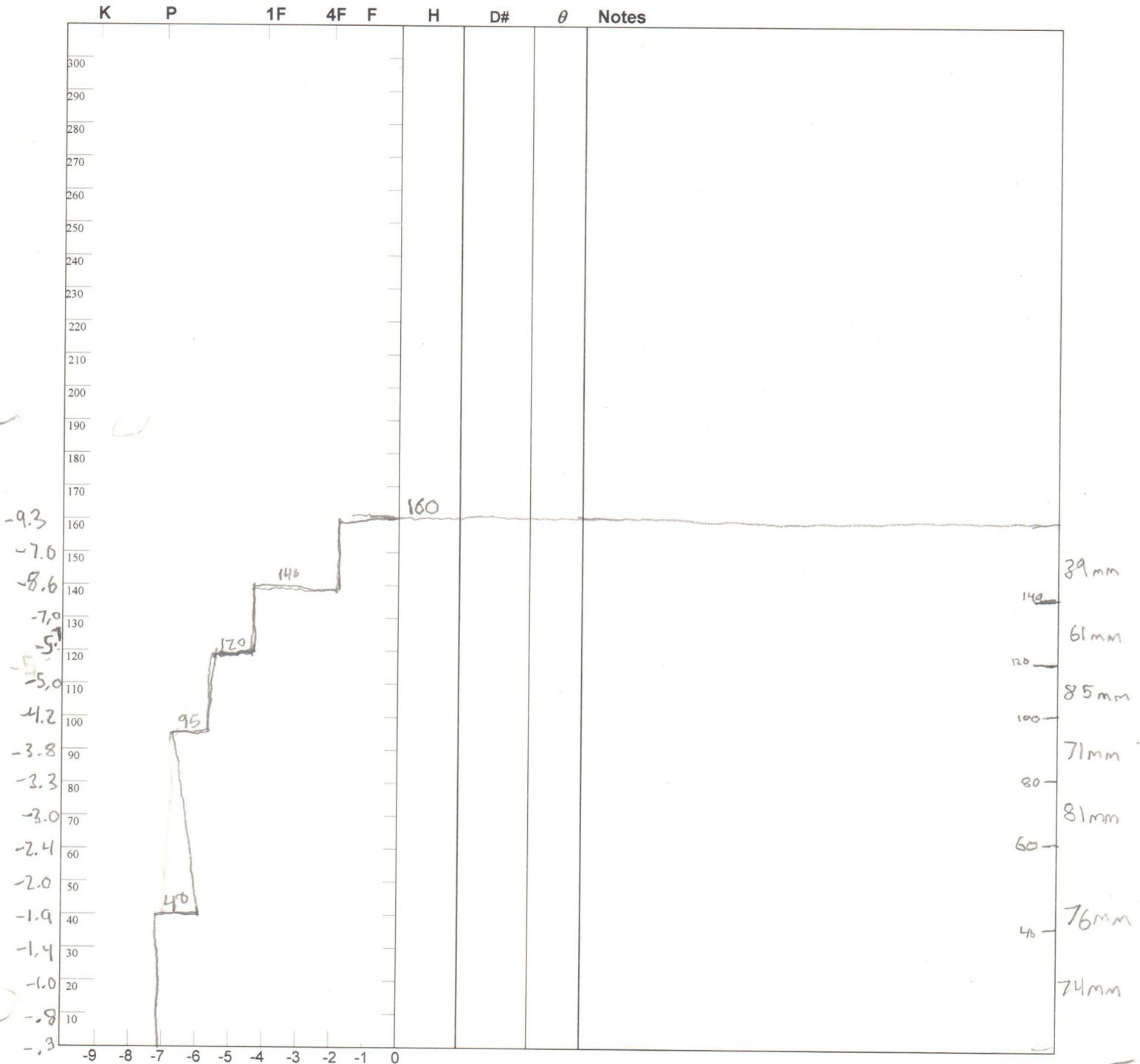
Date: 2/20/2020

Location: SASP Elev. 1060 Aspect: SE Boot Pen: 21 cm \angle : 2° Time: 2:38 PM MDT

Prior Obs: 1/1 Air T: -3 °C Sky: 0 Precip: NO Wind: C Notes: _____

No dust observed. 1.6 slope normal

Snow School



Observers: ged/pe/kyler

Center for Snow and Avalanche Studies

Profile # 4

Time: 9:43

Snowpack Profile

Date: 3/5/2020

Location: SASP

Elev. 11,060'

Aspect: SE

Boot Pen: 25 cm

∠: 2 °

Air T: -1.3 °C

Sky: 0

Precip: nil

Wind: nil

Prior Pit: # 3; 2/20/2020

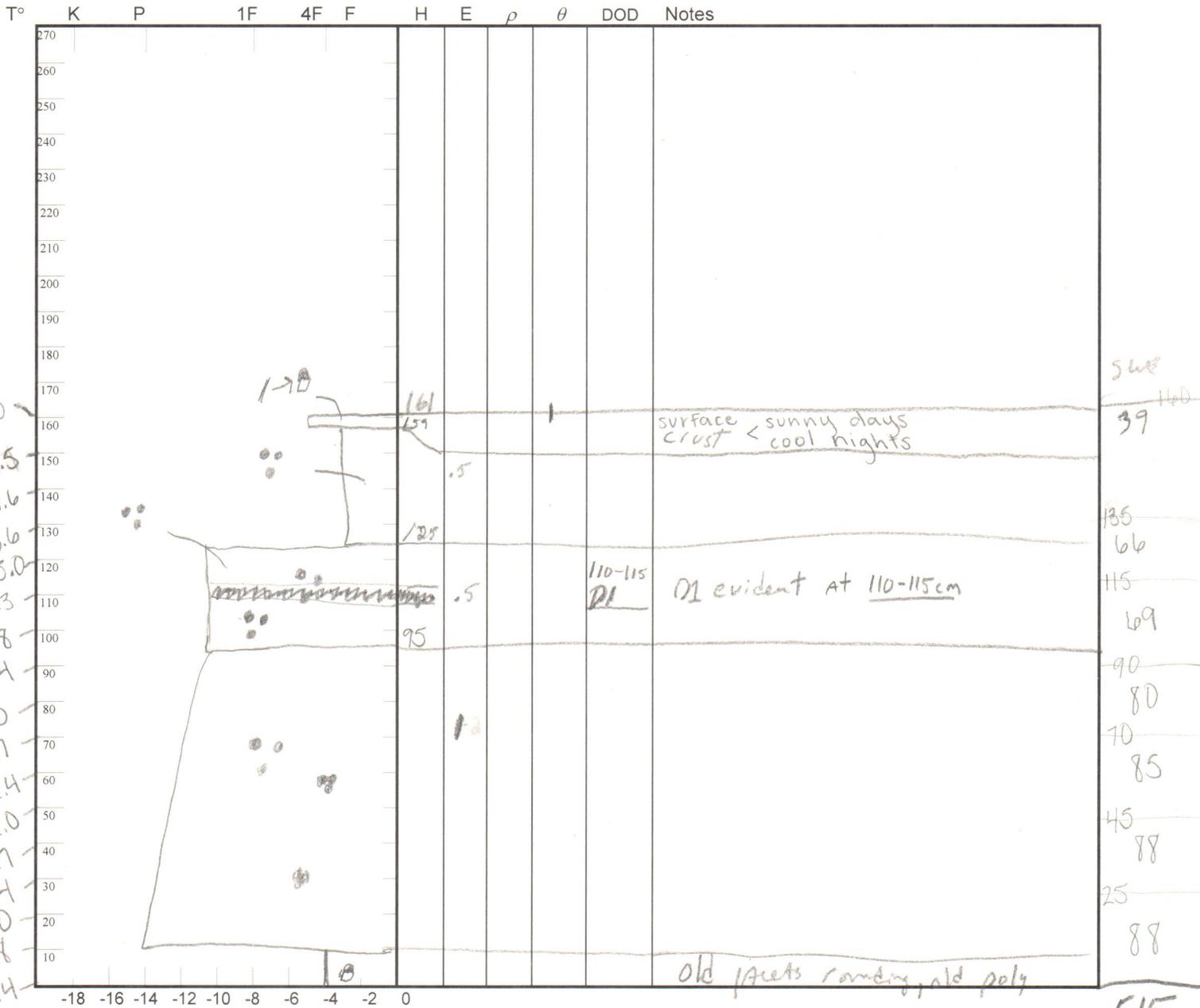
Total Snowpack SWE: 515 mm H₂O

HS Norm: 1.6 m

Mean ρ 322 kg/m³

Notes: _____

D1 = 110-115 cm



515

Notes:

Observers: g.d

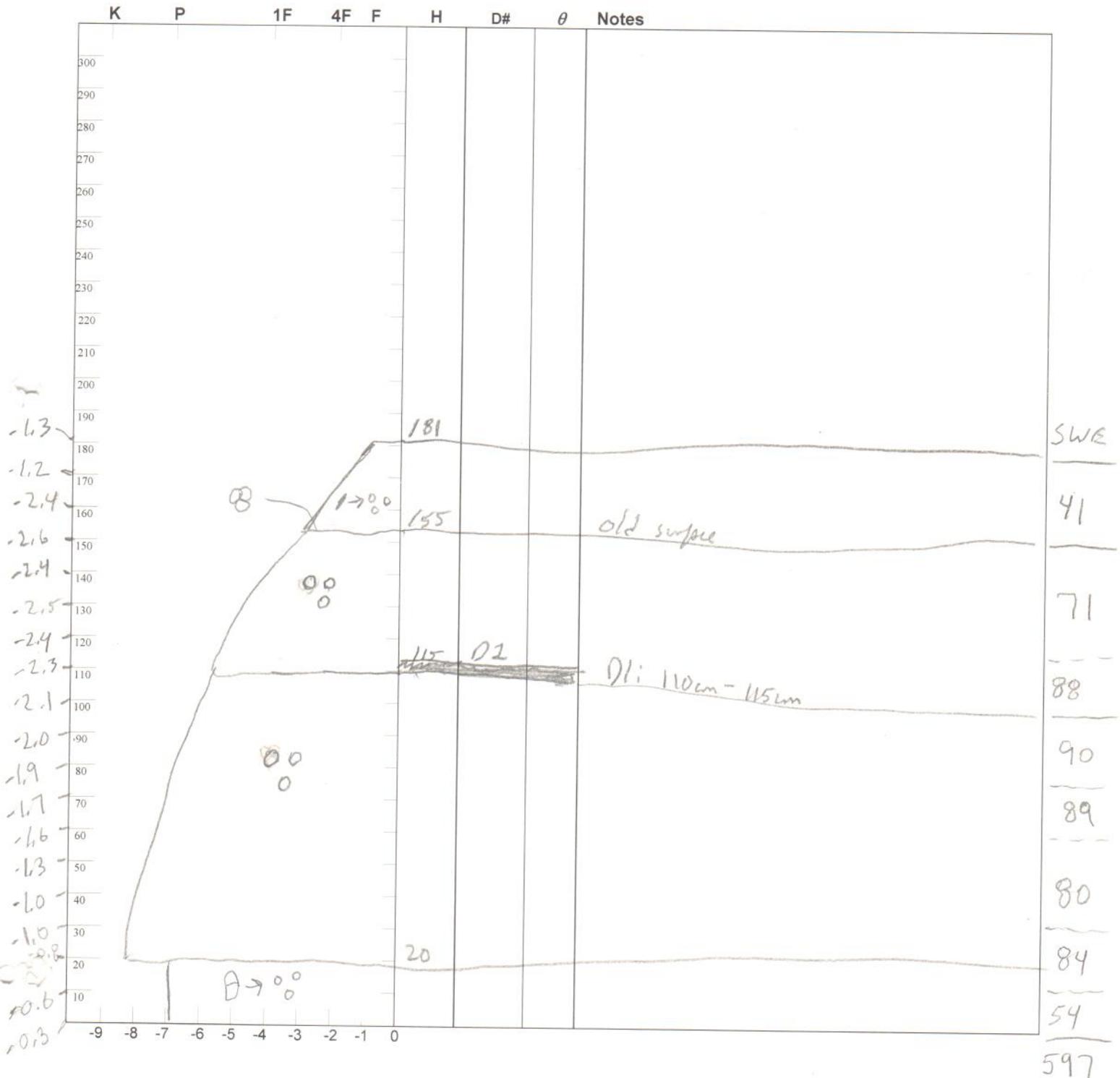
CODOS Snowpack Profile

Date: 3/15/2020

Location: SASP Elev. _____ Aspect: _____ Boot Pen: 22 cm \angle : _____ ° Time: 2:00 MDT

Prior Obs: 1/1 Air T: _____ °C Sky: (☉) Precip: nil Wind: calm Notes: _____

SH = 1.77m



Observers: AT + EO

Center for Snow and Avalanche Studies

Profile # _____

Time: 1200

Snowpack Profile

Date: 3/23/20

Location: SASP

Elev. 11,050'

Aspect: NE

Boot Pen: 45 cm

∠: 3 °

Air T: -2 °C

Sky: ⊕

Precip: S-1

Wind: Lt.

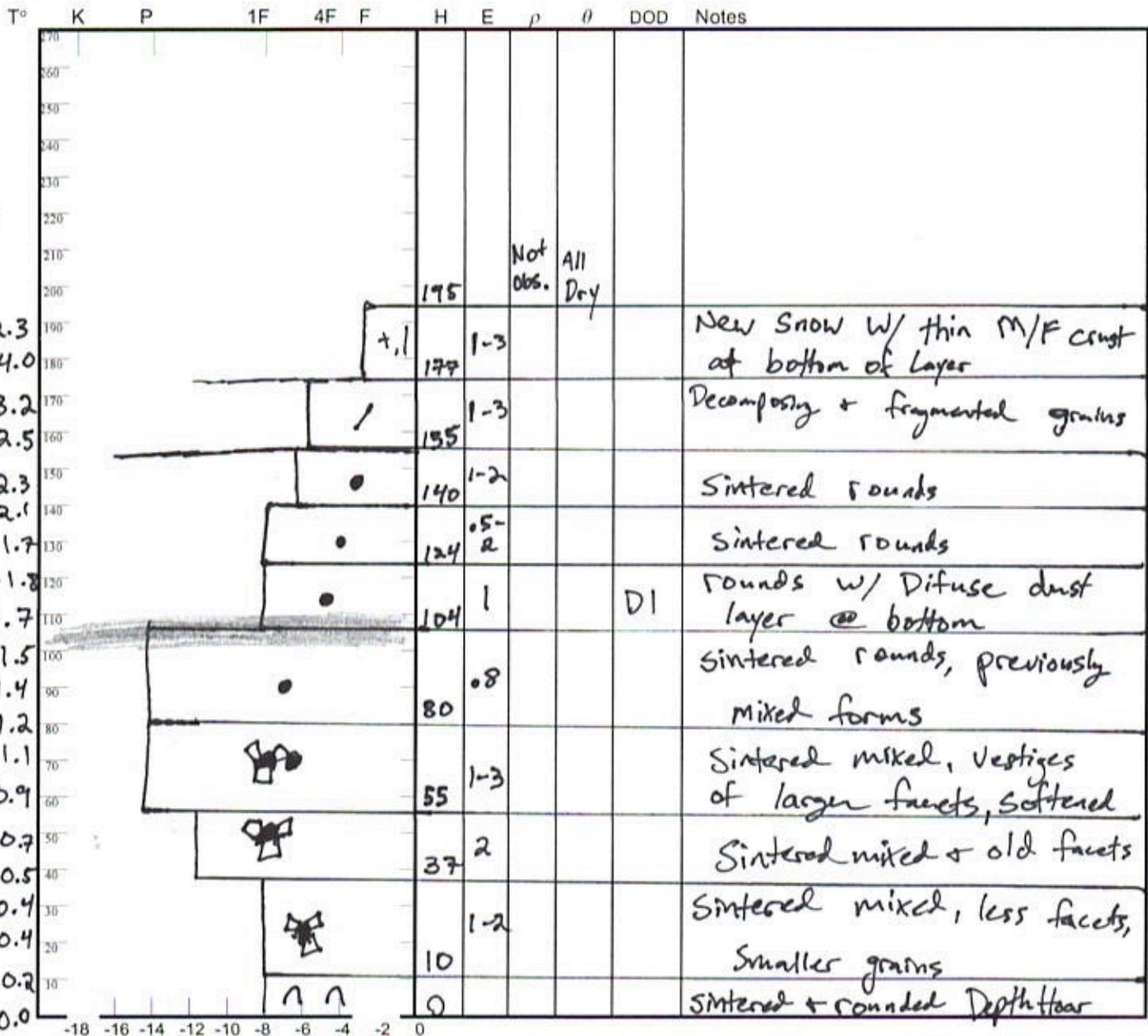
Prior Pit: # _____; _____/_____/_____

Total Snowpack SWE: 595 mm H₂O

HS Norm: 1.96 m

Mean ρ: 303.6 kg/m³

Notes: _____



Temp. °C
Surf. -1.4

7 SWE

17
34
40
49
80
82
80
91
88
34

Notes:

Observers: ST AT

Center for Snow and Avalanche Studies

Profile # _____

Time: 0942

Snowpack Profile

Date: 01/10/2020

Location: SASP

Elev. 11,060'

Aspect: NE

Boot Pen: 24 cm

α: 2°

Air T: ~5°C

Sky: SCT-BKN

Precip: no

Wind: L-SW

Prior Pit: # _____ ; _____ / _____ / _____

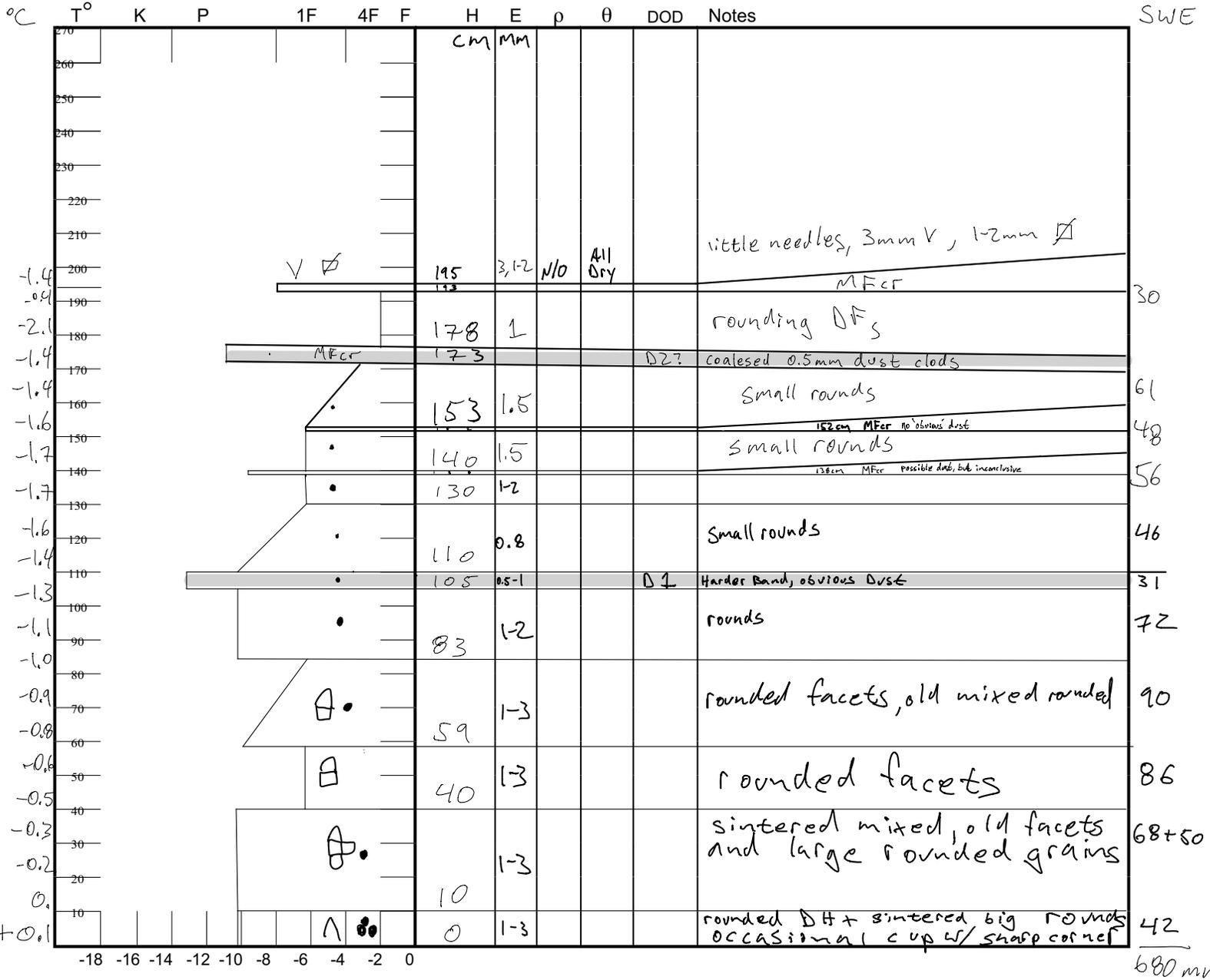
Total Snowpack SWE: 680 mm H₂O

HS Norm: 1.92 m

Mean ρ: N/A

kg/m³ Notes: _____

Stakes: N-198cm E-193cm S-196cm W-201cm



Notes: We still have a winter snow pack with primarily dry snow, but it will soon become moist and is almost moist near ground. Dust at 105 cm + 173cm is obvious. There is a possibility for dust in MFCr at 138cm + 152cm but it is not currently observable. E-S slopes below treeline are runned suggesting dust may be present in new surface snow, though it has not been directly observed.

Observers: JT AT

Center for Snow and Avalanche Studies

Profile # _____

Time: 0953

Snowpack Profile

Date: 2020104106

Location: SASP

Elev. 11,060'

Aspect: NE

Boot Pen: None cm

L: 2 °

Air T: ~3 °C

Sky: FEW

Precip: NO

Wind: L-N

Prior Pit: # _____; 2020104101

Total Snowpack SWE: 681 mm H₂O

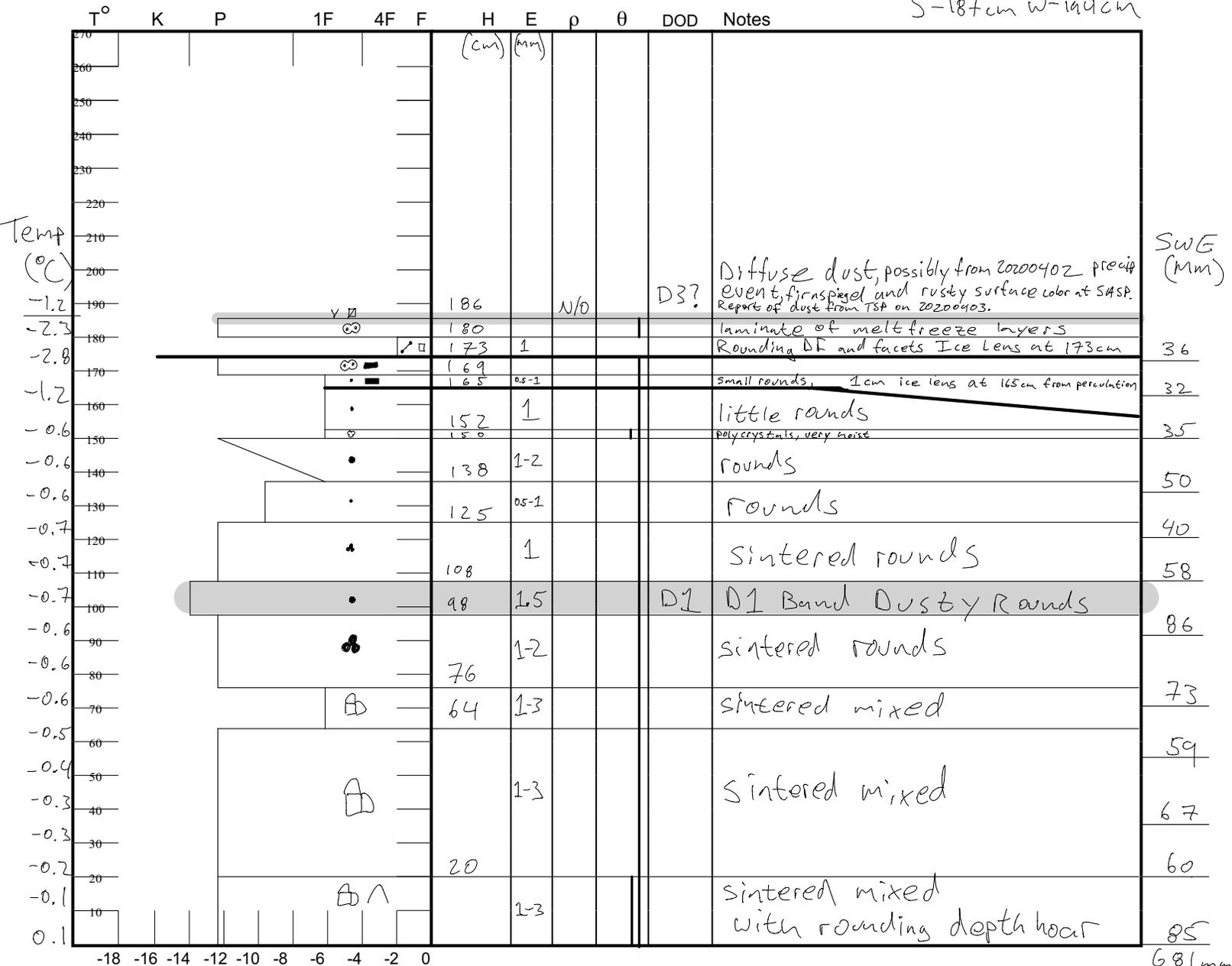
HS Norm: 1.85 m

Mean ρ: N/A kg/m³

Notes: Supportable

Crust caused Boot Pen to go from 0-20cm. Stakes: N-188cm E-183cm

S-187cm W-144cm



Notes: No clear evidence of DZ. Snowpack will likely become isothermal this week. The midpack temperatures have increased about 1°C since the last pit 6 days ago. SWE is very similar to last week, despite a small precip event, which produced 8mm, beginning 20200402 1000 MST. Telluride ski patrol (off duty) reported 'mocha' colored snow on 20200403 at TMR.

Observers: AT, JT

Center for Snow and Avalanche Studies

Profile #

Time: 0947

Snowpack Profile

Date: 2020 104 120

Location: SASP

Elev. 11,060'

Aspect: NE

Boot Pen: 7 cm \angle : 3 °

Air T: 10 °C

Sky: 13KN

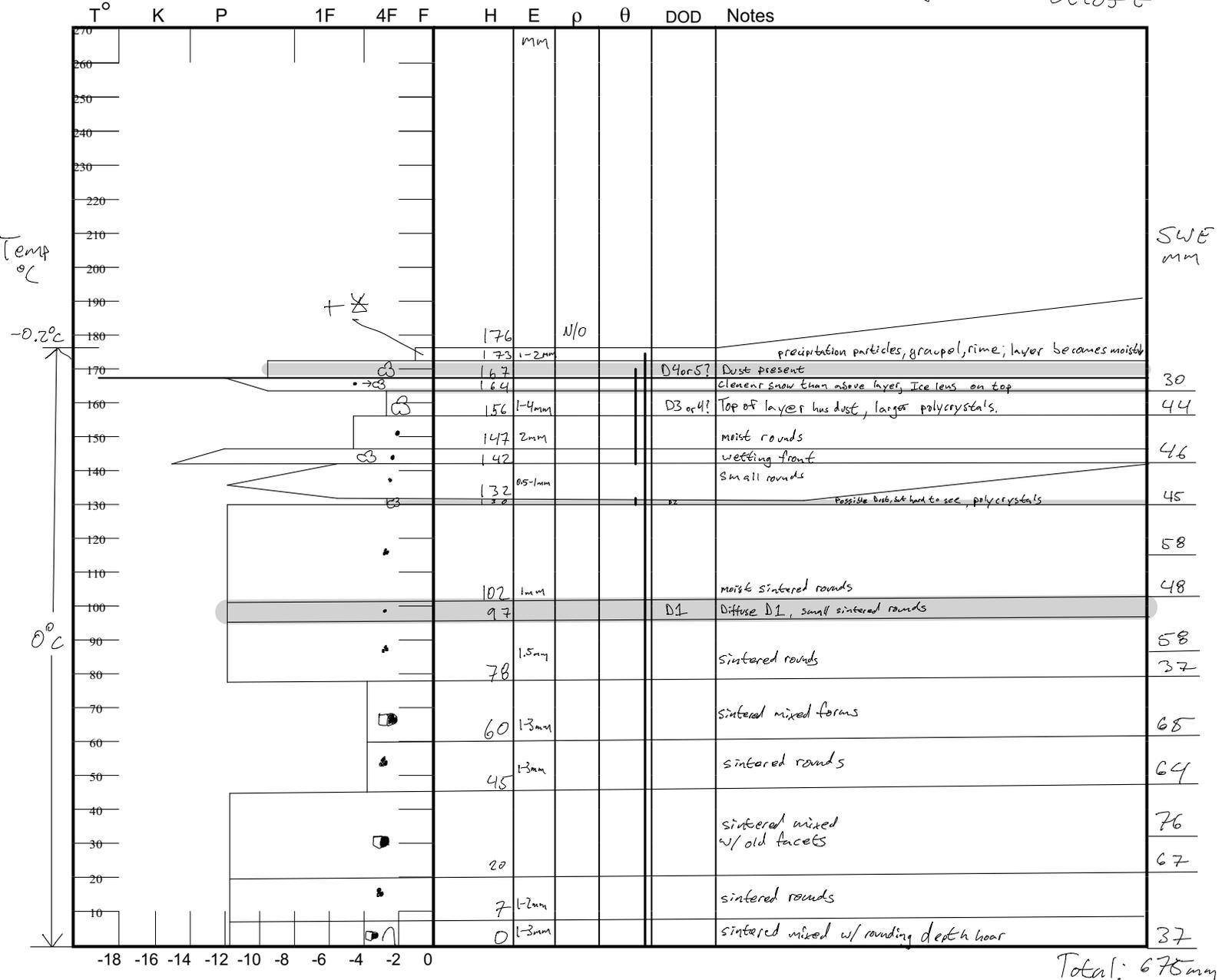
Precip: S-1

Wind: L-NW

Prior Pit: # ; 2020 104 113

Total Snowpack SWE: 675 mm H₂O HS Norm: 1.75 m Mean ρ : N/O kg/m³ Notes:

Mostly cloudy morning with some blue patches, clouds moving quickly with west wind aloft



Total: 675mm

Notes: D1 is obvious at 97-102cm. D2 is possible at 130, but not confirmed; it does relate to suspected dust on April 1 at about 140cm and observed dust from April 13. A thin layer of dust, likely D3, is visible at 164. Dust is also visible under the new snow at 167-173cm and is likely D4. Snow is isothermal. 404mm of SWE is below all visible dust.

Observers: ST AT

Center for Snow and Avalanche Studies

Profile # —

Time: 0937

Snowpack Profile

Date: 200104127

Location: SASP

Elev. 11,060'

Aspect: NE

Boot Pen: 10 cm

∠: n/a °

Air T: 9 °C

Sky: dr → few Precip: no

Wind: L-SW

Prior Pit: # —; 2020104126

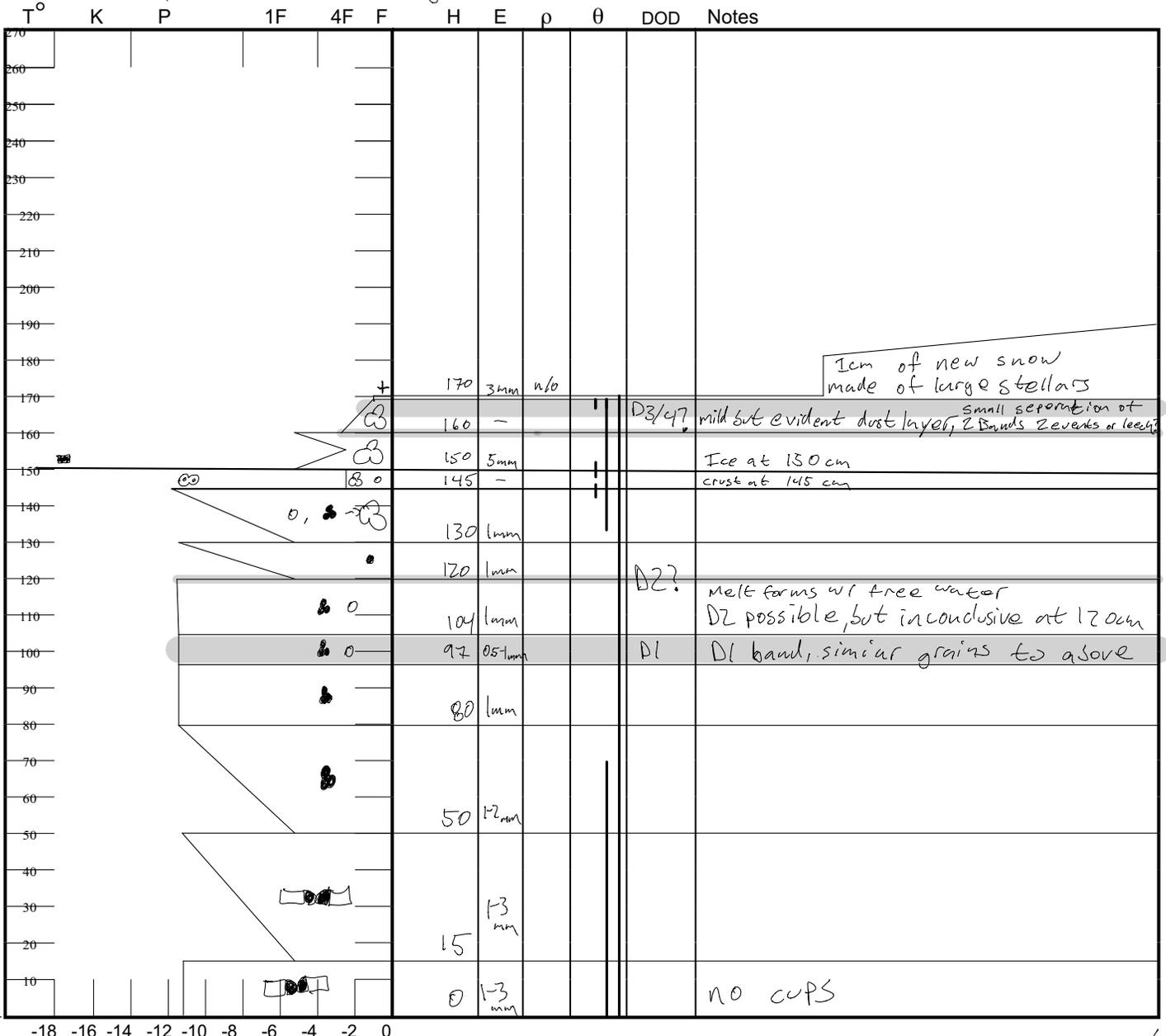
Total Snowpack SWE: 678 mm H₂O

HS Norm: 1.66 m

Mean ρ: n/a kg/m³

Notes: stakes; N! 17, E! 165; 182 w/ 170

Warm day with increasing clouds, Air T from station data



SWE mm: 35, 48, 74, 45, 66, 94, 85, 74, 81, 76

678 mm

Notes: Dust is prevalent at the surface and just below a trace of new snow. This may be a new event or a merging of previous events. D2 may exist around 120cm but inconclusive. D1 is obvious around 100cm. Snowpack is isothermal. Snow is mostly moist, with wet snow near surface and near ground with some very wet areas at interfaces in upper snowpack.

Observers: JT AT

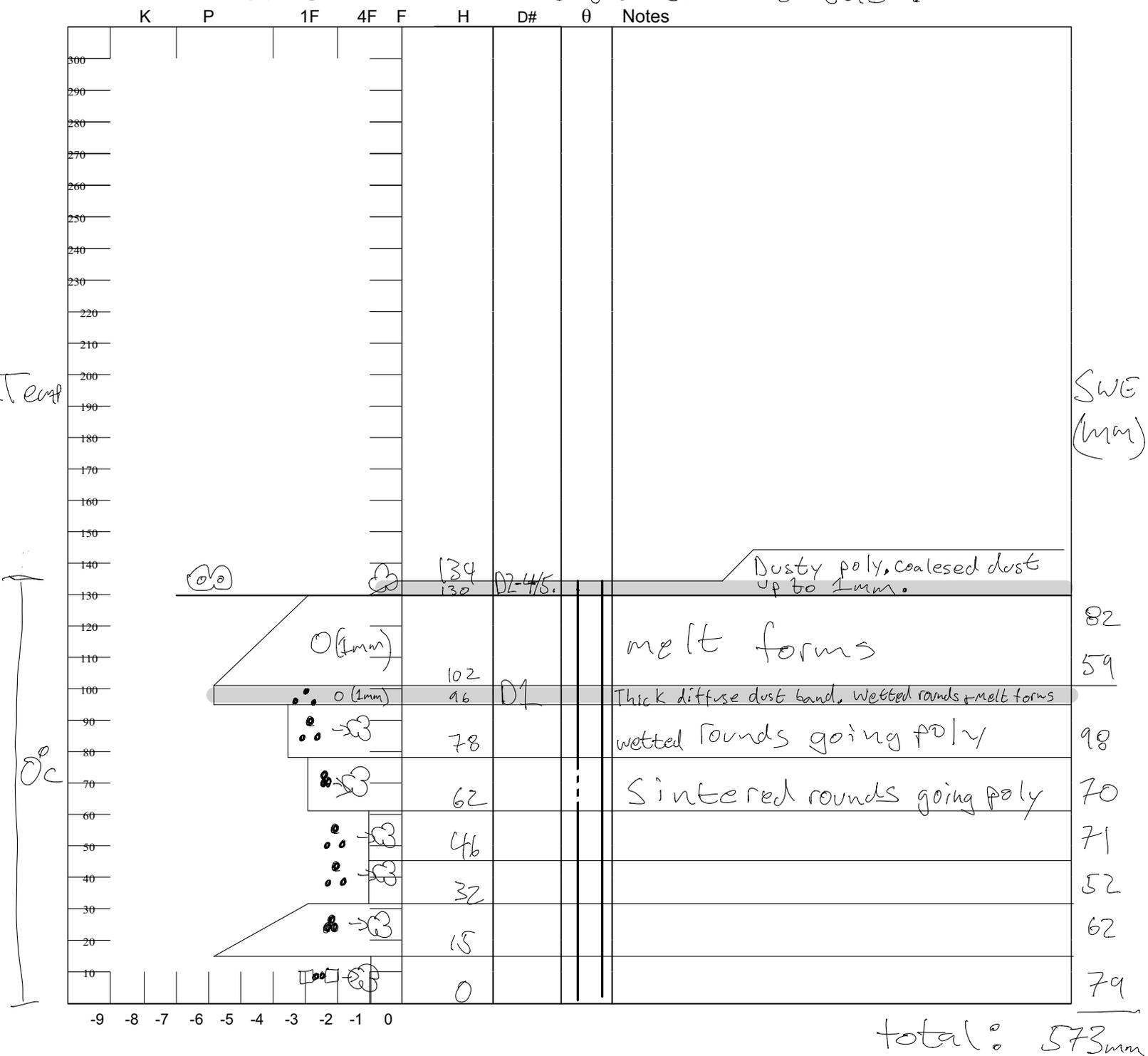
CODOS Snowpack Profile

Date: 2020 10 5 104

Location: SASP Elev. 11,060' Aspect: NE Boot Pen: 1 cm \angle : 3° Time: 0944 MDT

Prior Obs: 2020 10 4 / 27 Air T: - °C Sky: Few Precip: no Wind: L-S Notes: slope normal 1.1, 33m

The snow surface is dusty with 1mm particles. It is still below the surface. The dust is widespread and the snow change is dramatic week to week. The stream is as full as it has been this season. The snow will support the weight of a skier thanks to crust just below surface.



Observers: JT AT

Center for Snow and Avalanche Studies

Profile # _____

Time: 0955

Snowpack Profile

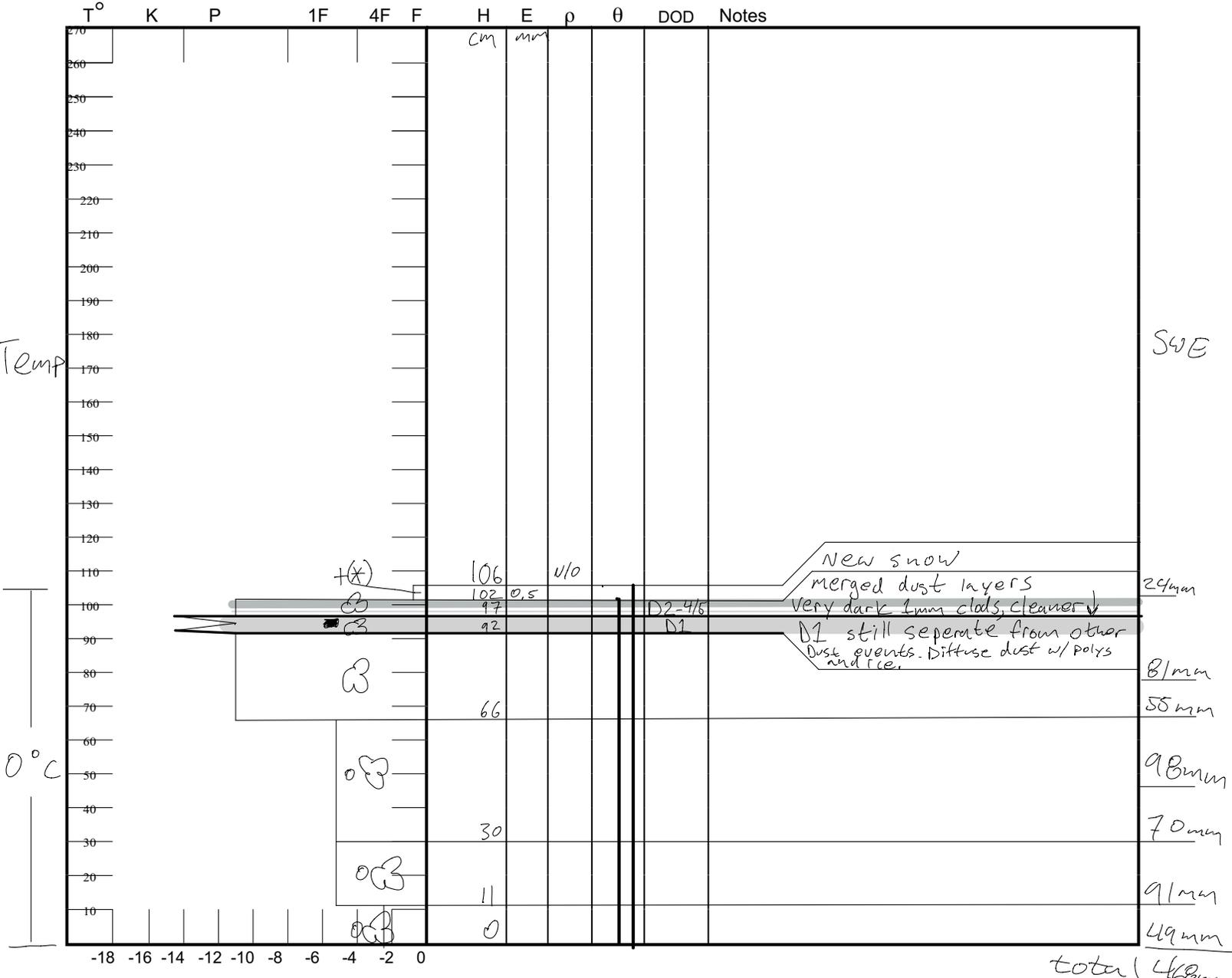
Date: 2020 05 11

Location: SASP

Elev. 11,060' Aspect: NE Boot Pen: 3 cm α : 3°

Air T: 3 °C Sky: OVC Precip: S1 Wind: L-SE Prior Pit: # - ; 2020/05/04

Total Snowpack SWE: 468 mm H₂O HS Norm: 107 m Mean ρ : 1/0 kg/m³ Notes: First snowfall in weeks. Initially S-1 with calm wind went to S1 with SE wind



Notes: Dust events from D2 and later are becoming more concentrated in the surface/near-surface snow. The merged layers appear cleaner with increased depth, and there is a small 'clean' band. D1 is several centimeters deeper, within an ice laminate and is more diffuse than the above merged layers. Based on rate of melt, we expect all layers to merge within the next 3 days. Winter is back with 4cm of moist snow at SASP.

Observers: JT AT

Center for Snow and Avalanche Studies

Profile # _____

Time: 1140

Snowpack Profile

Date: 2020/05/19

Location: SASP

Elev. 11,060'

Aspect: NE

Boot Pen: 2 cm

∠: 3°

Air T: 11 °C

Sky: Few

Precip: very light

Wind: m-south

Prior Pit: # -; 2020/05/11

Total Snowpack SWE: 302 mm H₂O

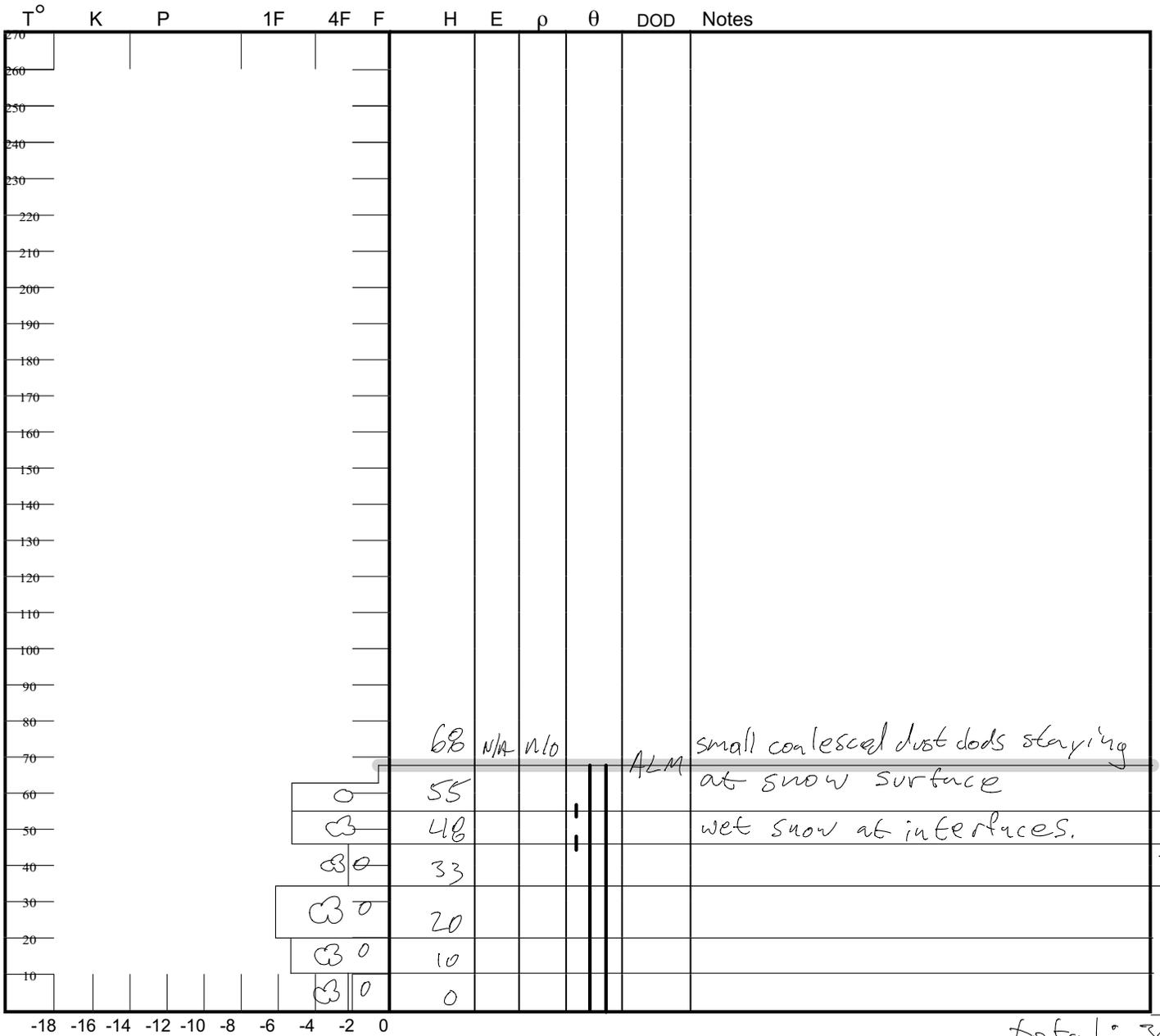
HS Norm: 0.67 m

Mean ρ: n/a

kg/m³

Notes: A few rain

drops fell under mostly clear sky.



Notes: All layers merged at surface. Snowpack is melting quicker than polycrystals can grow. Nothing in the snow structure to hold back water leading to free drainage. Creek is just about entirely melted out through Swamp Angel clearing, portions of Swamp Angel are melted to bare ground, we expected to still see snow at SASP next week. Spent some time digging out creek upstream of SASG for gauging tomorrow.

Observers: ST AT

Center for Snow and Avalanche Studies

Profile # —

Time: 1145

Snowpack Profile

Date: 2020/05/26

Location: SASP

Elev. 11,060

Aspect: NE

Boot Pen: 2 cm

L: n/o °

Air T: 9 °C

Sky: clr

Precip: no

Wind: L-E

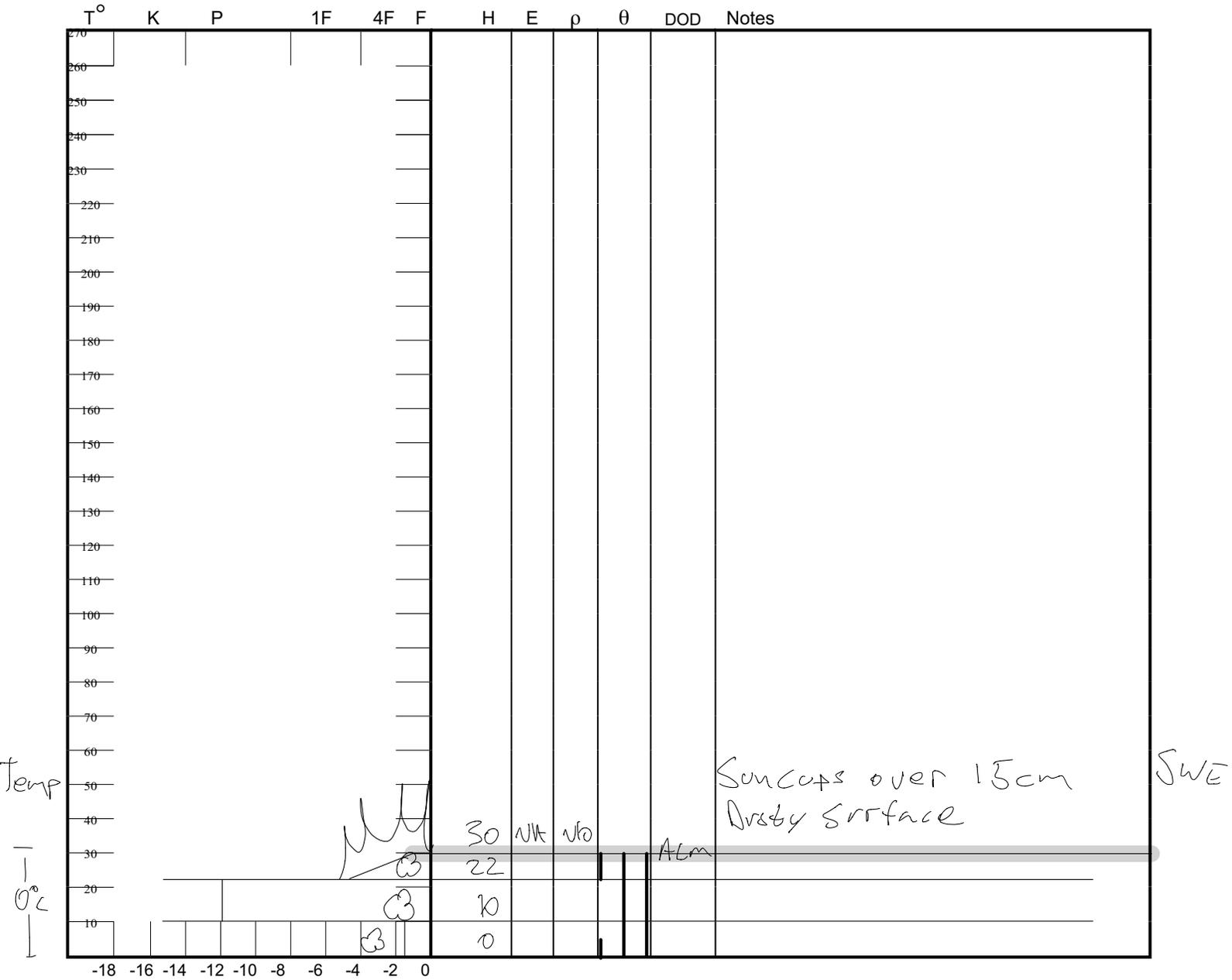
Prior Pit: # —; 2020/08/19

Total Snowpack SWE: 126 mm H₂O

HS Norm: 0.32 m

Mean ρ: n/o kg/m³

Notes: Less wind than above tree line, North: 25cm East: 30cm South: 25cm West: 15cm



Notes: All layers merged. Large sun cups. Some sun cups between SASP and SBSP were around 50cm deep. Still snowy at SASP but much of meadow is melted out.

Observers: JT, AT

Center for Snow and Avalanche Studies

Profile # _____

Time: 1123

Snowpack Profile

Date: 31/03/2020

Location: SBSF

Elev. 12,186

Aspect: NE

Boot Pen: 17 cm

α : 4°

Air T: 1 °C

Sky: CLR

Precip: NO

Wind: L-NE

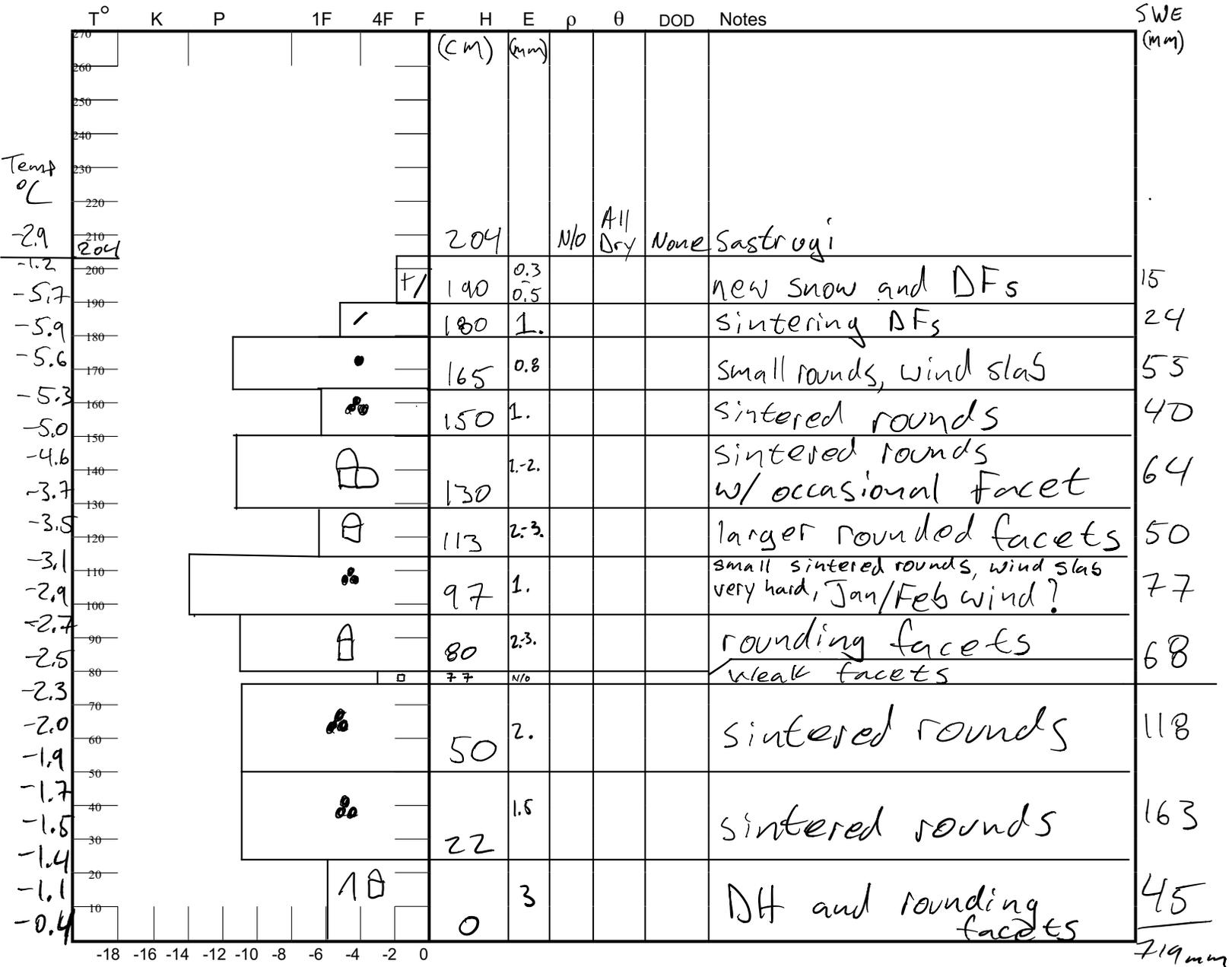
Prior Pit: # -; 24/03/2020

Total Snowpack SWE: 719 mm H₂O

HS Norm: 1.98 m

Mean ρ : _____ kg/m³

Notes: _____



Notes: No dust observed. 2020 snowpack came in good & deep with little exposure to atmosphere until January. A nice day with clear sky and generally light wind from W-E, occasional gust. A bank of amber colored clouds to the south built through the day.

Observers: AT JT

Center for Snow and Avalanche Studies

Profile # _____

Time: 1120

Snowpack Profile

Date: 24/03/20

Location: SBSP

Elev. 12,186'

Aspect: NE

Boot Pen: 26 cm

∠: 3°

Air T: -4.4°C

Sky: ☉

Precip: no

Wind: M-SW

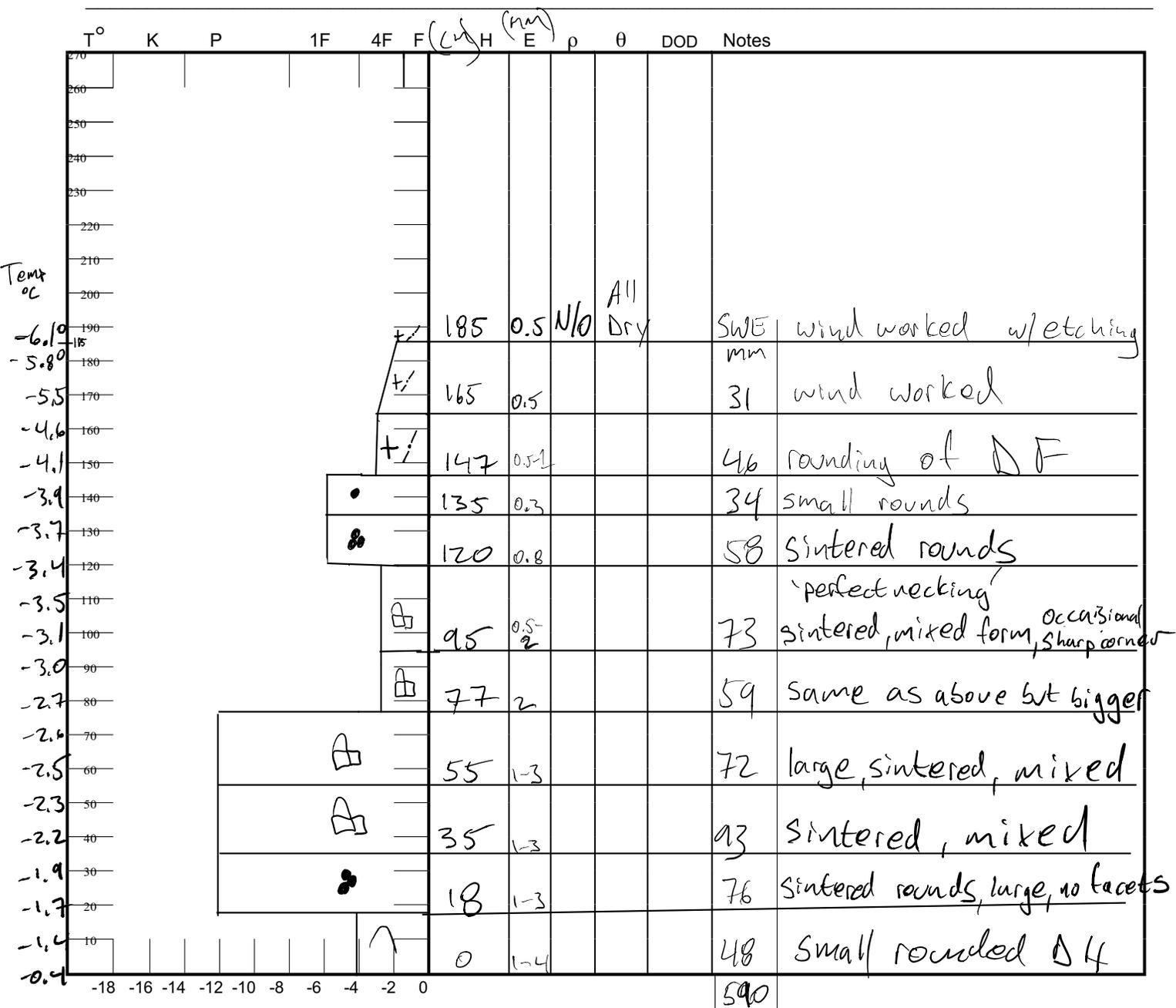
Prior Pit: # _____; _____/_____/_____

Total Snowpack SWE: 590 mm H₂O

HS Norm: 1.85 m

Mean ρ: N/O

kg/m³ Notes: _____



Notes: Inconclusive evidence of DF, possibly due to extensive wind transport, it may exist in upside of 120 layer. Snow is stiff down low! Lots of rounding, especially 120cm and below.

Observers: ST, AT

Center for Snow and Avalanche Studies

Profile # —

Time: 1024

Snowpack Profile

Date: 2020/04/07

Location: SBSF

Elev. 12,186'

Aspect: NE

Boot Pen: 6 cm

∠: N/O °

Air T: -1 °C

Sky: CLR

Precip: no

Wind: L-SV

Prior Pit: # —; 2020/03/31

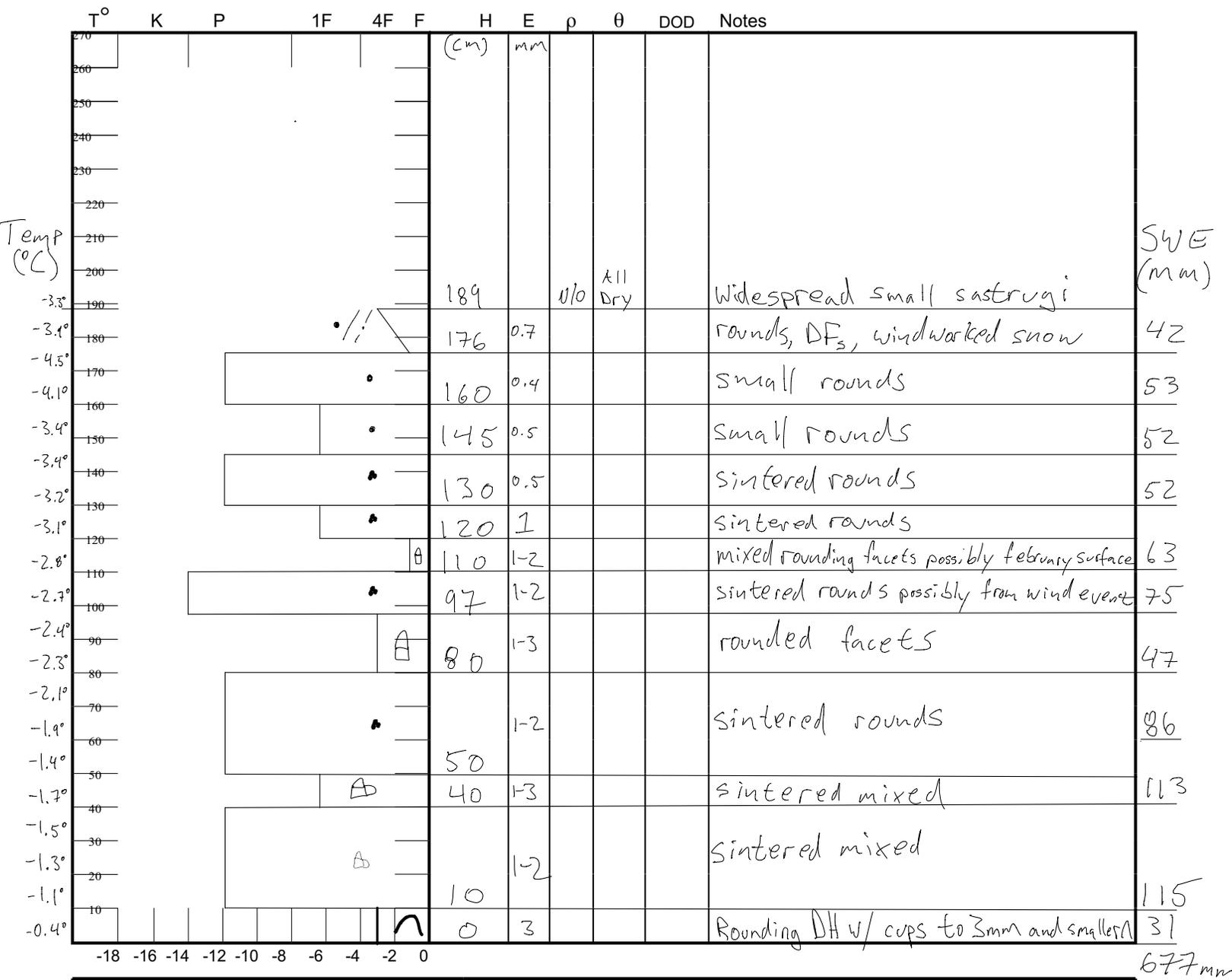
Total Snowpack SWE: 677 mm H₂O

HS Norm: 1.86 m

Mean ρ: N/O kg/m³

Notes: Cloudless

Sky. Yellow hue on SE horizon.



Notes: No clear sign of D1 or D2. D3 is prevalent on surface from SASF to SBSF as dirty snow and dramatized melt patterns (firnsiegel + runnels) as well as in wet loose avalanches. It is not prevalent at SBSF but visible in many other areas of SBB. CAIC forecasters + CNOT staged at SASF for explosive mission to Blue Point cornice. CAIC welcomed us and explained our work to CNOT.

Observers: JT AT

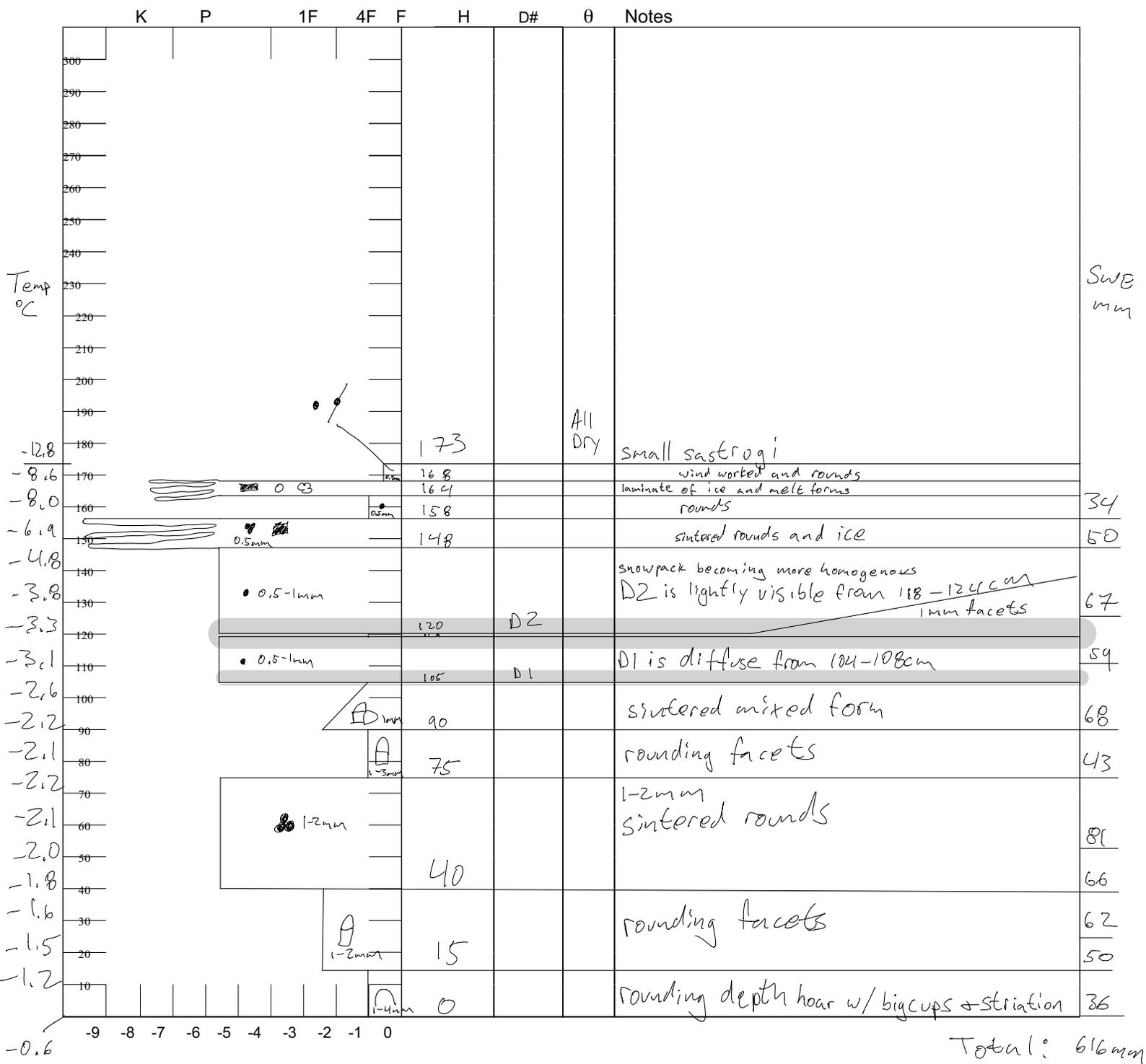
CODOS Snowpack Profile

Date: 2020, 04, 13

Location: SBSP Elev. 12186 Aspect: NE Boot Pen: 2 cm \angle : 5° Time: 1130 MDT

Prior Obs: 2020/04/07 Air T: -13.5° C Sky: Few Precip: no Wind: M-SW Notes: _____

D1 is visible from 104-108cm, D2 is light, but visible from 118-124cm. The snowpack at SBSP is very cold and winter-like today, but it has had liquid water move through it. It was a very chilly day, especially with wind.



Total: 616mm

Observers: JTAT

Center for Snow and Avalanche Studies

Profile # —

Time: 11 11

Snowpack Profile

Date: 2020/04/12

Location: SBSP

Elev. 12,186

Aspect: NE

Boot Pen: 15 cm

∠: 3°

Air T: 2 °C

Sky: OVC

Precip: S-1 to S1

Wind: L-SW

Prior Pit: # — ; 2020/04/14

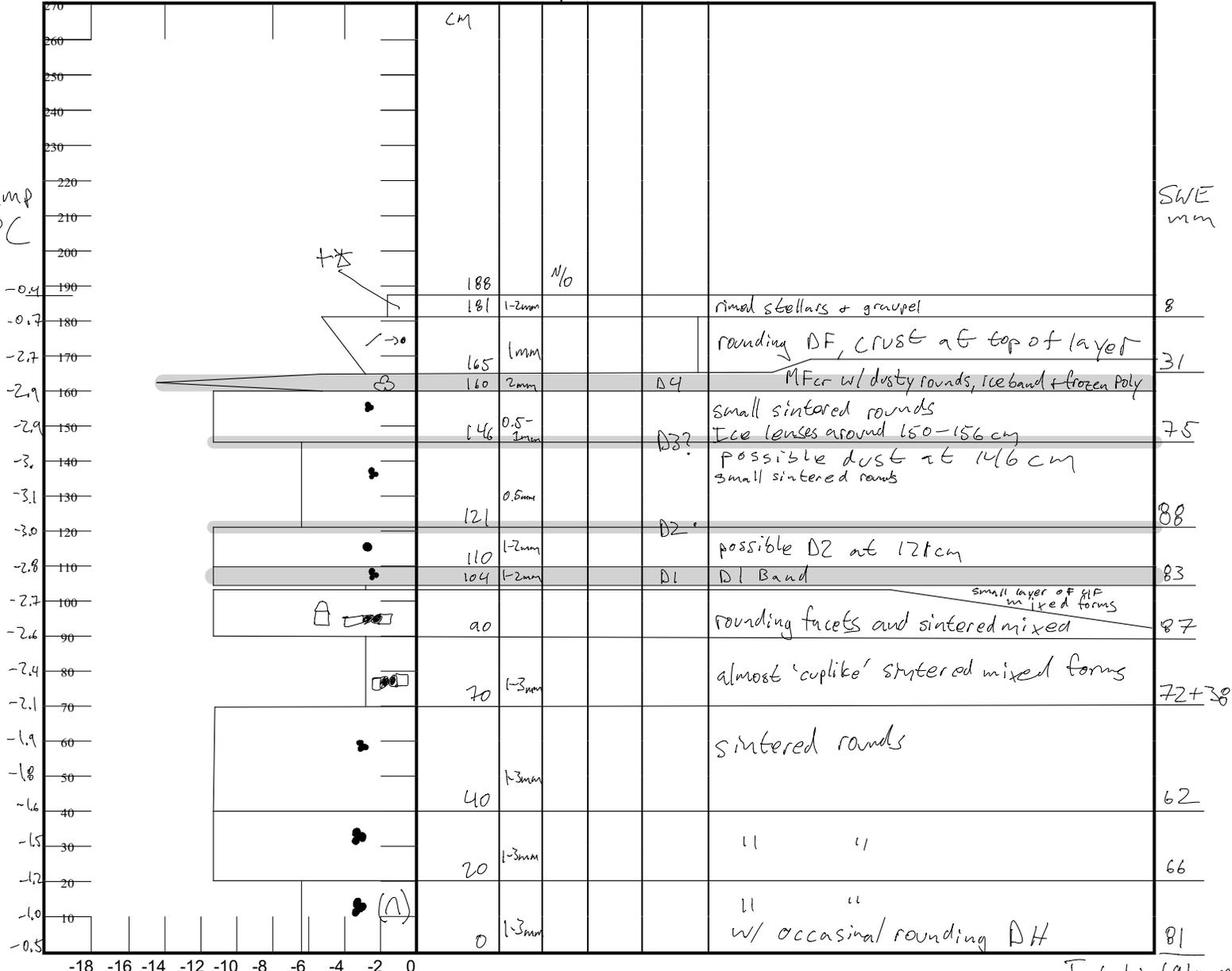
Total Snowpack SWE: 691 mm H₂O

HS Norm: 1.84 m

Mean ρ: ρ₀

kg/m³ Notes: Intermittent very light to light snowfall and sky clearing S,

T° K P 1F 4F F H E ρ θ DOD Notes



Notes: This was the first time we have clearly seen dust in a profile at SBSP in WY2020. This may be because the pit was located in a spot with more deposition, or because water has moved through the snow possibly consolidating dust. In addition the lighting was flat which may have provided more contrast from clean to dusty snow. There was moist snow near the surface, generally the snow was still 'winter like'.

Observers: JT AT

CODOS Snowpack Profile

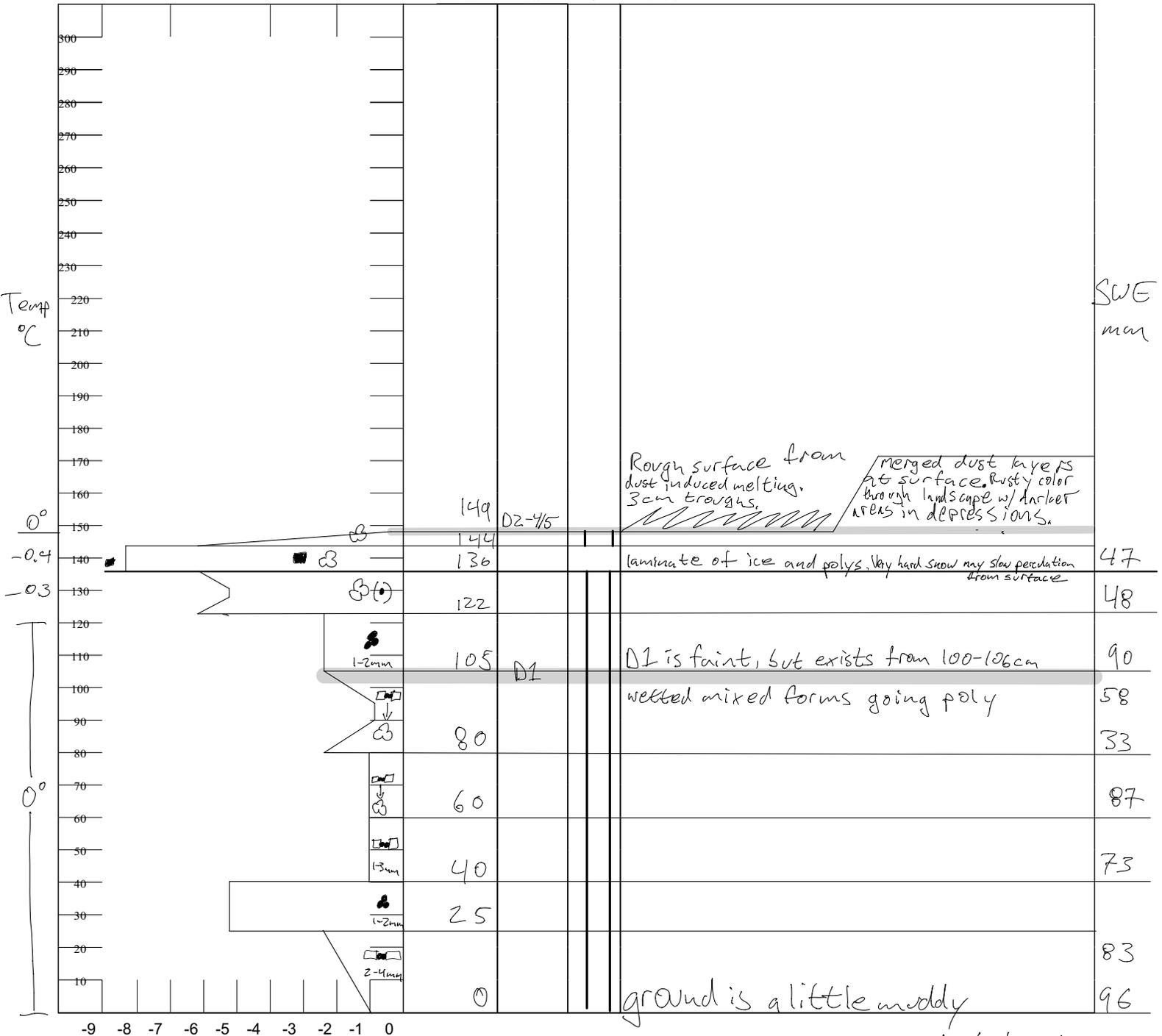
Date: 2020/05/05

Location: SBSF Elev. 12,186 Aspect: NE Boot Pen: 1 cm \angle : } ° Time: 0944 MDT

Prior Obs: 2020/04/28 Air T: - °C Sky: clr Precip: no Wind: L-NW Notes: Slope normal; 1.5/m

What a difference from last week, SBSF has transitioned into a melting snowpack. Surface dust has become more dramatic with 'melt troughs' around 3cm deep, D1 is still buried and is faint. A very hard near surface layer may prevent surface melt from percolating into the midpack.

K P 1F 4F F H D# θ Notes



total: 615mm
above D1: 185mm

Observers: JT, AT

Center for Snow and Avalanche Studies

Profile # 1

Time: 1025

Snowpack Profile

Date: 2020/05/12

Location: SBSF

Elev. 12,186

Aspect: NE

Boot Pen: 5 cm

∠: 2 °

Air T: 4 °C

Sky: Few

Precip: no

Wind: L-SW

Prior Pit: # -; 2020/05/05 (COPOS)

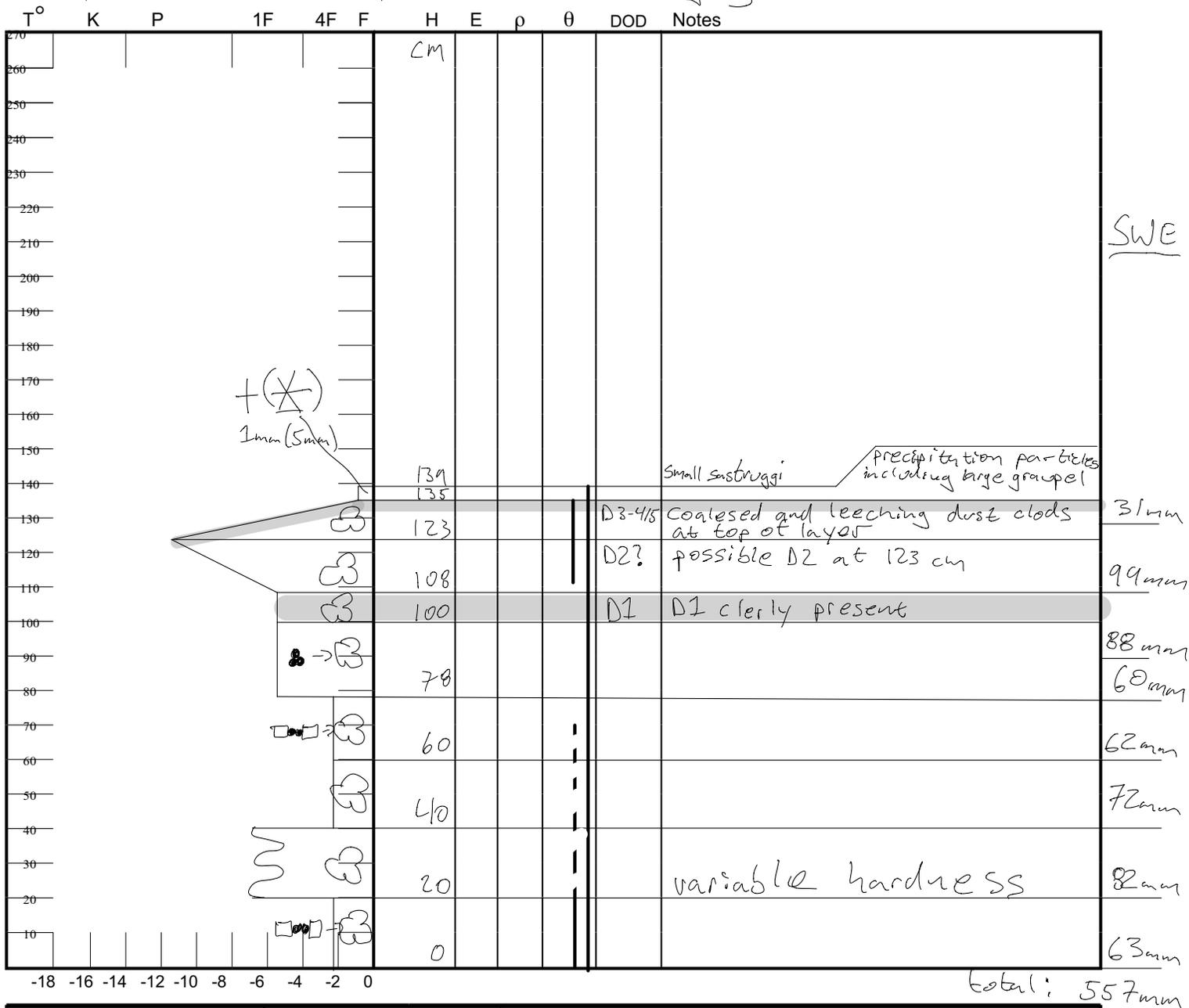
Total Snowpack SWE: 557 mm H₂O

HS Norm: 1.36 m

Mean ρ: N/D kg/m³

Notes: pleasant

day. Marmots and coyotes out. Challenging descent below treeline.



Notes: 4cm of fresh snow left the surface looking clean, with the exception of elevated snow features, wind scoured areas, and wetter surface snow. Dust events after D3 are merged at 135cm. D2 is not obvious, it may exist by itself at 123cm or may be merging with above layers. D1 is not merged and present at 100-108cm. We do not expect all layers to merge in the next 2 weeks. The snowcover is dramatically different week by week with expanding bare areas, and shallow snow around vegetation.

Observers: JT, AT

Center for Snow and Avalanche Studies

Profile # _____

Time: 11:00

Snowpack Profile

Date: 2020/05/19

Location: SBSP

Elev. 12,186

Aspect: NE

Boot Pen: 2-40cm

\angle : 3 °

Air T: 7 °C

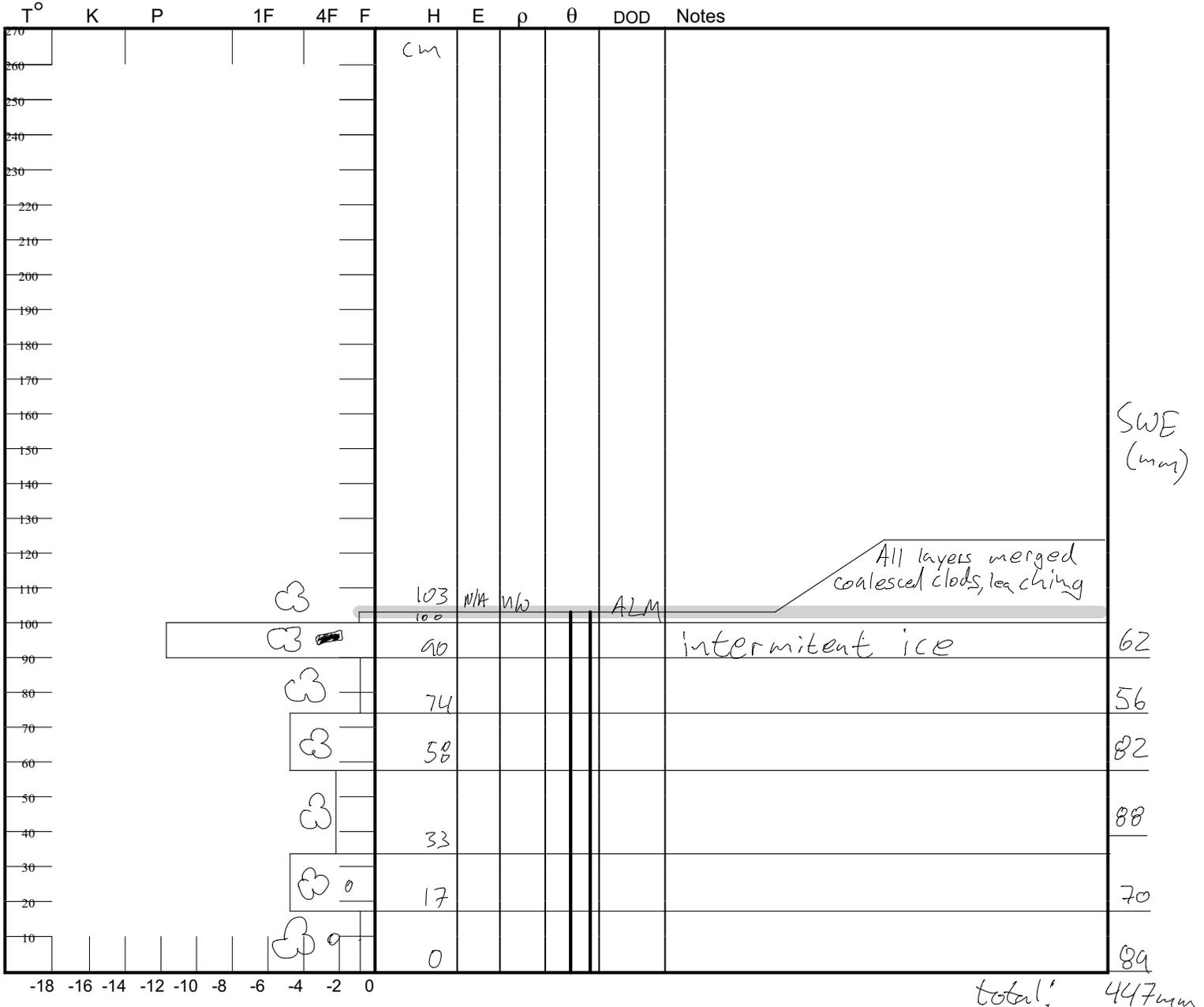
Sky: ScT

Precip: no

Wind: S-South

Prior Pit: # -; 2020/05/12

Total Snowpack SWE: 447 mm H₂O HS Norm: 1.03 m Mean ρ : 1/10 kg/m³ Notes: Fast moving clouds, significant increase in wind speed at treeline. Coyote at SBSP.



Notes: All dust layers are merged at snow surface. The surface is sun cupped and dusty. Snow is melting quickly with large areas melted out and no continuous snow on southerly aspect of SBB from SASP to SBSP. Snow is continuous between study plots on northerly aspects. Drainage is well established allowing water to freely drain. Fortunately snow is supportive for foot travel in the morning.

Observers: JT AT

Center for Snow and Avalanche Studies

Profile # 1

Time: 1040

Snowpack Profile

Date: 2020/05/26

Location: SASP

Elev. 12,186

Aspect: NE

Boot Pen: 2-Full cm

\angle : N/O °

Air T: 5 °C

Sky: few

Precip: no

Wind: N-NW

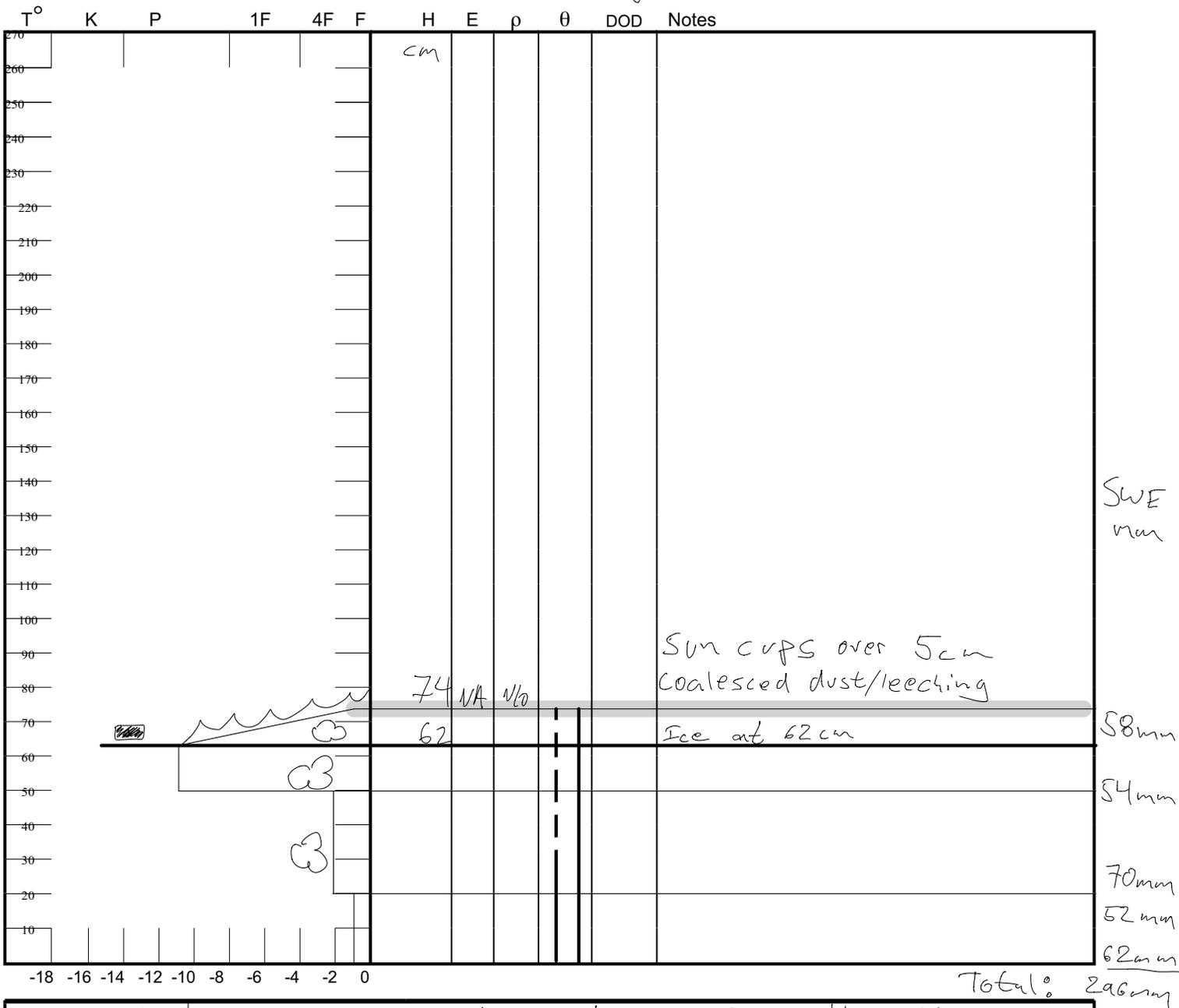
Prior Pit: # 1; 2020/05/19

Total Snowpack SWE: 296 mm H₂O

HS Norm: 0.70 m

Mean ρ : 1/0 kg/m³

Notes: a few high clouds to the east, wind speed much higher above treeline



Notes: All layers merged and leeching heavily. Sun cupped surface throughout SASP. Sun cups are larger below treeline. Large areas melted out. Travel on bare ground to approx 11,500' on southerly aspect. Descent route enables snow travel to SASP with minimal bare ground on north aspect. Elk have been moving through basin. Mushrooms and flowers are beginning to appear on southerly aspects.