

Observers: CL

Center for Snow and Avalanche Studies

Profile # 1

Time: 1125

Snowpack Profile

Date: 11.29.11

Location: SASP

Elev. 11,060

Aspect: NE

Boot Pen: 45 cm

$\angle$ : 4 °

Air T: 1.2 °C

Sky: 0

Precip: Nil

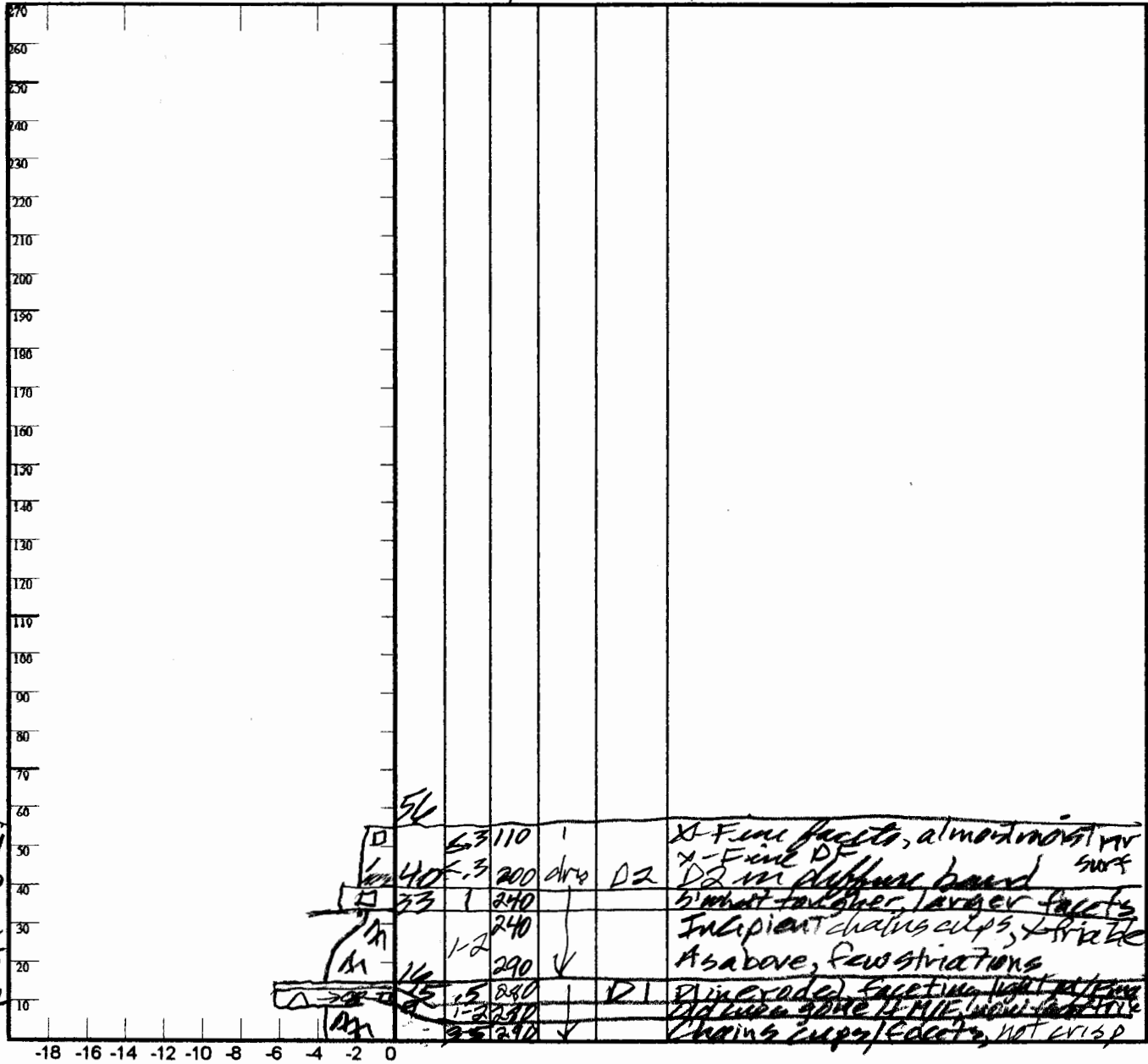
Wind: Nil

Prior Pit: # —; 1-1

Total Snowpack SWE: 130 mm H<sub>2</sub>O

Notes: H<sub>s</sub> = 0.57;  $\rho$  = 229 kg/m<sup>3</sup>

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Surf  
-5.3  
-6.4  
5.0  
-3.2  
2.5  
1.2  
0.1

7  
SWE  
—  
26  
—  
42  
—  
42  
—

Potential Slab				Weak Layer & Bed Surface						
Ref	$H_2O_{Nor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$		F	E	TWL	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =								
B	mm ÷ m =	X X X 9.8 =								

Notes:  
 Surf @ 0.31:  $\rho_{kg} = 110$   
 10m @ 0.57:  $\rho_{kg} = 229$ , 3 @ 0.6, 4 @ 0.57, covered V. 11/20/03

Observers: CL

Center for Snow and Avalanche Studies

Profile # 2

Time: 1235 MST

Snowpack Profile

Date: 11/1/12

Location: SB4P

Elev. 12900' Aspect: NE

Boot Pen: 3545 cm  $\alpha$ : 3 °

Air T: 5 °C Sky: 0

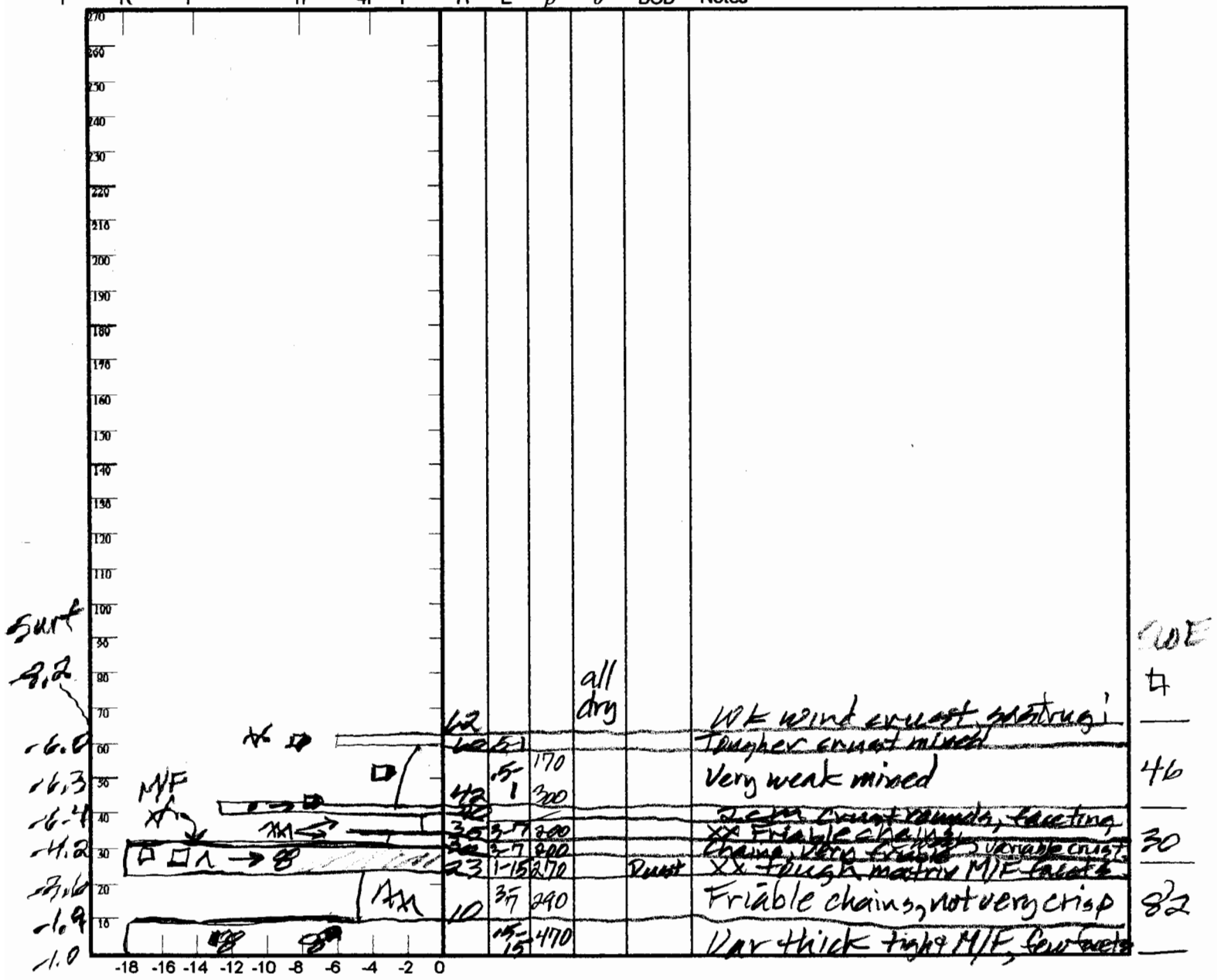
Precip: Nil Wind: LT

Prior Pit: # -; -

Total Snowpack SWE: 158 mm H<sub>2</sub>O

Notes: H<sub>2</sub>O = 0.03;  $\bar{\rho}$  = 251 kg/m<sup>3</sup>

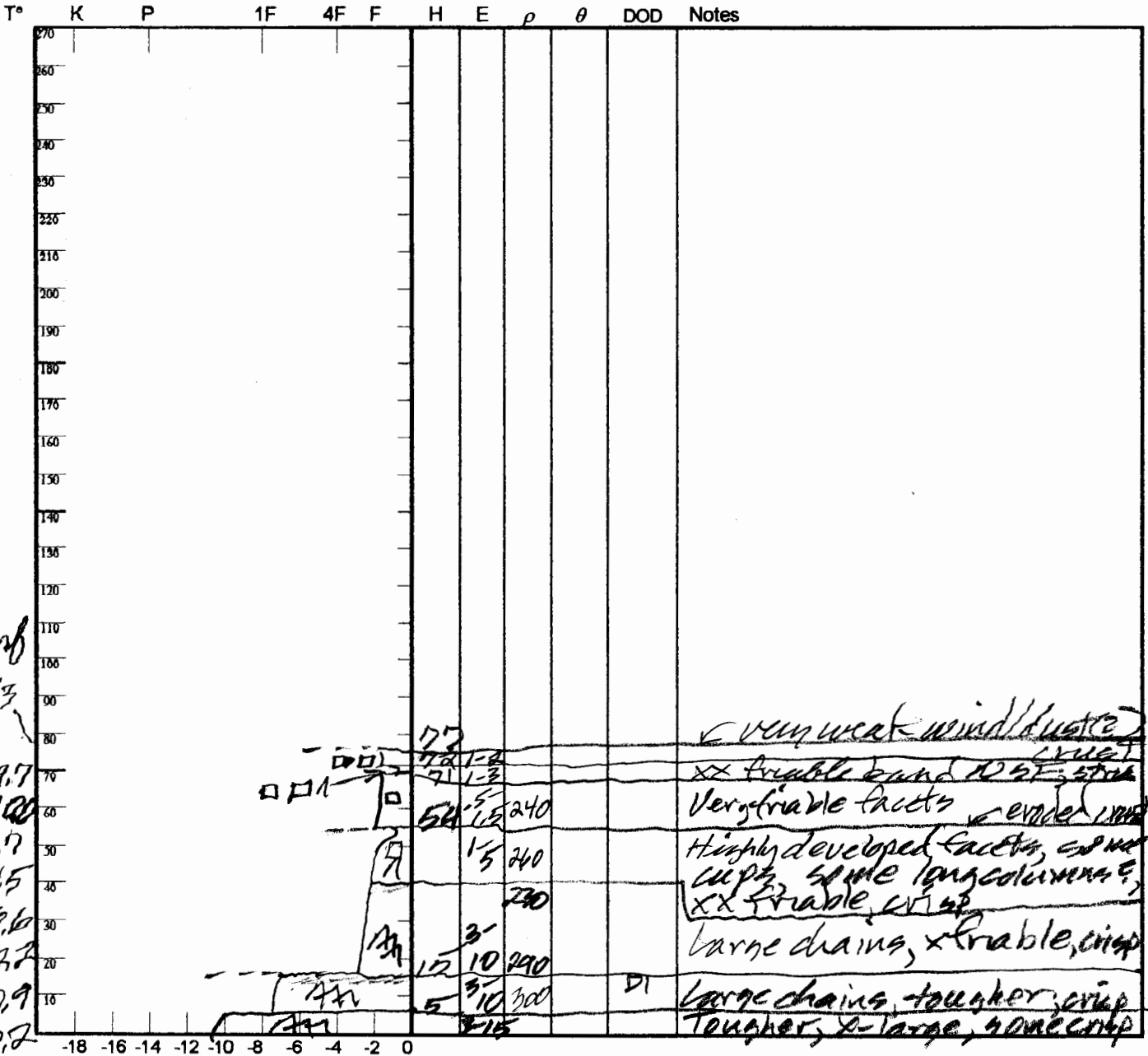
T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \alpha \times H_{Nor} \times \rho \times 9.8 = T_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	x x x 9.8 =							
B	mm ÷ m =	x x x 9.8 =							

Notes:

Observers: Ch E Ming Center for Snow and Avalanche Studies Profile # 3  
 Time: 1110 Snowpack Profile Date: 1/2/12  
 Location: GASP Elev. 11,080' Aspect: NE Boot Pen: 240 cm  $\angle$ : 3 °  
 Air T: +4 °C Sky: 0 Precip: Nil Wind: Lt Prior Pit: # 1 ; 1  
 Total Snowpack SWE: 188 mm H<sub>2</sub>O Notes: H<sub>2</sub>O = 0.80 ;  $\rho = 235$  kg/m<sup>3</sup>



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_2O_{Nor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes: D3 dust not distinctively perceptible @ surface here (but was in concentrated locations during snow to GASP yesterday).

Observers: U, MB  
 Time: 1045 MST  
 Location: SBSP  
 Air T: -5 °C Sky: 0  
 Total Snowpack SWE: 236 mm H<sub>2</sub>O

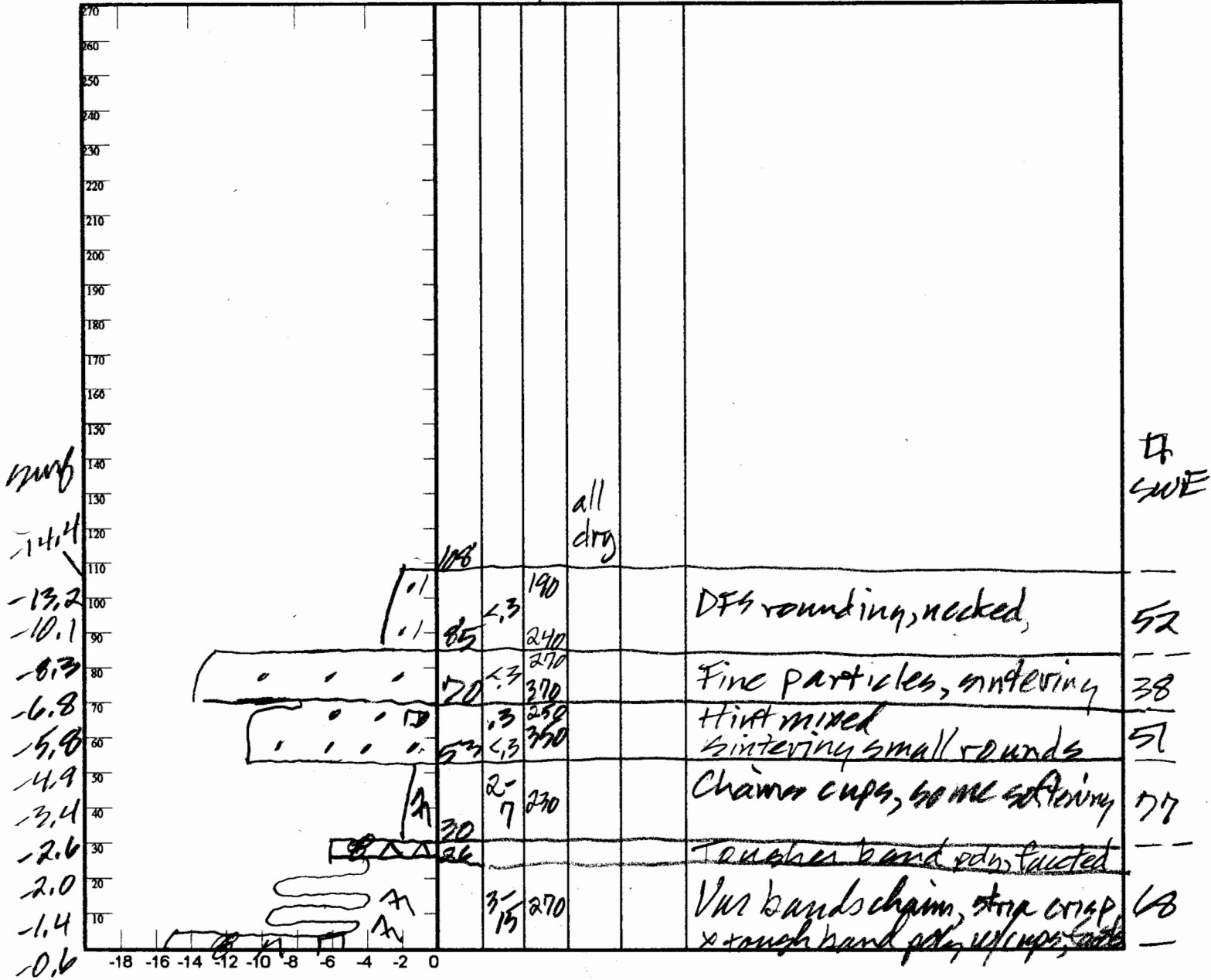
Center for Snow and Avalanche Studies

Profile # 4

Snowpack Profile

Elev. 12300' Aspect: NE Boot Pen: 15 cm 2:3 °  
 Precip: Nil Wind: Nil Prior Pit: # 2; 11/1/12  
 Notes: 454 = 1.12 m;  $\bar{\rho} = 255 \text{ kg/m}^3$

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: CLAMB

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Profile # 5

Time: 1300

Snowpack Profile

Date: 2.1.12

Location: SAP

Elev. 11,000

Aspect: NE

Boot Pen: 20 cm

$\angle$ : 3 °

Air T: 12 °C

Sky: ①

Precip: Nil

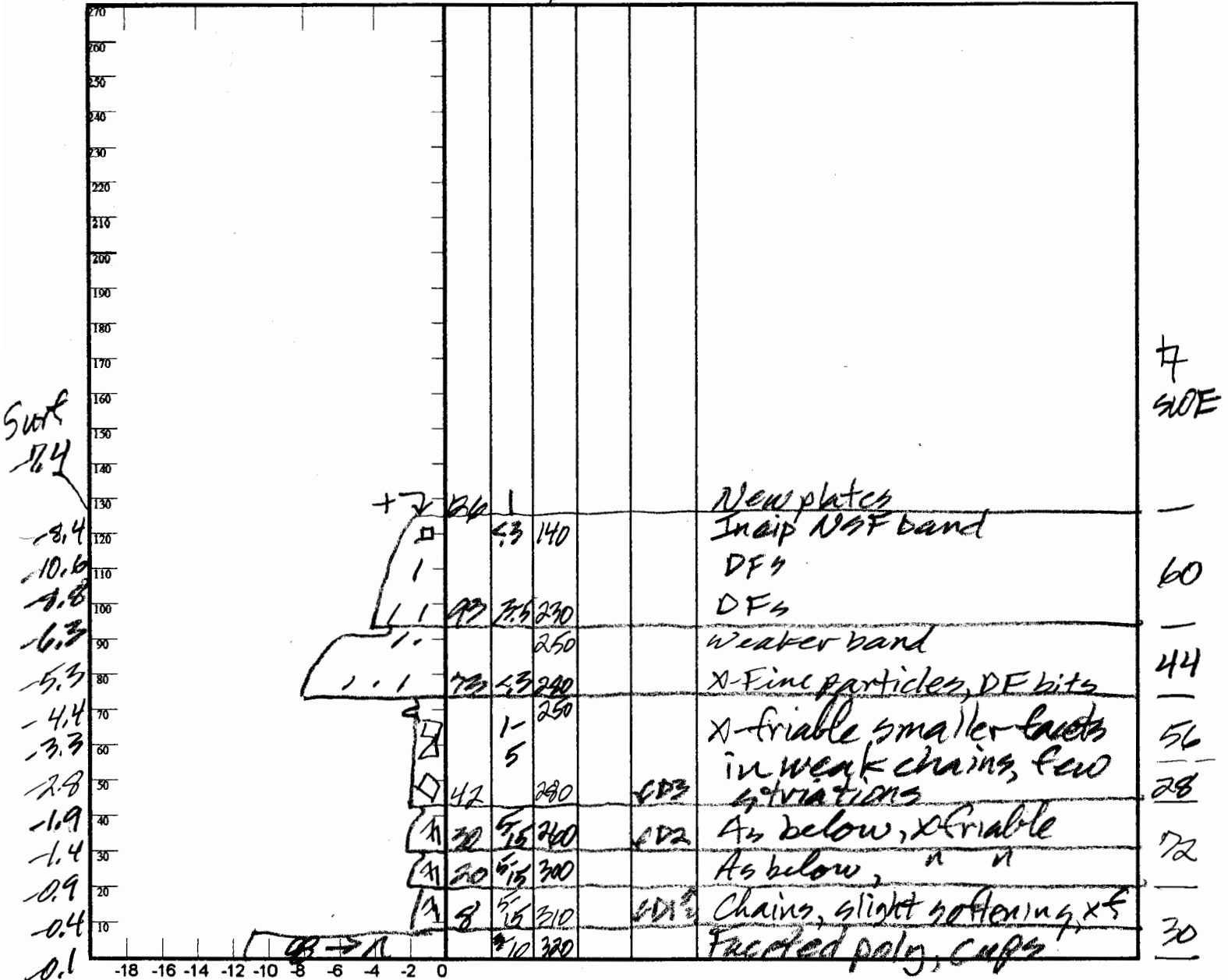
Wind: W

Prior Pit: # 3; 112/12

Total Snowpack SWE: 290 mm H<sub>2</sub>O

Notes: H<sub>2</sub>O = 1.25 m;  $\rho = 232$  kg/m<sup>3</sup>

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab				Weak Layer & Bed Surface						
Ref	$H_2O_{Nor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$		F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =								
B	mm ÷ m =	X X X 9.8 =								

Notes:

Observers: CCAT

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Profile # 6

Time: 0945

Snowpack Profile

Date: 3/5/12

Location: SASP

Elev. 11,900

Aspect: NE

Boot Pen: 28 cm

$\alpha$ : 2°

Air T: +3 °C

Sky: 0

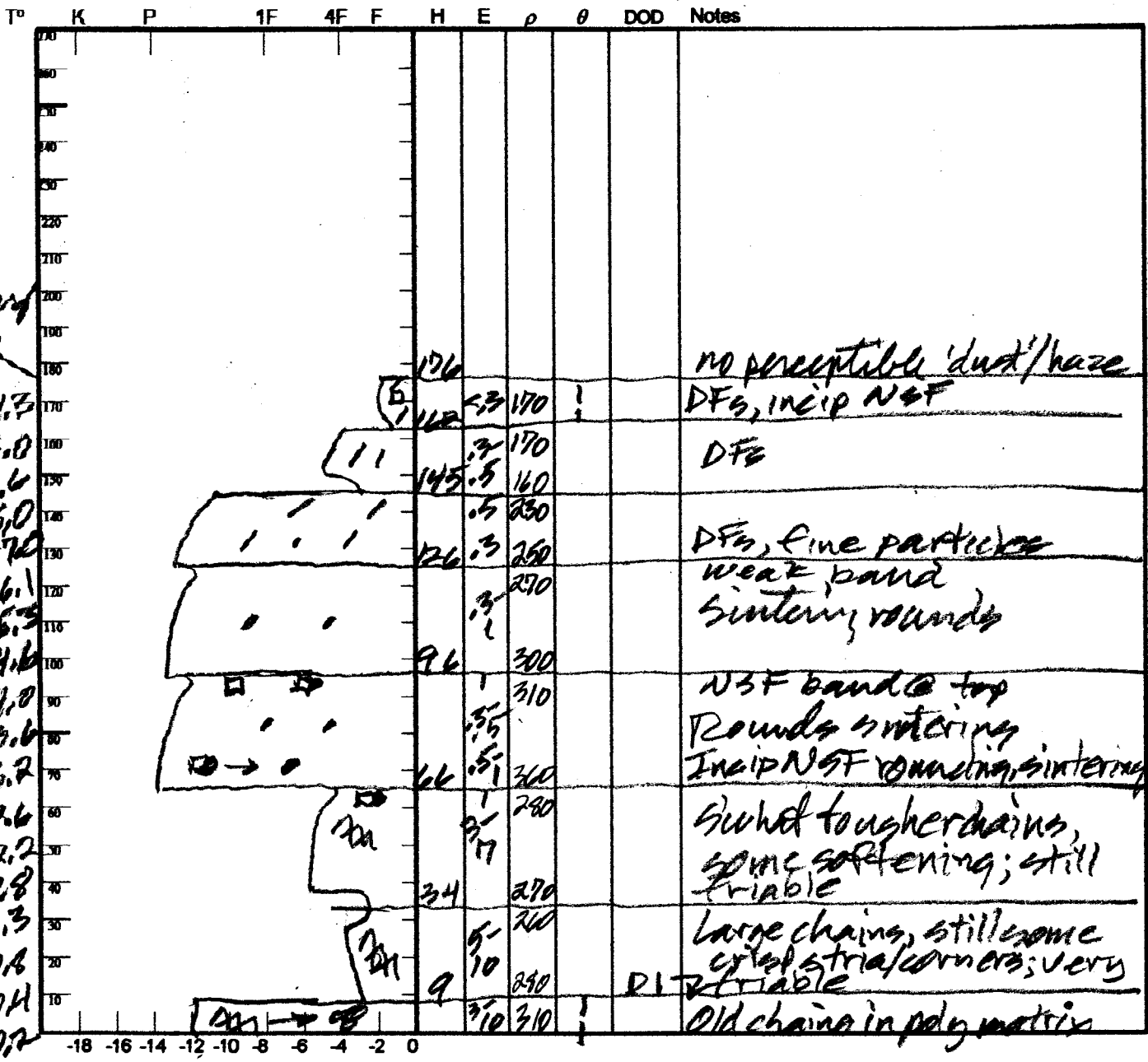
Precip: Nil

Wind: Nil

Prior Pit: # 5; 2/1/12

Total Snowpack SWE: 494 mm H<sub>2</sub>O

Notes: H<sub>2</sub>O = 1.75 ;  $\rho$  = 282 kg/m<sup>3</sup>



5 wind  
8.2  
-14.3  
-15.0  
-9.6  
-6.0  
-7.0  
-6.1  
-5.3  
-4.6  
-4.0  
-3.6  
-3.2  
-2.6  
-2.2  
-1.8  
-1.3  
-0.6  
-0.4  
0.2

4  
50E  
15  
41  
37  
69  
34  
57  
48  
81  
76  
36

Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{10}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{slab}$	F	E	TWL	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: CL+AT

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Profile # 7

Time: 0945

Snowpack Profile

Date: 3/24/12

Location: SASP

Elev. 11,000'

Aspect: NE

Boot Pen: 0.5 cm

$\angle$ : 3°

Air T: +5°C

Sky: 0

Precip: Nil

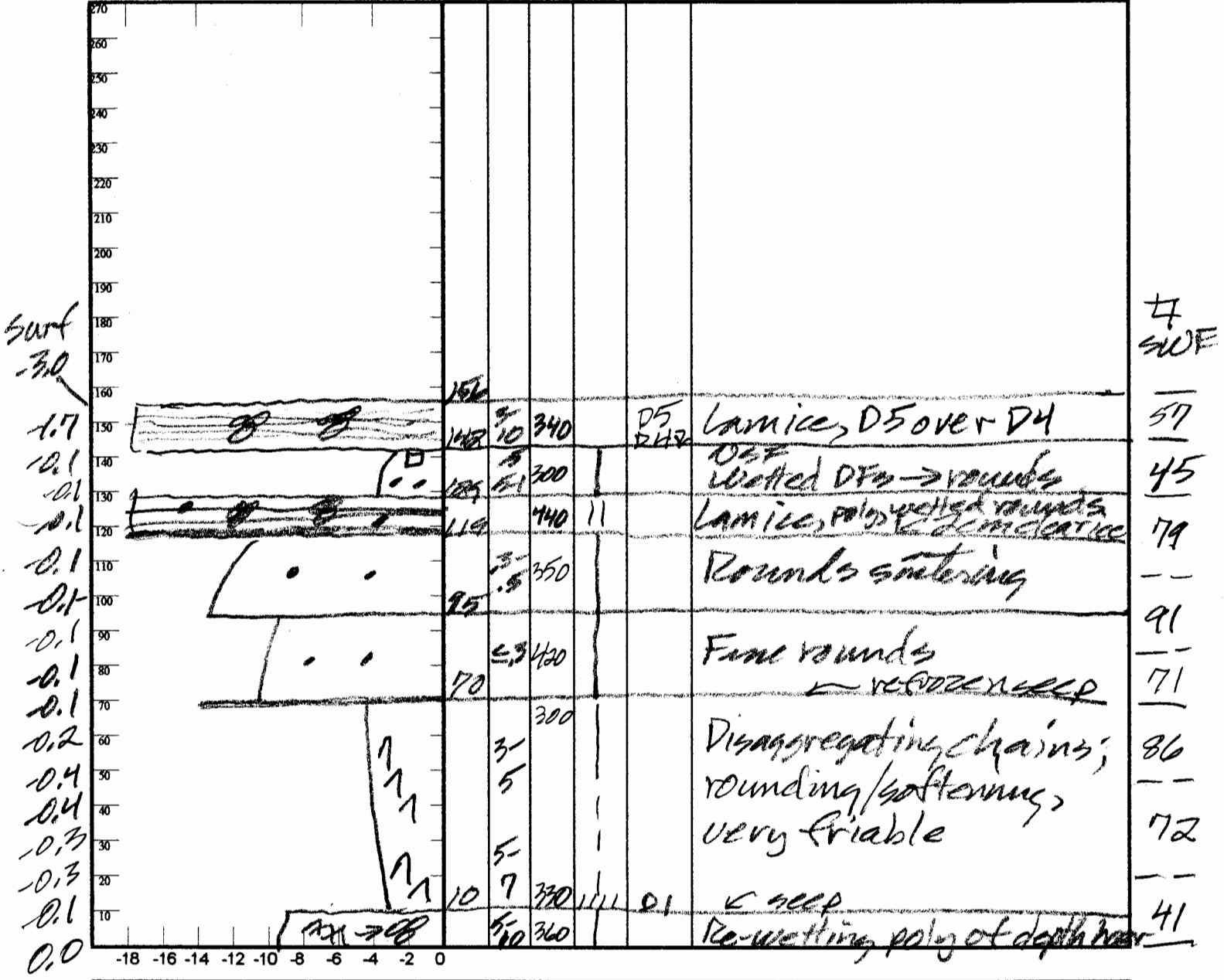
Wind: LH

Prior Pit: # 6; 3/5/12

Total Snowpack SWE: 542 mm H<sub>2</sub>O

Notes: H<sub>st</sub> = 1.55m;  $\rho = 350$  kg/m<sup>3</sup>

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	x x x 9.8 =							
B	mm ÷ m =	x x x 9.8 =							

Notes: Grav samples 4+5 merged

Observers: CVAT

Center for Snow and Avalanche Studies

Profile # 8

Time: 0840 MST

Snowpack Profile

Date: 3/27/12

Location: GBSP

Elev. 12,186' Aspect: NE

Boot Pen: 0-5 cm  $\angle$ : 3°

Air T: +6 °C Sky: 0

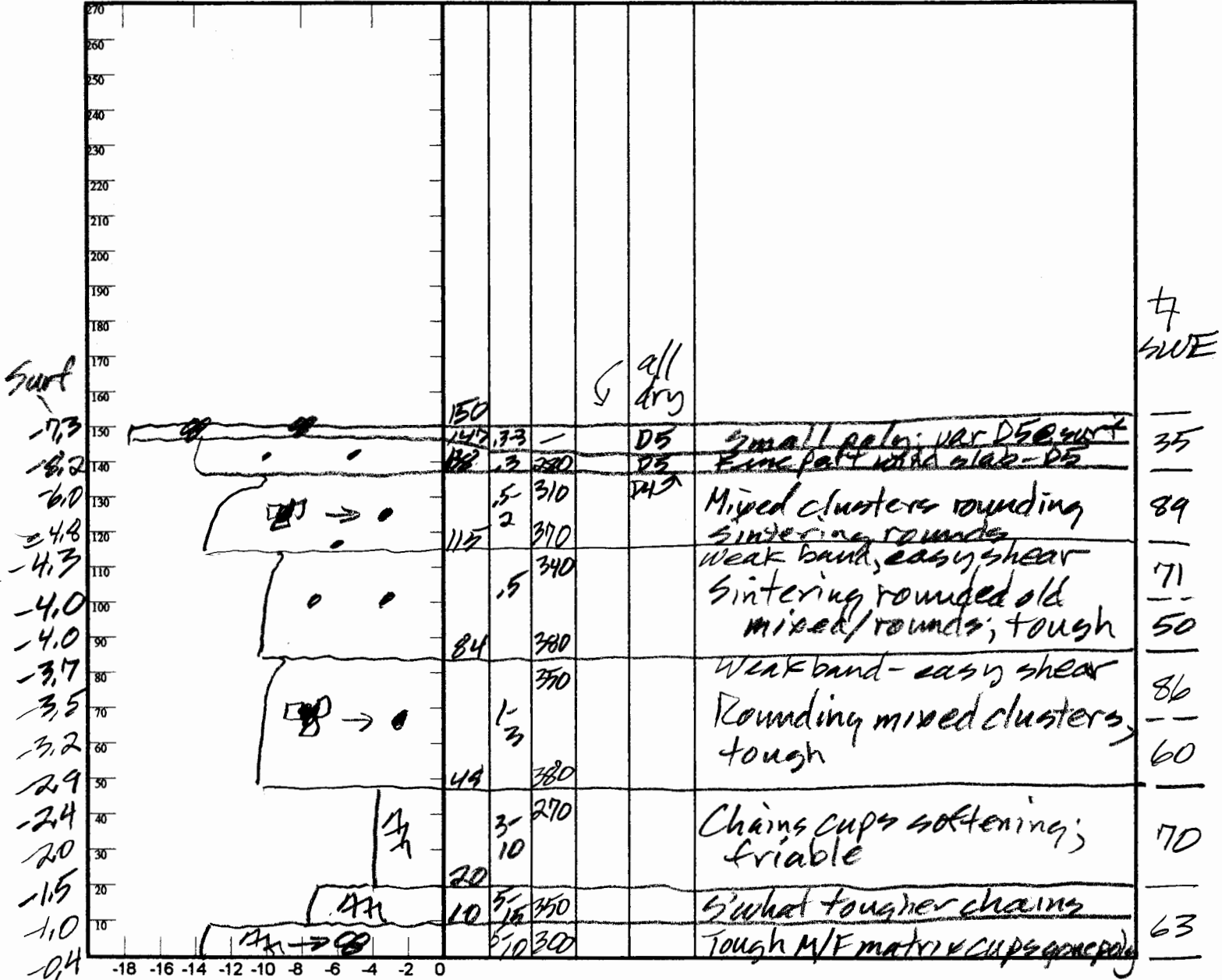
Precip: Nil Wind: Nil

Prior Pit: # 4; 2/1/12

Total Snowpack SWE: 524 mm H<sub>2</sub>O

Notes: H<sub>2</sub>O = 1.47m;  $\rho = 356 \text{ kg/m}^3$

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{slab}$	F	E	T <sub>wl</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:



Observers: CLLAT

Center for Snow and Avalanche Studies

Profile # 9

Time: 1050 MST

Snowpack Profile

Date: 4/2/12

Location: SASP

Elev. 11,010' Aspect: NE

Boot Pen: 1 cm  $\angle$ : 3°

Air T: 6 °C Sky: ☉

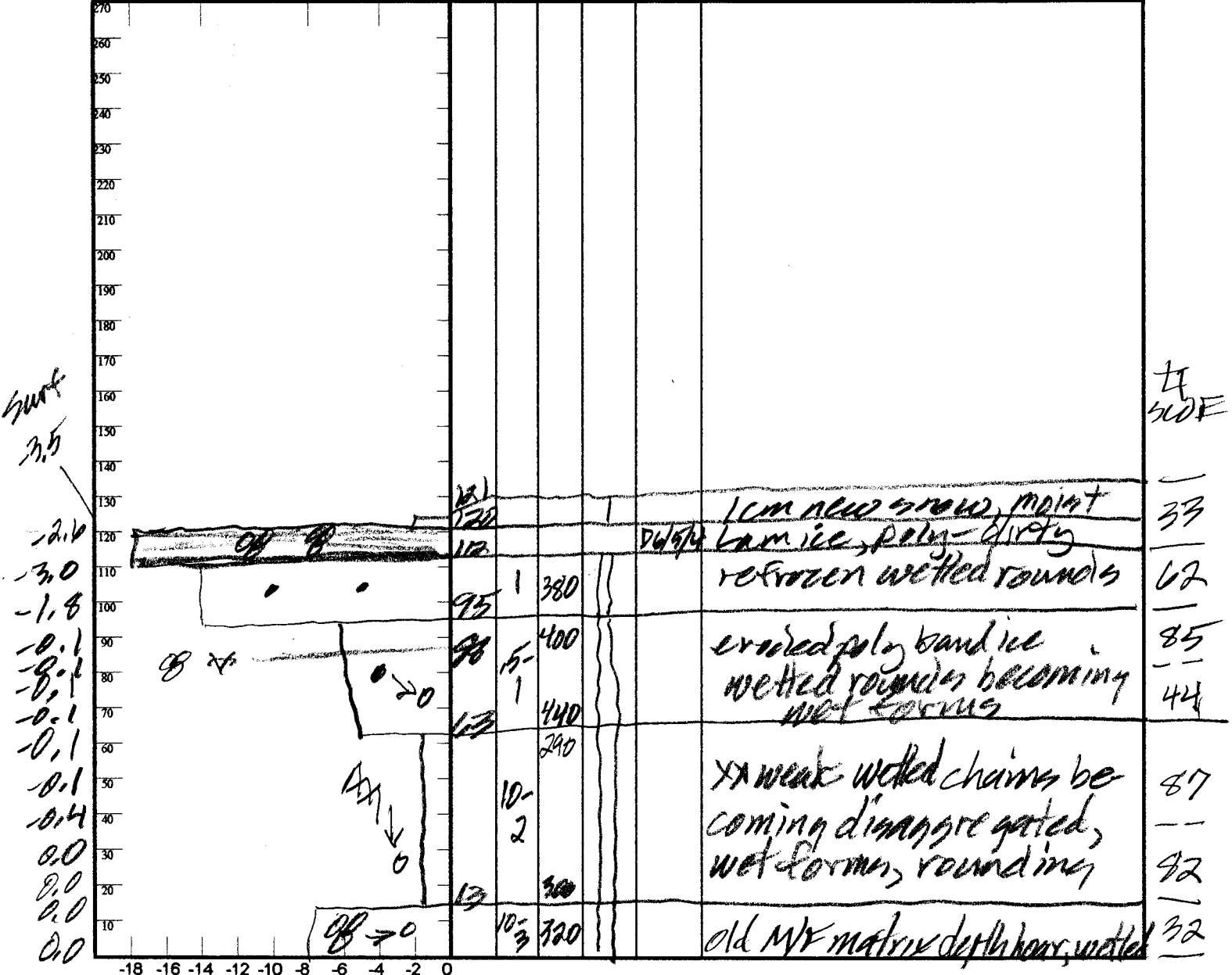
Precip: 5' Wind: lt

Prior Pit: # 7; 3/26/12

Total Snowpack SWE: 425 mm H<sub>2</sub>O

Notes: H<sub>gt</sub> = 122m  $\rho$  = 346 kg/m<sup>3</sup>

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes: No clear evidence of a D7 except red tinge in old surface.

Observers: CL+AT

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Profile # 10

Time: 0815 MST

Snowpack Profile

Date: 4, 7, 12

Location: SBHP

Elev. 12,166' Aspect: NE

Boot Pen: 0-5 cm  $\angle$ : 3°

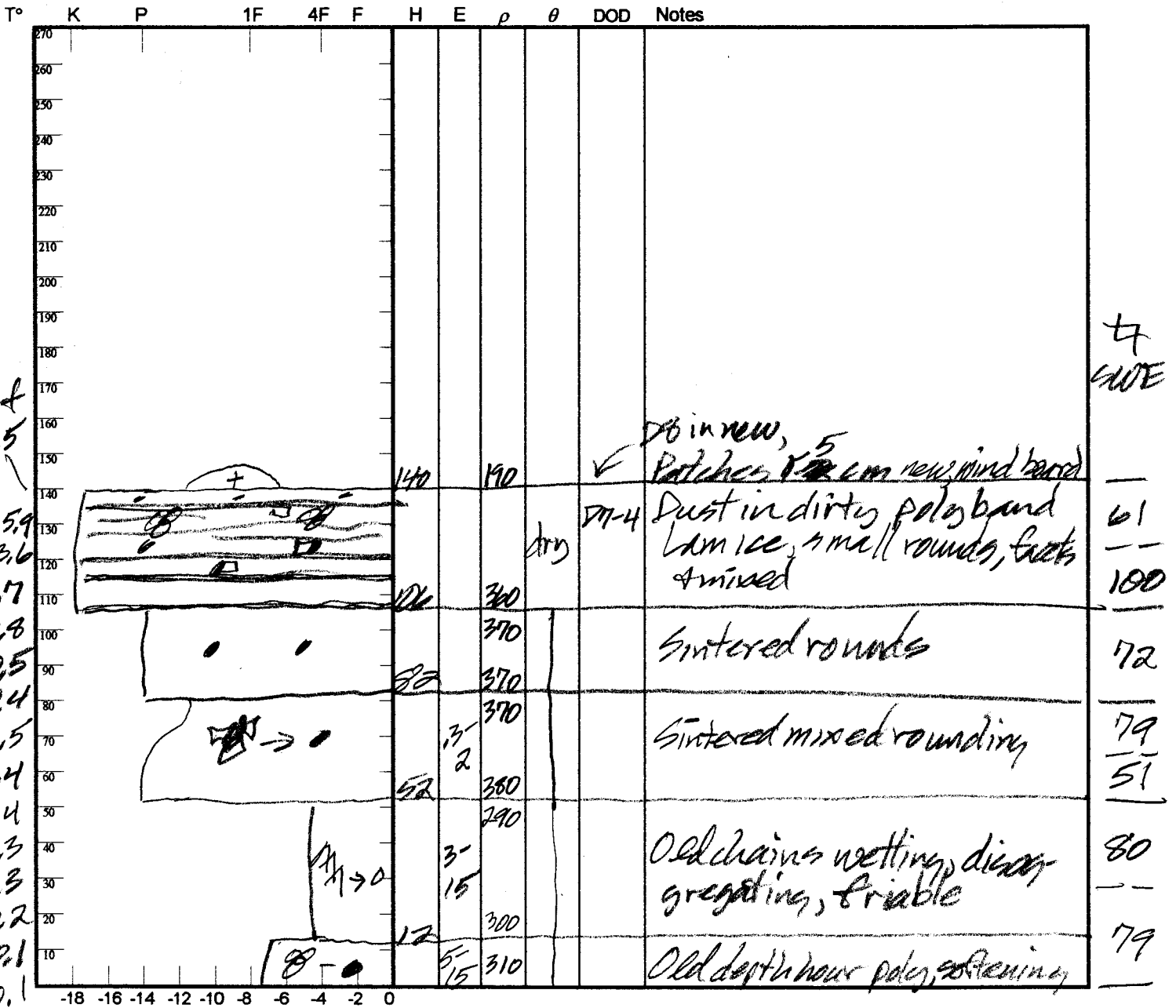
Air T: -2°C Sky: 0

Precip: Nil Wind: LT

Prior Pit: # 8; 3/27/12

Total Snowpack SWE: 532 mm H<sub>2</sub>O

Notes: H<sub>tot</sub> = 1.46 m;  $\bar{\rho}$  = 354 kg/m<sup>3</sup>



Surf 8.5

4  
SWE

DB in new, 5 Patches 5 cm new, wind based

DM-4 Dust in dirty poly band Lam ice, small rounds, facets Amixed

Sintered rounds

Sintered mixed rounding

Old chains wetting, disintegrating, friable

Old depth near poly, softening

F=116

Potential Slab				Weak Layer & Bed Surface						
Ref	$H_2O_{Nor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = T_{Slab}$		F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm $\div$ m =	X X X 9.8 =								
B	mm $\div$ m =	X X X 9.8 =								

Notes:

Observers: CB, AT, KE

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Profile # 11

Time: 0915

Snowpack Profile

Date: 4/8/12

Location: SASP

Elev. 11,060' Aspect: NE

Boot Pen: 1 cm  $\angle$ : 3°

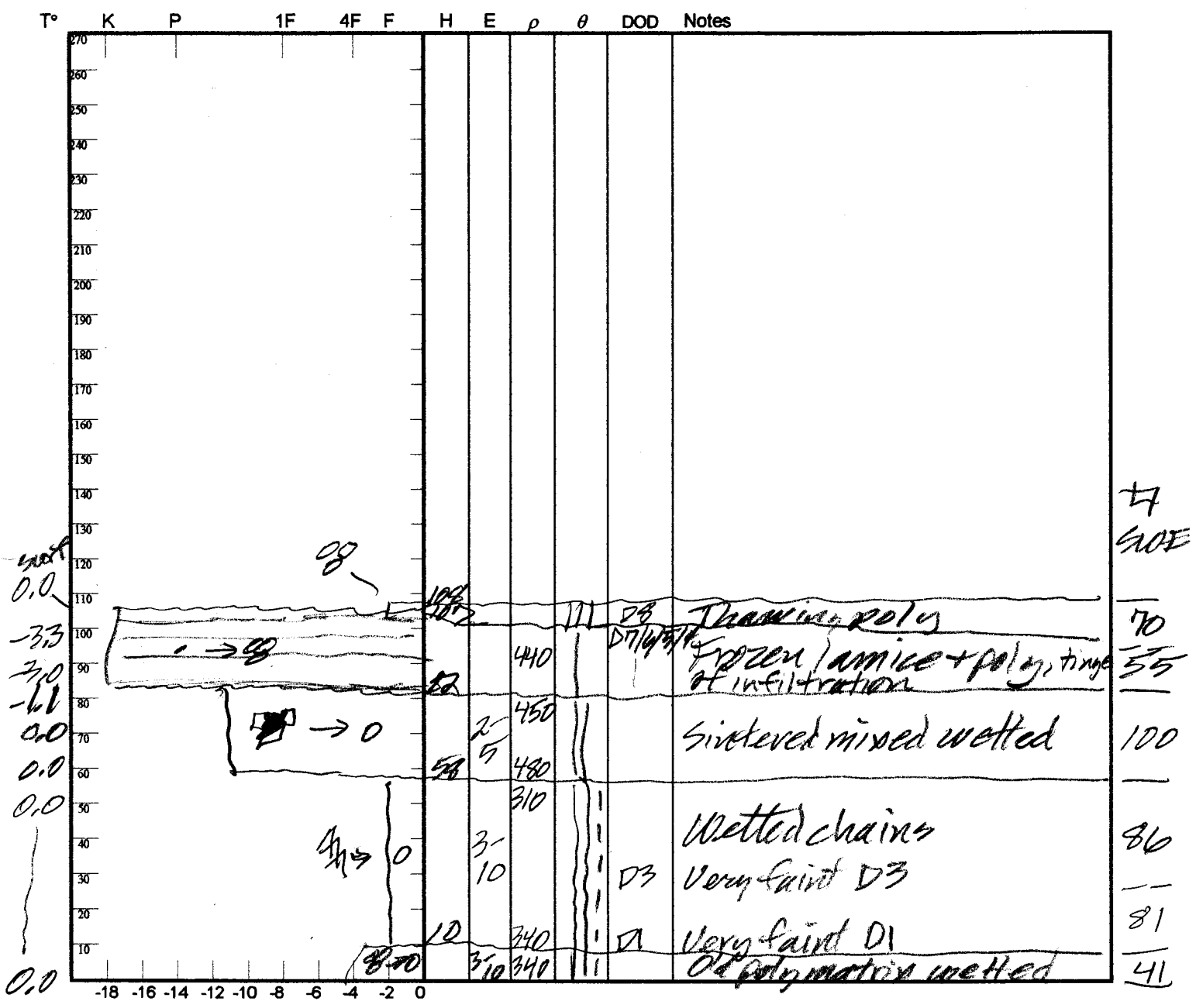
Air T: +6 °C Sky: ☉

Precip: Nil Wind: Nil

Prior Pit: # 9; 4/2/11

Total Snowpack SWE: 433 mm H<sub>2</sub>O

Notes:  $H_s = 1.15$  m,  $\rho = 377$  kg/m<sup>3</sup>



Potential Slab				Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = T_{Slab}$		F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =								
B	mm ÷ m =	X X X 9.8 =								

Notes:

Observers: WAKB

Center for Snow and Avalanche Studies

Profile # 12

Time: 0830 MST

Snowpack Profile

Date: 4/16/12

Location: GASP

Elev. 11,060'

Aspect: NE

Boot Pen: 23 cm

$\angle$ : 3°

Air T: +1 °C

Sky: 0

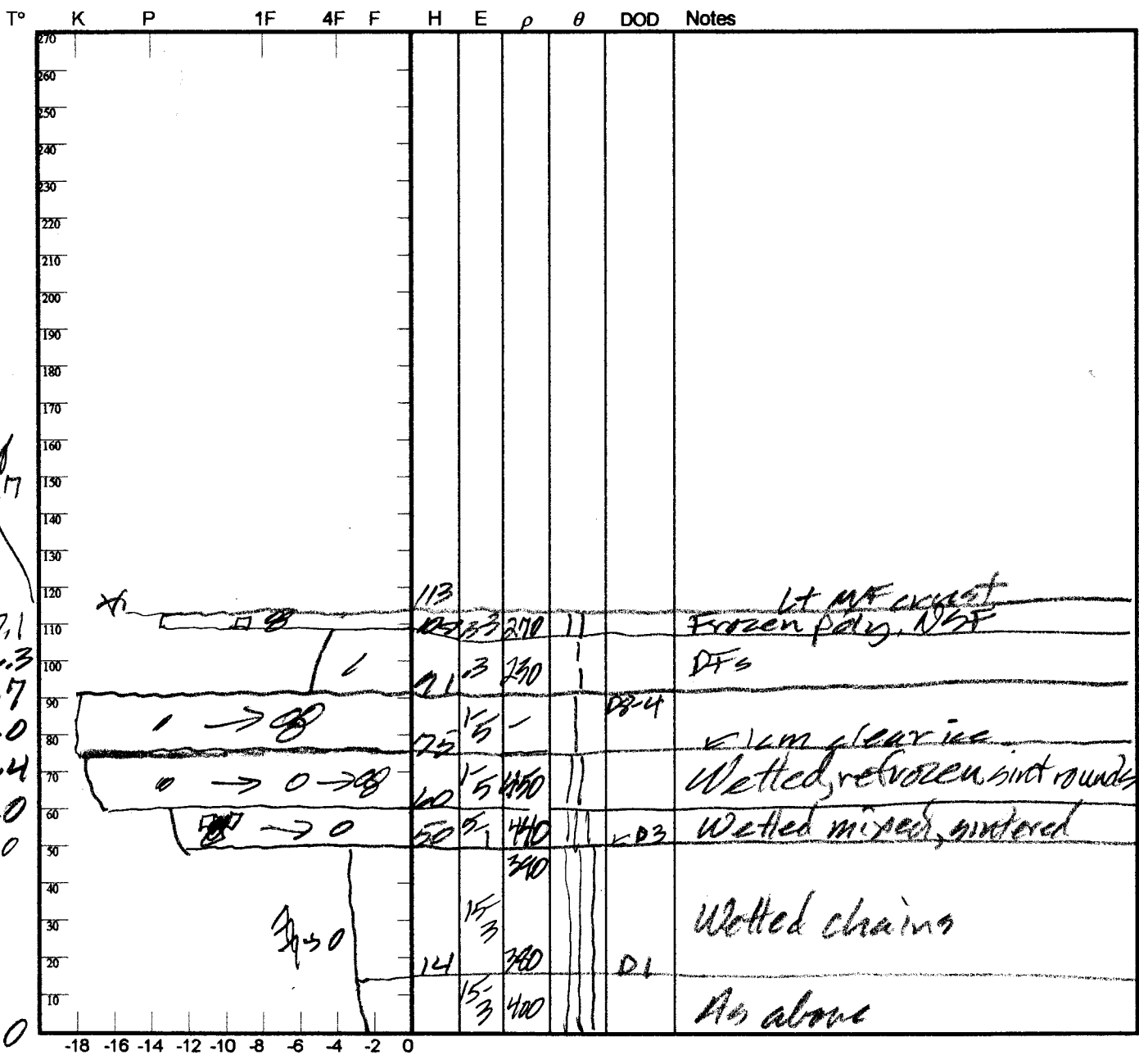
Precip: Nil

Wind: Nil

Prior Pit: # 11; 4/8/12

Total Snowpack SWE: 453 mm H<sub>2</sub>O

Notes: HS<sub>2</sub> = 1.21m;  $\bar{\rho}$  = 374 kg/m<sup>3</sup>



7  
SWE  
—  
42  
—  
79  
—  
116  
—  
101  
—  
115

Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2ONor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: U, AT

Center for Snow and Avalanche Studies

Profile # 13

Time: 0830

Snowpack Profile

Date: 4/23/12

Location: SOSP

Elev. 12,186' Aspect: NE

Boot Pen: 1 cm  $\angle$ : 3 °

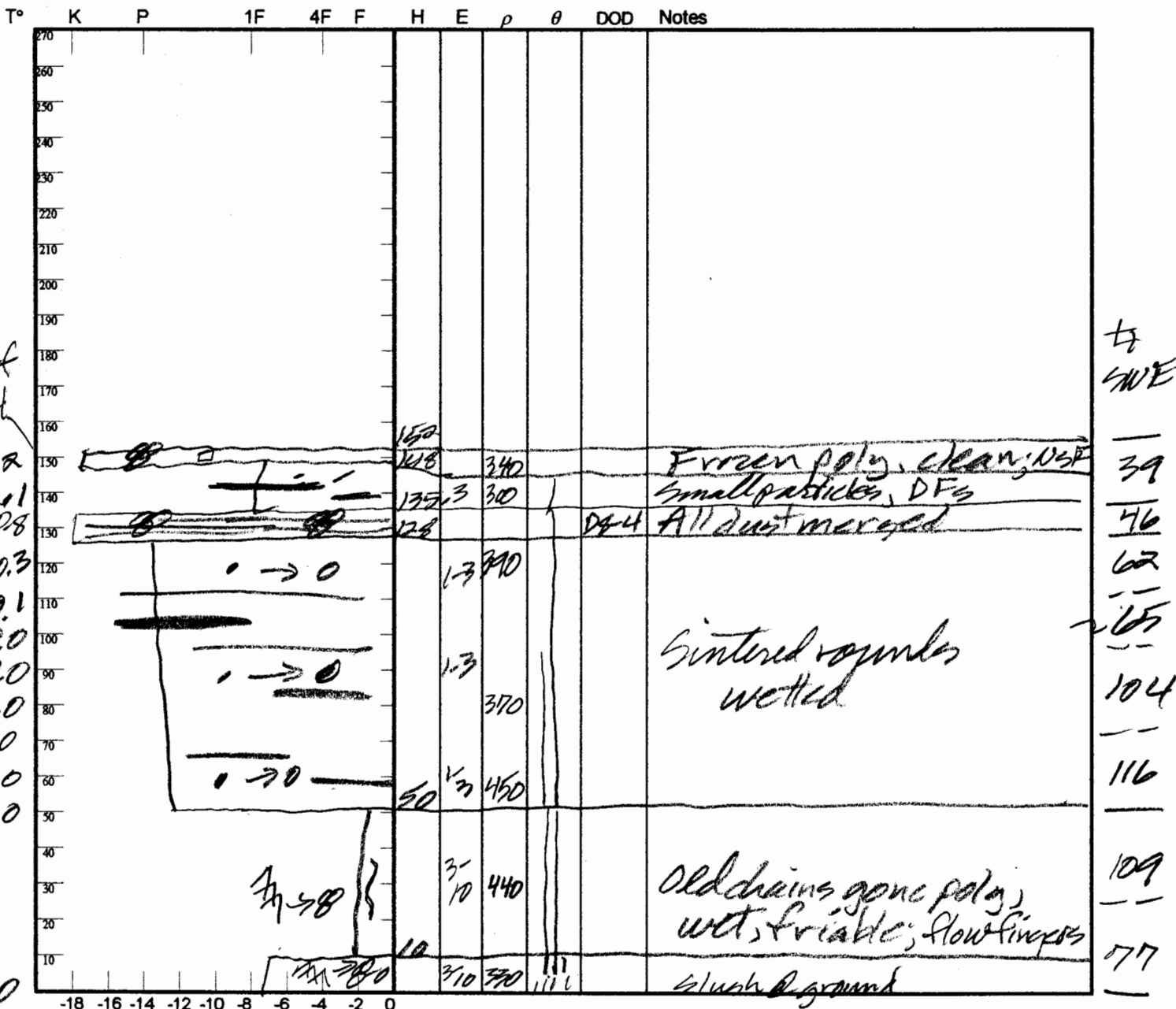
Air T: +9 °C Sky: 0

Precip: Nil Wind: Nil

Prior Pit: # 10; 4/7/12

Total Snowpack SWE: 418 mm H<sub>2</sub>O

Notes:  $H_s \tau = 1.50$ ;  $\bar{\rho} = 412 \text{ kg/m}^3$



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2ONor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = T_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: CL, AT

Center for Snow and Avalanche Studies

Profile # 14

Time: 1100 MST

Snowpack Profile

Date: 4/23/12

Location: GPP

Elev. 11060' Aspect: NE

Boot Pen: 4 cm  $\angle$ : 3°

Air T: +15°C Sky: 0

Precip: Nil Wind: Nil

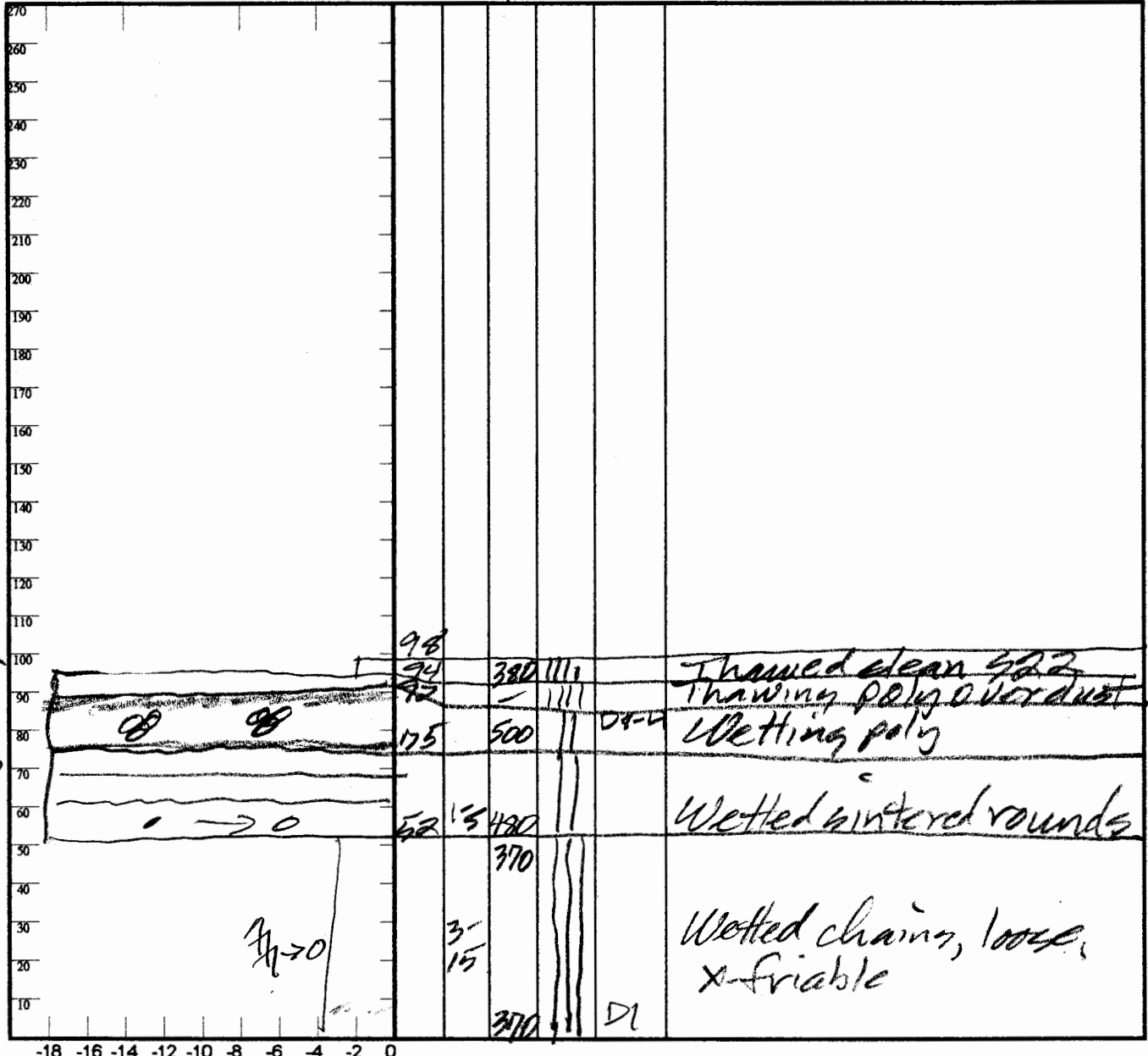
Prior Pit: # 12; 4/17/12

Total Snowpack SWE: 413 mm H<sub>2</sub>O

Notes: H<sub>s</sub> = 0.98 m;  $\rho = 421$  kg/m<sup>3</sup>

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes

SWF  
0.0  
0.0  
0.0  
0.0  
0.0  
0.0  
0.0



7  
113  
123  
105  
72

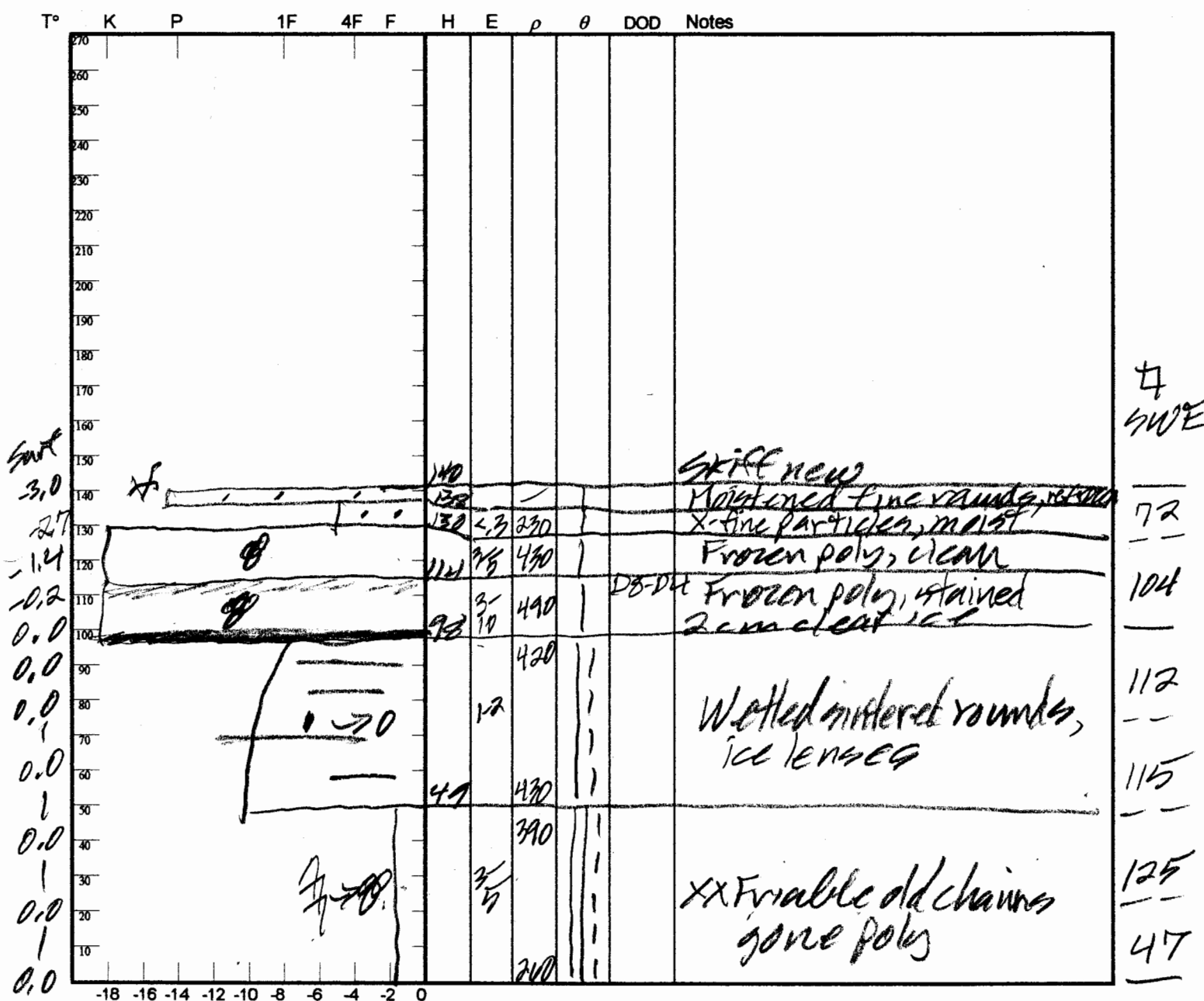
Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2ONor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>wl</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: U+AT  
 Time: 0835 MST  
 Location: HWA  
 Air T: -1 °C Sky: ☉  
 Total Snowpack SWE: 575 mm H<sub>2</sub>O

Center for Snow and Avalanche Studies  
 Snowpack Profile  
 Elev. 12,185 Aspect: NE  
 Precip: Furries Wind: LH+  
 Notes: HWA = 1.42 m;  $\bar{\rho} = 405 \text{ kg/m}^3$

Profile # 15  
 Date: 4/29/12  
 Boot Pen: 2 cm  $\angle: 3^\circ$   
 Prior Pit: # 13; 4/23/12



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = T_{Slab}$	F	E	T <sub>wl</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: CL, AT, EM

Center for Snow and Avalanche Studies

Profile # 16

Time: 1035 MST

Snowpack Profile

Date: 4/30/12

Location: SASP

Elev. 11,060' Aspect: NE Boot Pen: 5 cm  $\angle$ : 3°

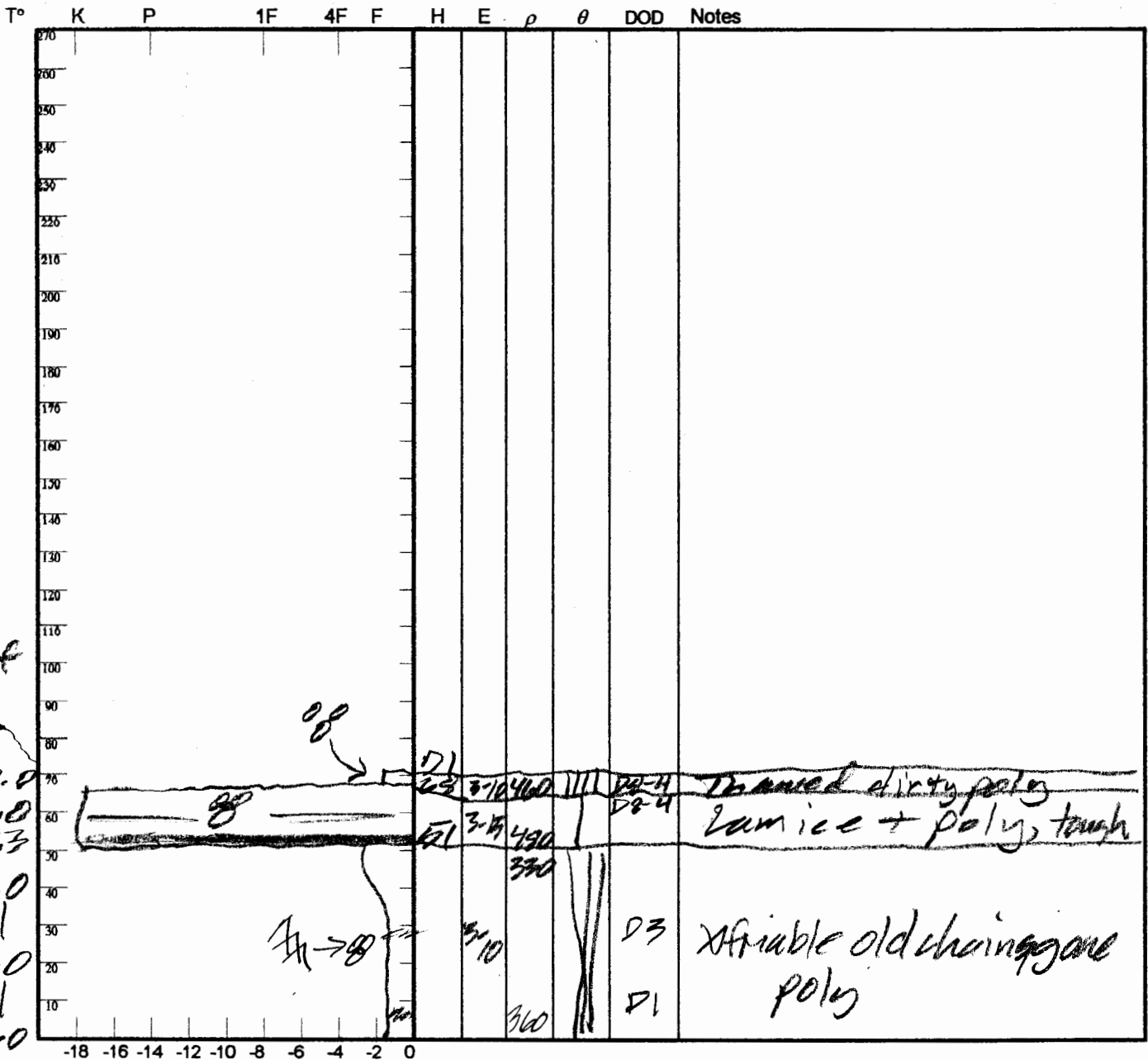
Air T: +7 °C Sky: 0

Precip: Nil Wind: Nil

Prior Pit: # 14; 4/23/12

Total Snowpack SWE: 243 mm H<sub>2</sub>O

Notes: H<sub>s</sub> = 0.71 m ;  $\bar{\rho}$  = 399 kg/m<sup>3</sup>



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:



Observers: CK KB

Center for Snow and Avalanche Studies

Profile # 17

Time: 0615

Snowpack Profile

Date: 5/7/12

Location: SAMP

Elev. 11,060' Aspect: NE

Boot Pen: 1-30 cm  $\angle$ : 3°

Air T: +5 °C

Sky: ☉ → ☉

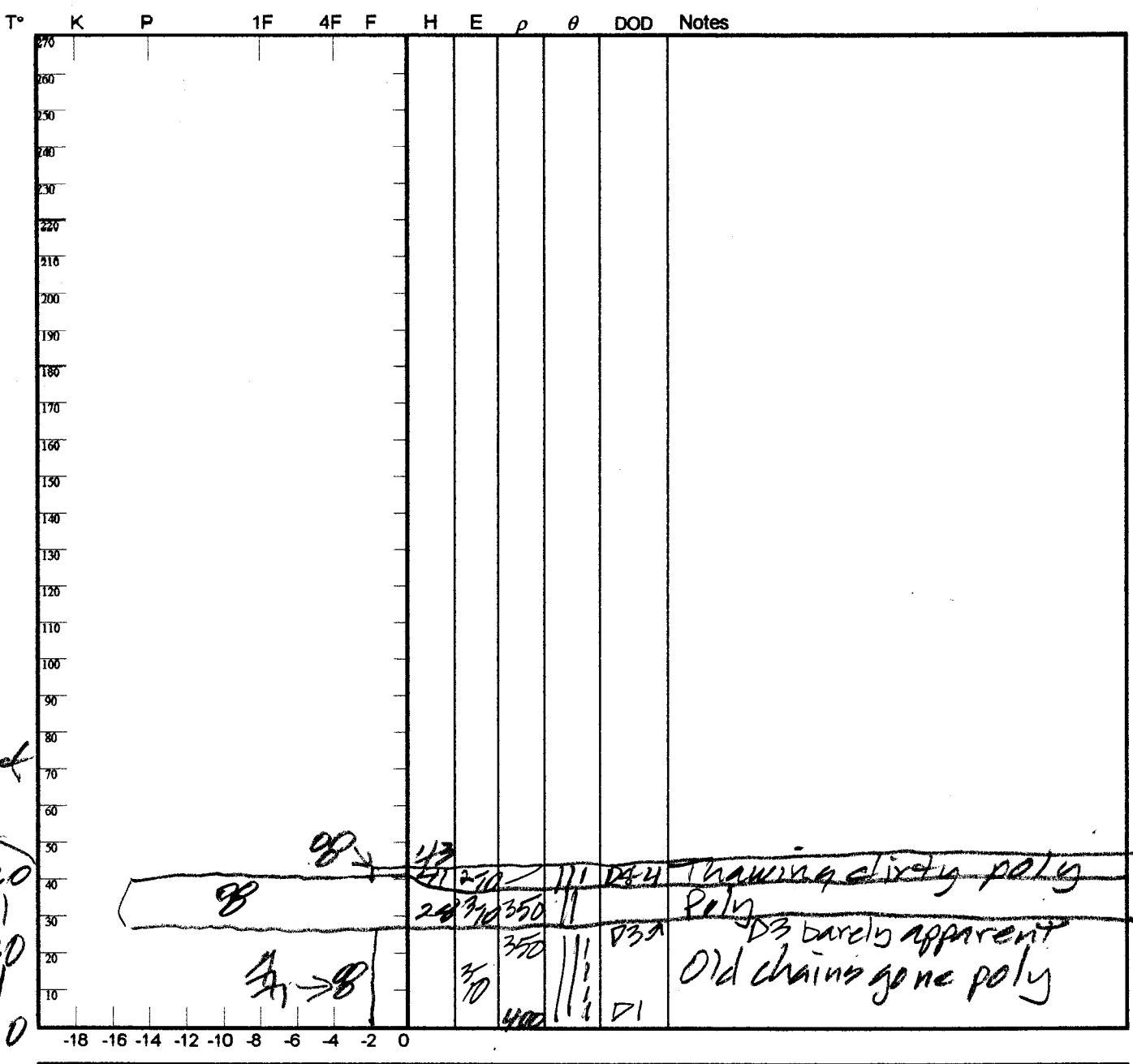
Precip: Nil

Wind: LT

Prior Pit: # 16; 4/30/12

Total Snowpack SWE: 150 mm H<sub>2</sub>O

Notes: H<sub>2</sub>O = 0.43 ;  $\bar{\rho}$  = 349 kg/m<sup>3</sup>



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2O_{Nor}} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: CLTAT

Center for Snow and Avalanche Studies

Profile # 18

Time: 0820 MST

Snowpack Profile

Date: 5/9/12

Location: SBS

Elev. 1210'

Aspect: NE

Boot Pen: 1 cm  $\angle$ : 3°

Air T: +7 °C

Sky: 0

Precip: Nil

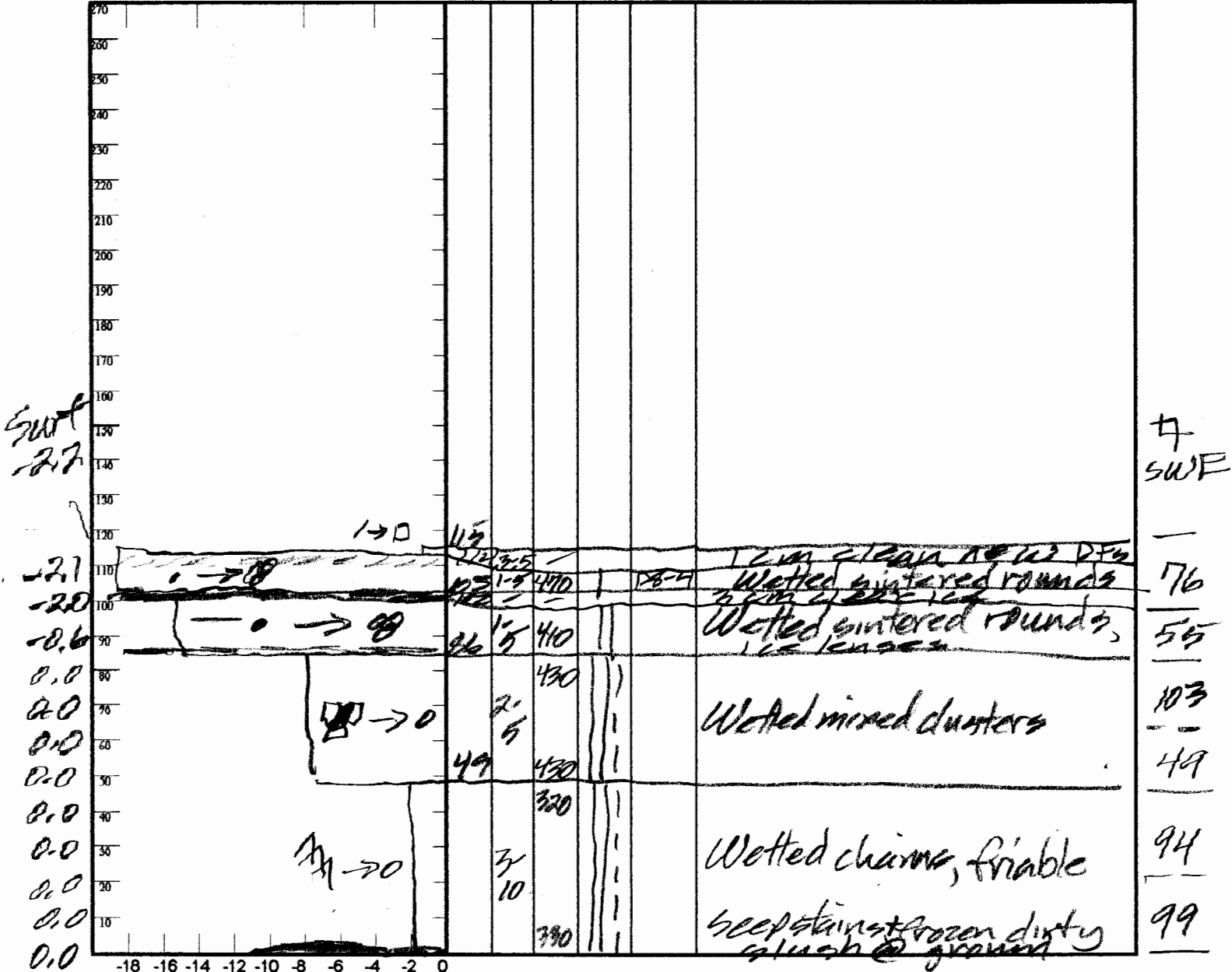
Wind: Nil

Prior Pit: # 15; 4/29/12

Total Snowpack SWE: 476 mm H<sub>2</sub>O

Notes: HSTA = 618m;  $\rho = 403 \text{ kg/m}^3$

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2ONor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = \tau_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm ÷ m =	X X X 9.8 =							
B	mm ÷ m =	X X X 9.8 =							

Notes:

Observers: CHAT

Center for Snow and Avalanche Studies

Profile # 19

Time: 0905

Snowpack Profile

Date: 5/15/12

Location: GPSP

Elev. 18,160' Aspect: NE

Boot Pen: 1 cm  $\angle$ : 3°

Air T: +9 °C Sky: 0

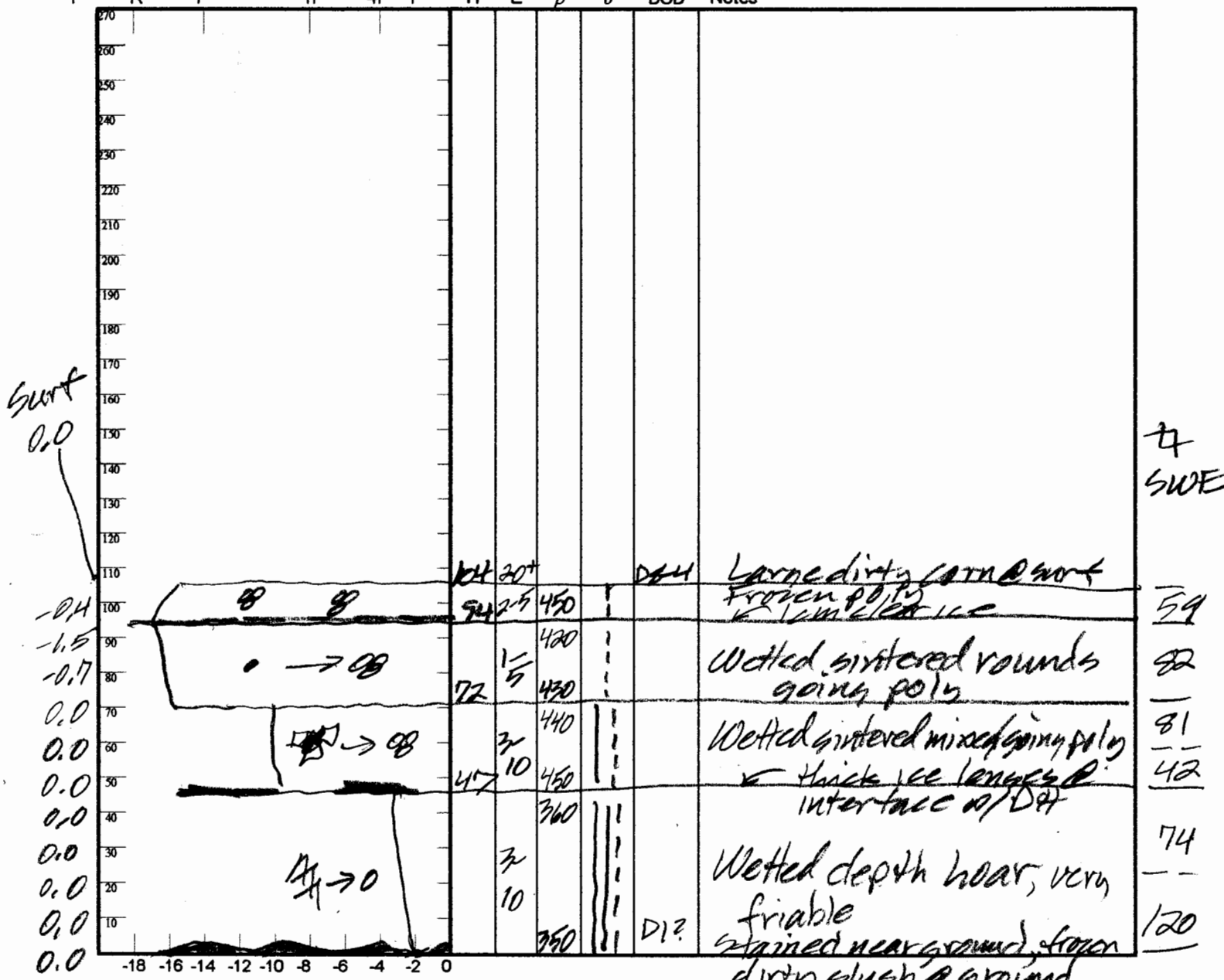
Precip: Nil Wind: Calm

Prior Pit: # 18; 5/9/12

Total Snowpack SWE: 456 mm H<sub>2</sub>O

Notes: H<sub>tot</sub> = 1.02m;  $\bar{\rho}$  = 449 kg/m<sup>3</sup>

T° K P 1F 4F F H E  $\rho$   $\theta$  DOD Notes



Potential Slab			Weak Layer & Bed Surface						
Ref	$H_{2ONor} \div H_{Nor} = \rho_{kg}$	$\sin \angle \times H_{Nor} \times \rho \times 9.8 = T_{Slab}$	F	E	T <sub>WL</sub>	S	C	RB	Shear Quality
A	mm $\div$ m =	X X X 9.8 =							
B	mm $\div$ m =	X X X 9.8 =							

Notes: 6mm samples 3+4 merged

