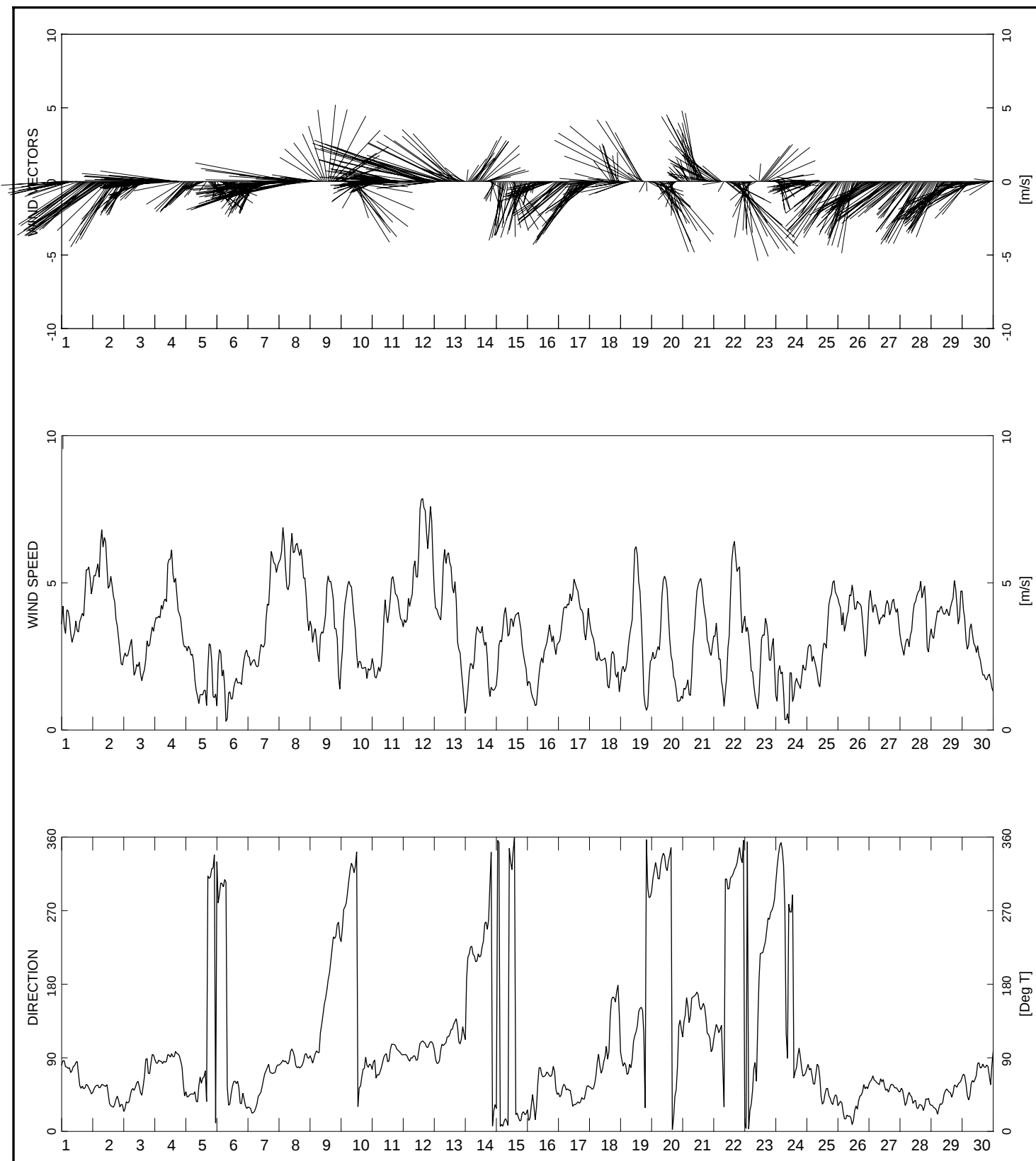




NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
April 2005**

PROJECT NO.
Y22101057

DWN
RED

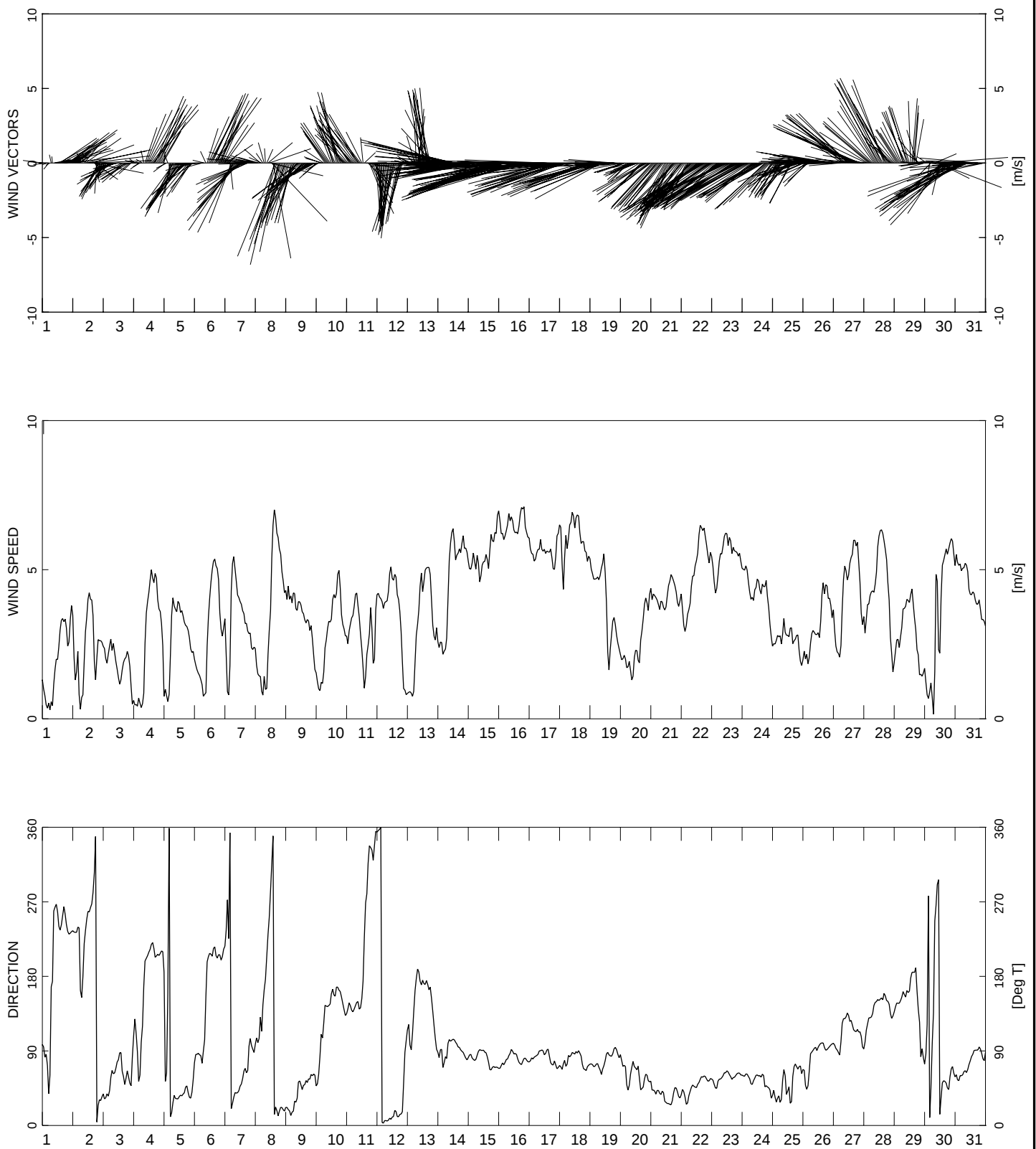
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Figure B-08



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
May 2005**

PROJECT NO.

Y22101057

DWN

RED

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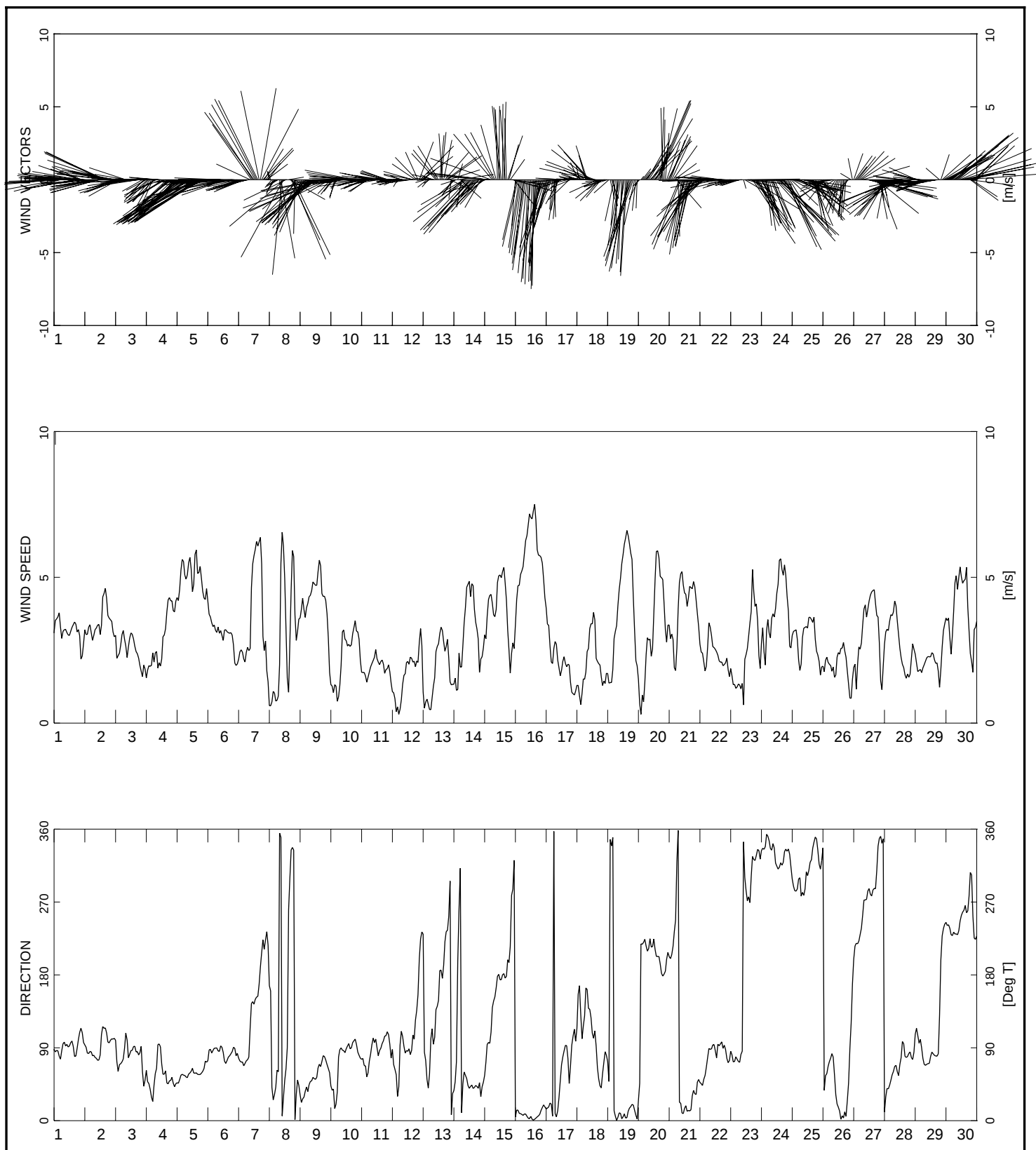
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Figure B-09



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
June 2005**

PROJECT NO.
Y22101057

DWN
RED

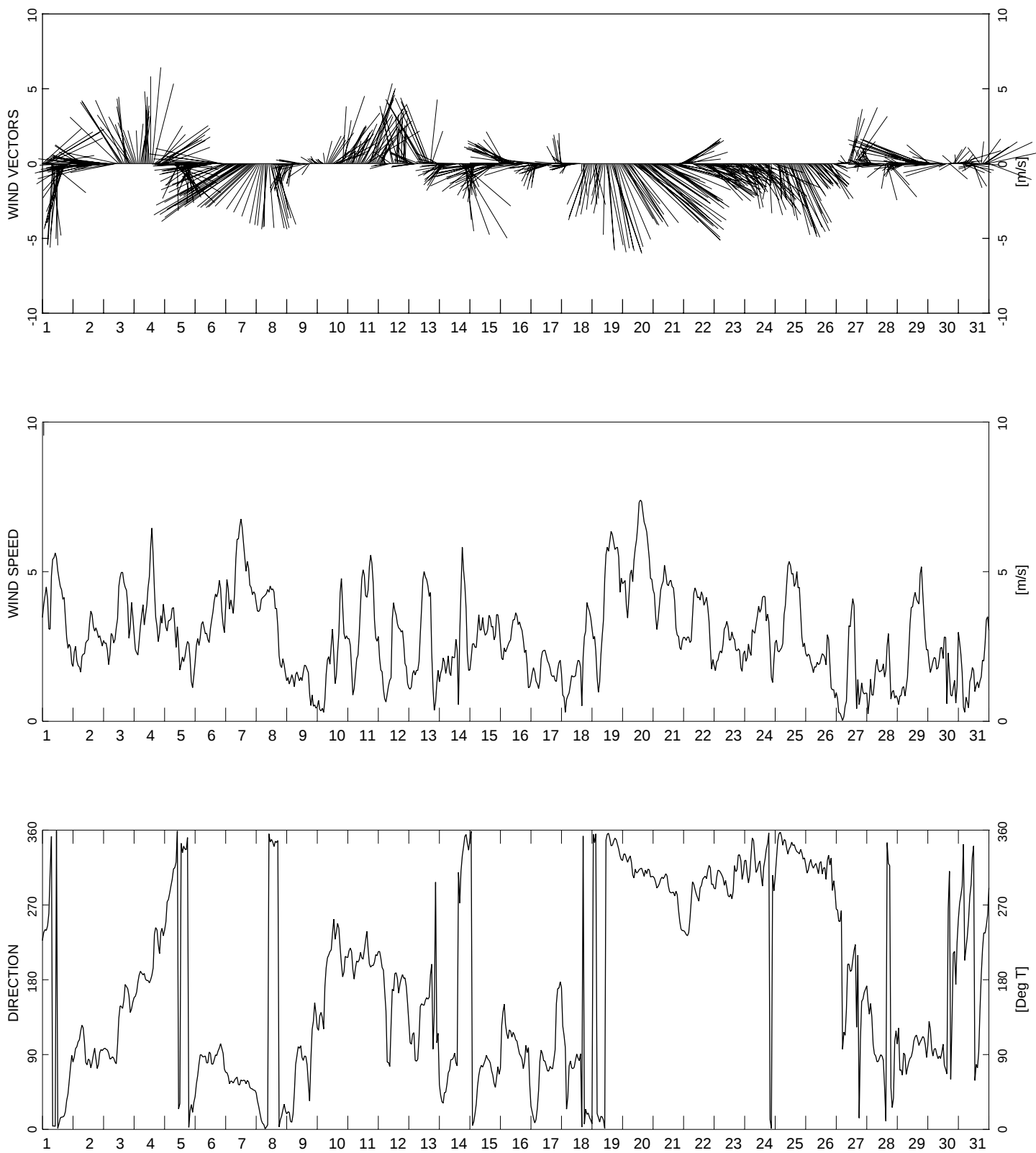
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Figure B-10



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**Tyhee Station
Wind Data
July 2005**

PROJECT NO.

Y22101057

DWN

RED

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0

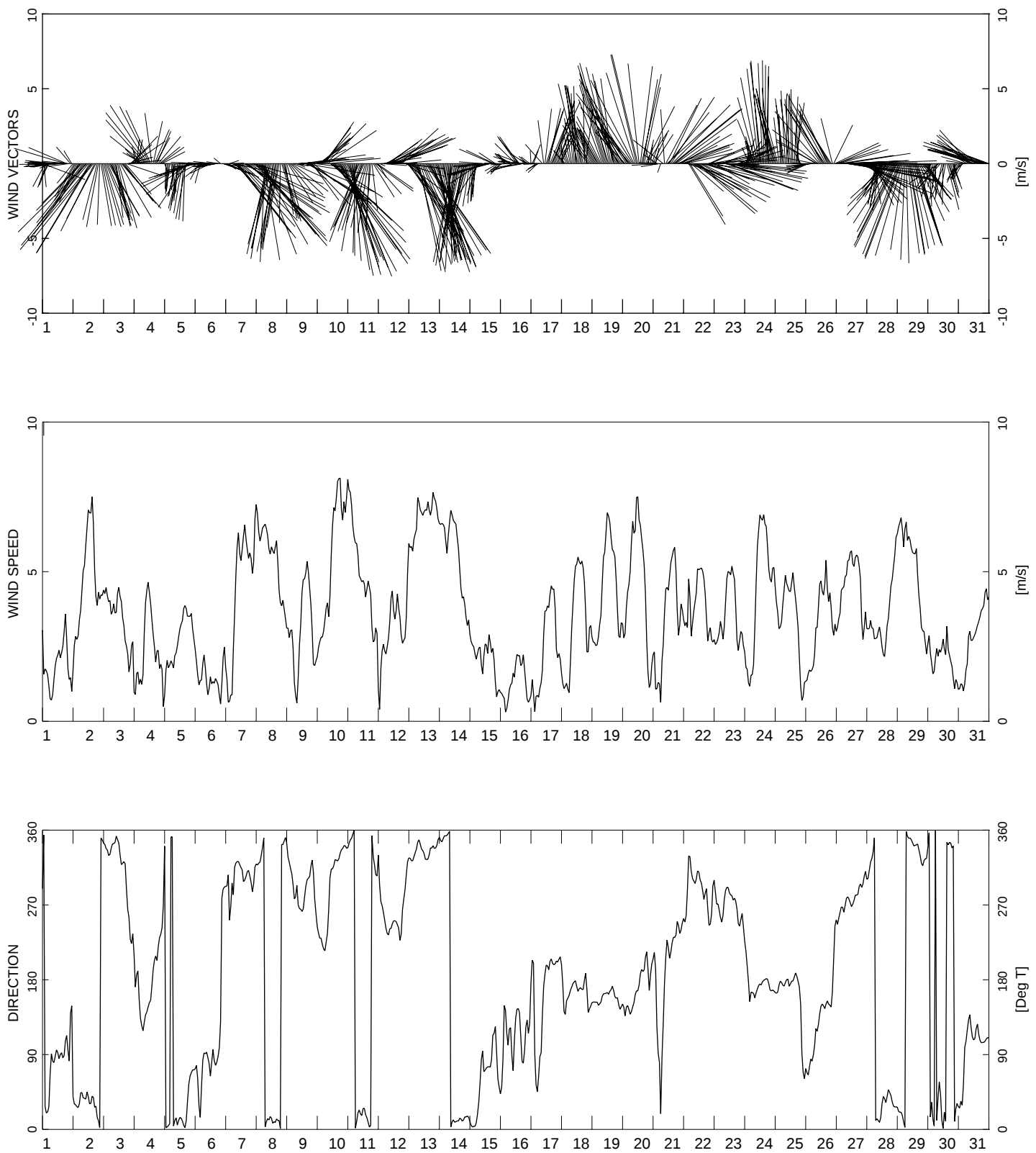
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Figure B-11



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**Tyhee Station
Wind Data
August 2005**

PROJECT NO.
Y22101057

DWN
RED

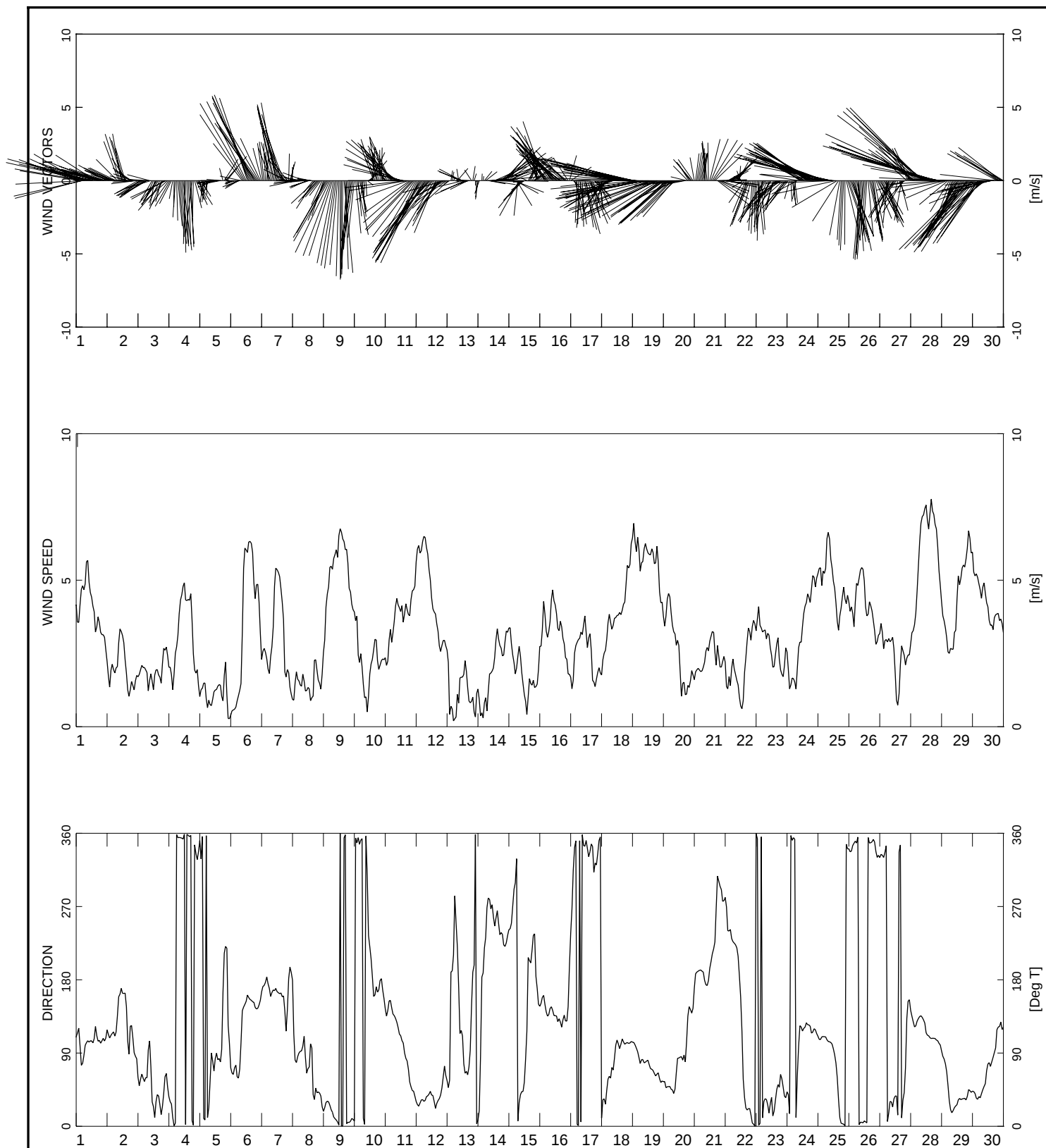
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Figure B-12



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**Tyhee Station
Wind Data
September 2005**

PROJECT NO.
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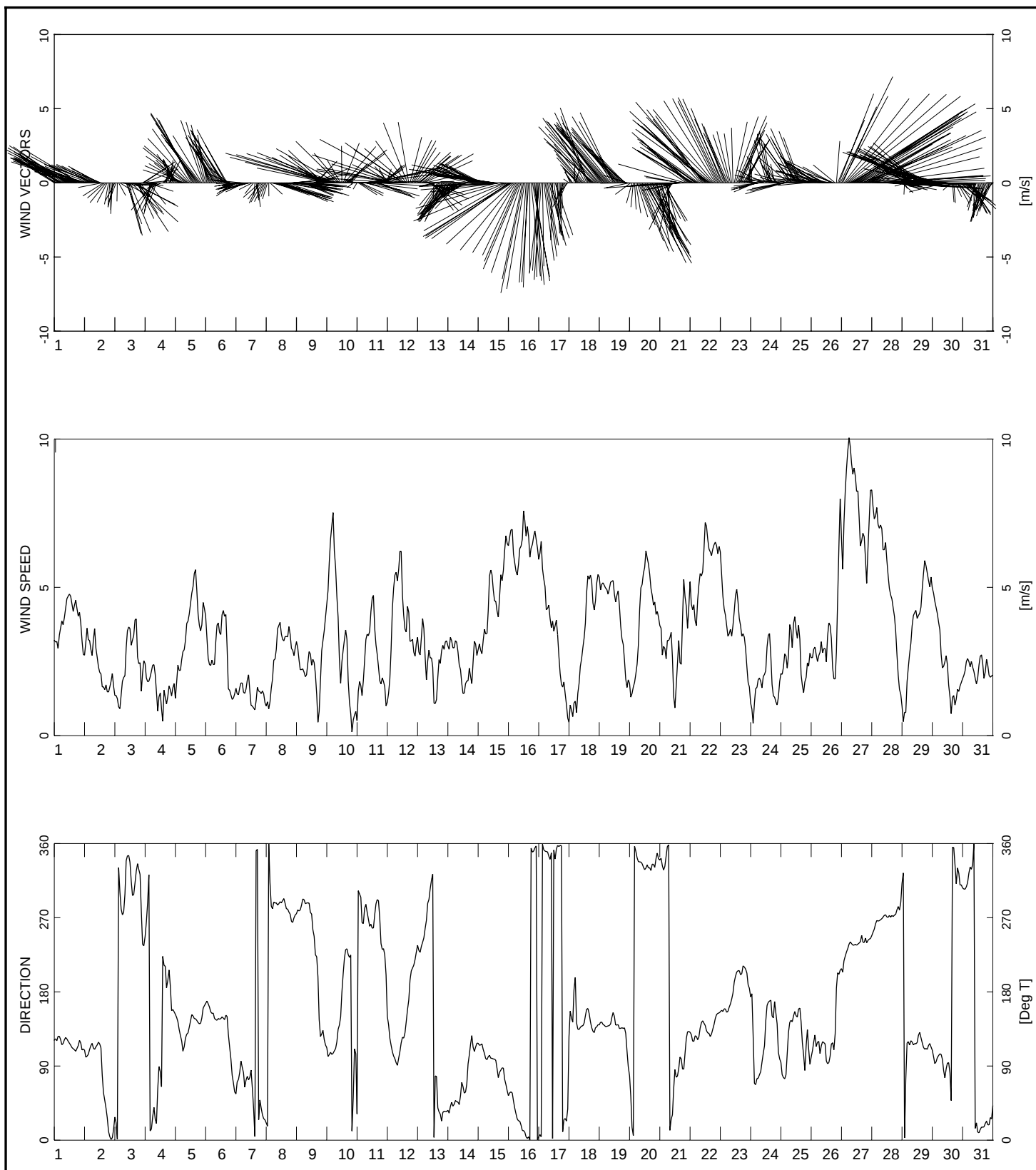
DWN
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Figure B-13



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**Tyhee Station
Wind Data
October 2005**

PROJECT NO.
Y22101057

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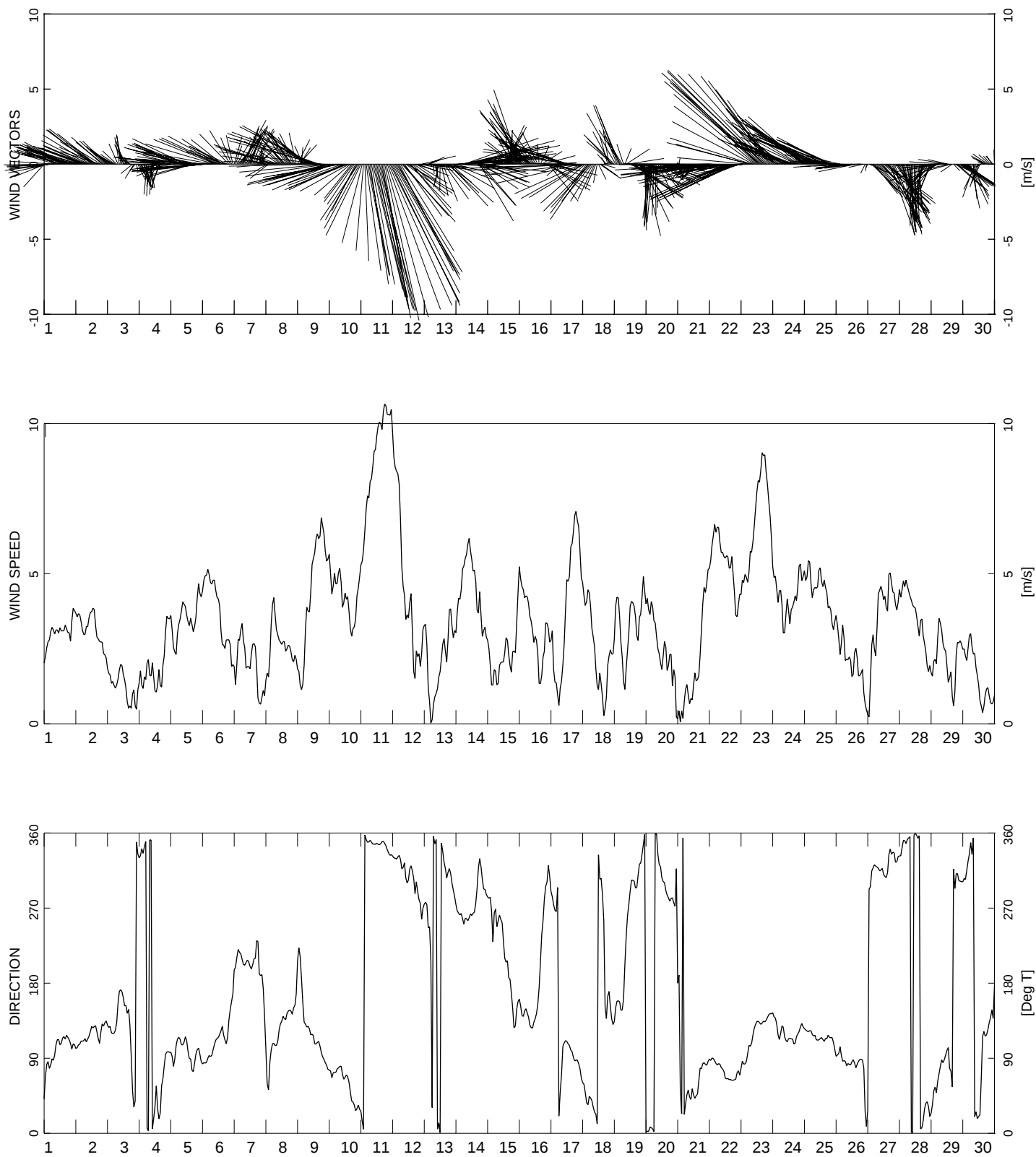
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Figure B-14



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
November 2005**

PROJECT NO.
Y22101057

DWN
RED

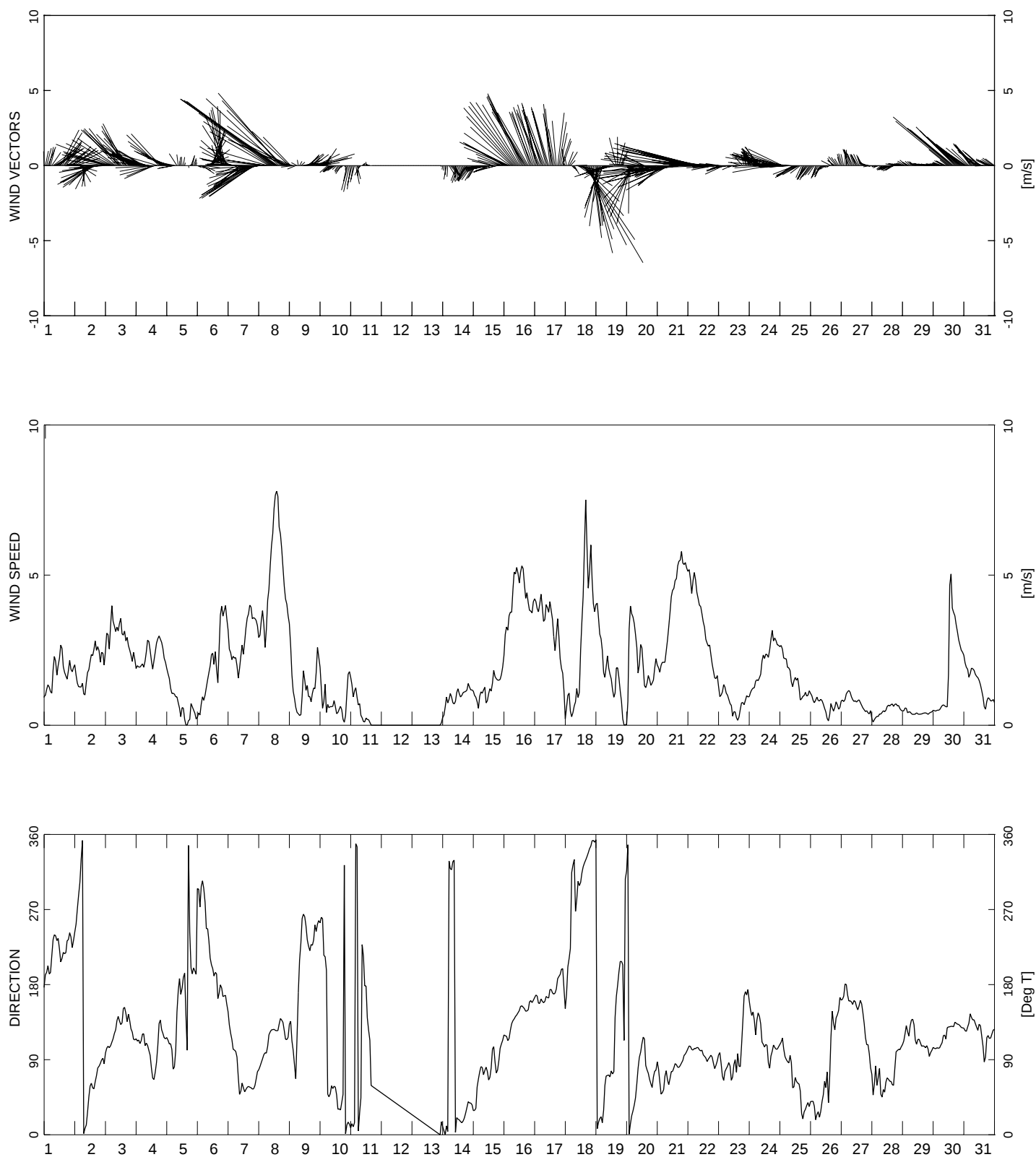
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Figure B-15



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
December 2005**

PROJECT NO.
Y22101057

DWN
RED

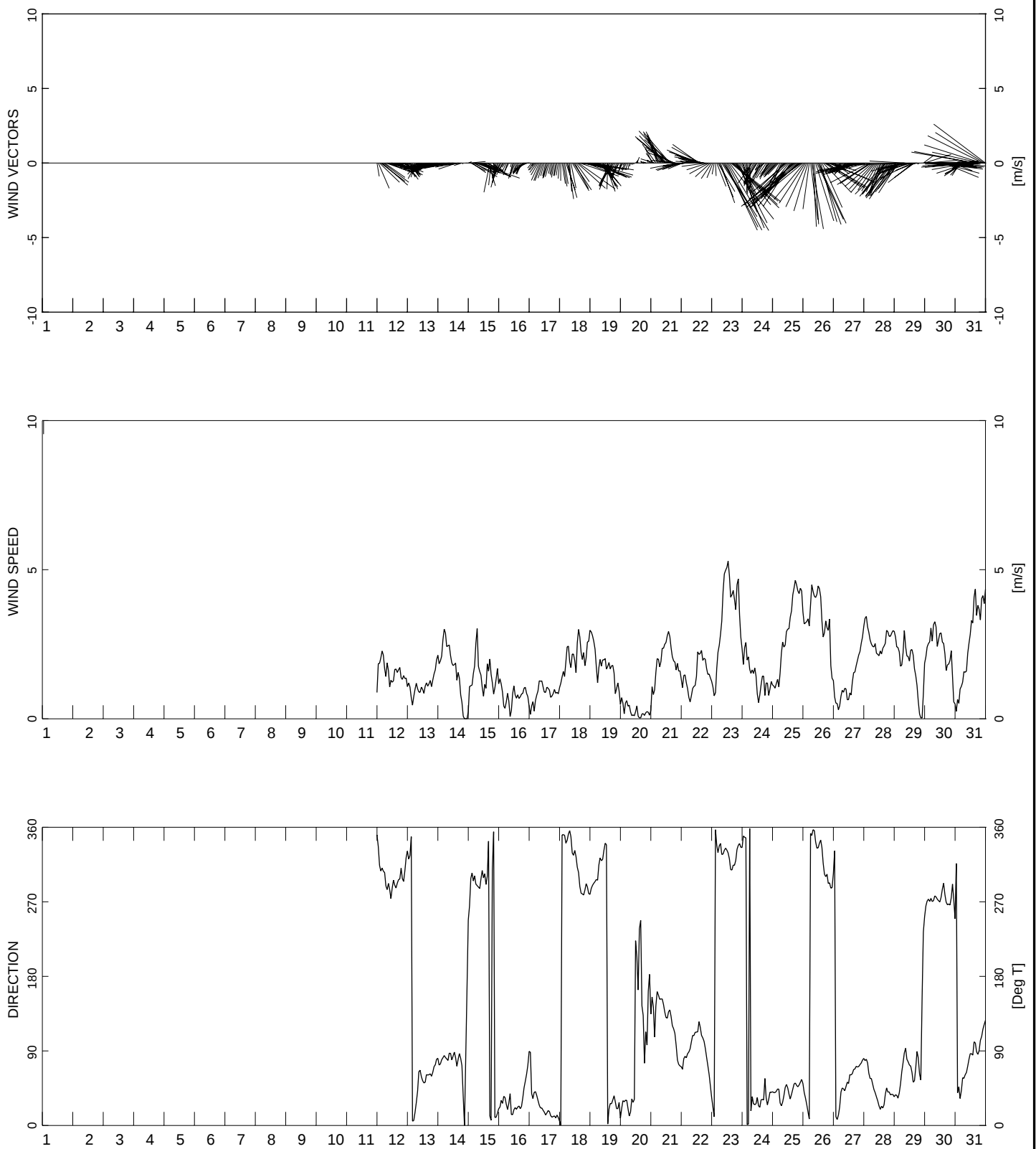
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Figure B-16



NOTES

Suspected erroneous wind data between January 1st and 12th has been removed from the record.

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

Tyhee Station Wind Data January 2006

PROJECT NO.
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DWN
RED

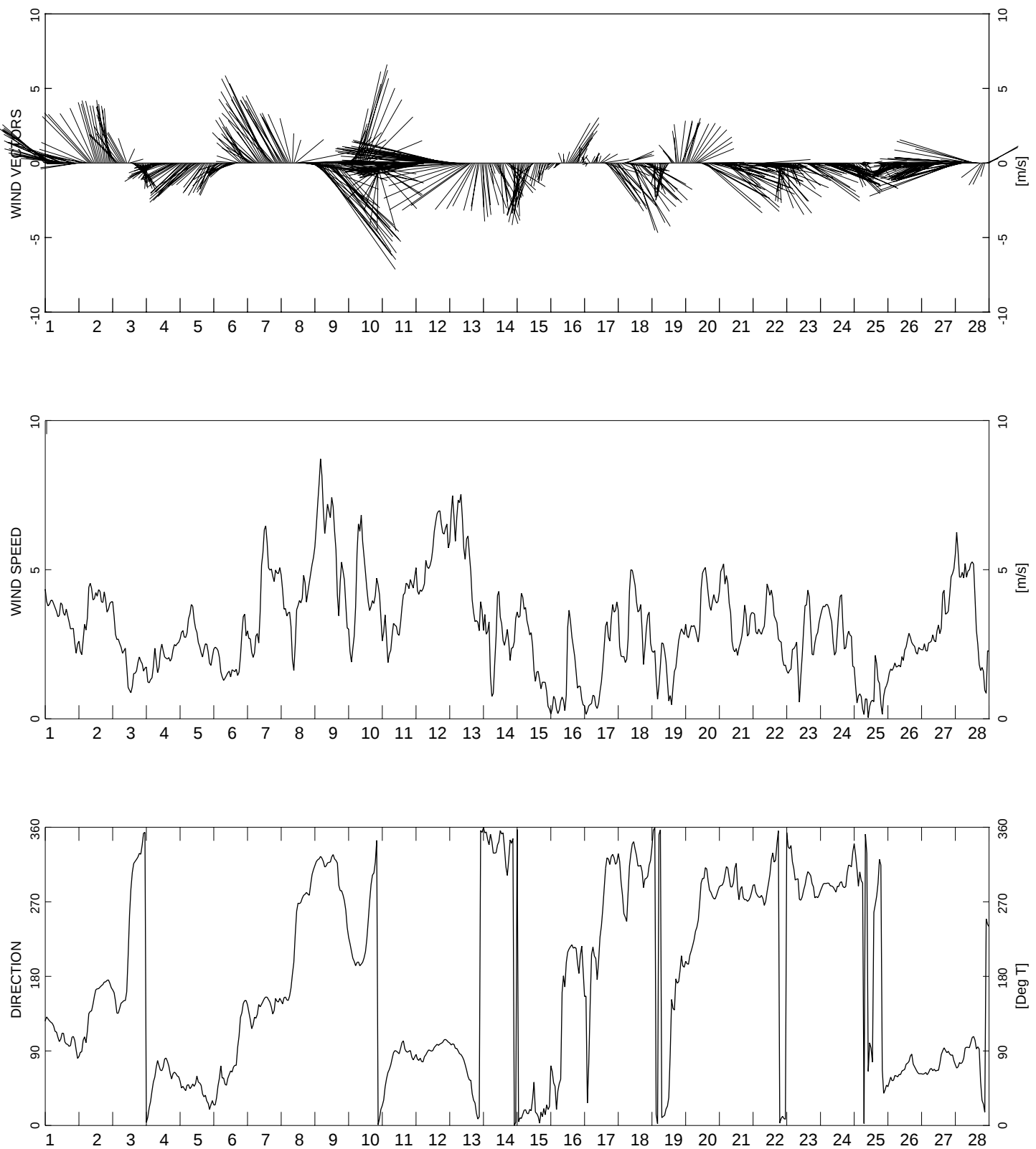
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Figure B-17



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
February 2006**

PROJECT NO.
Y22101057

DWN
RED

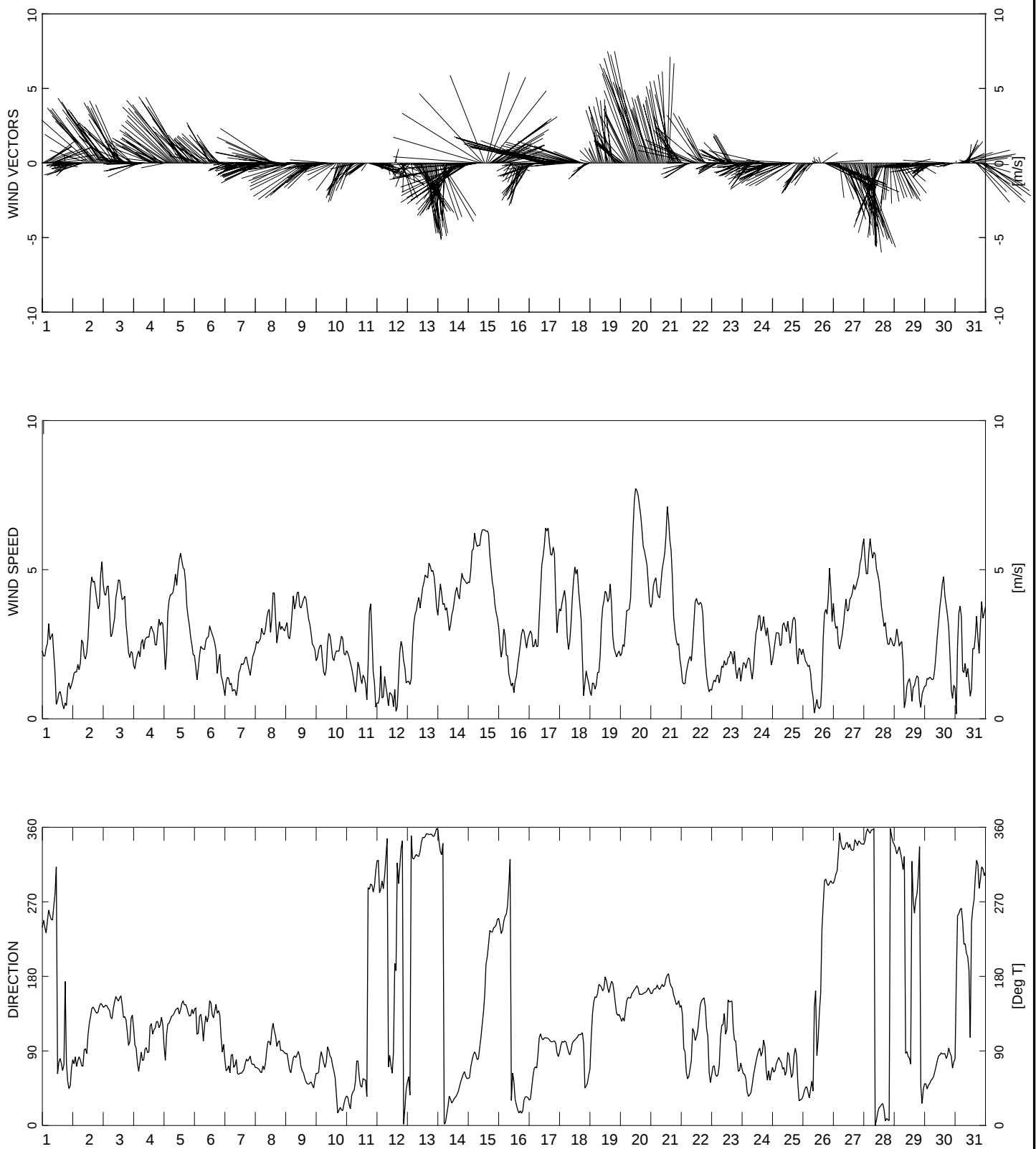
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Figure B-18



NOTES

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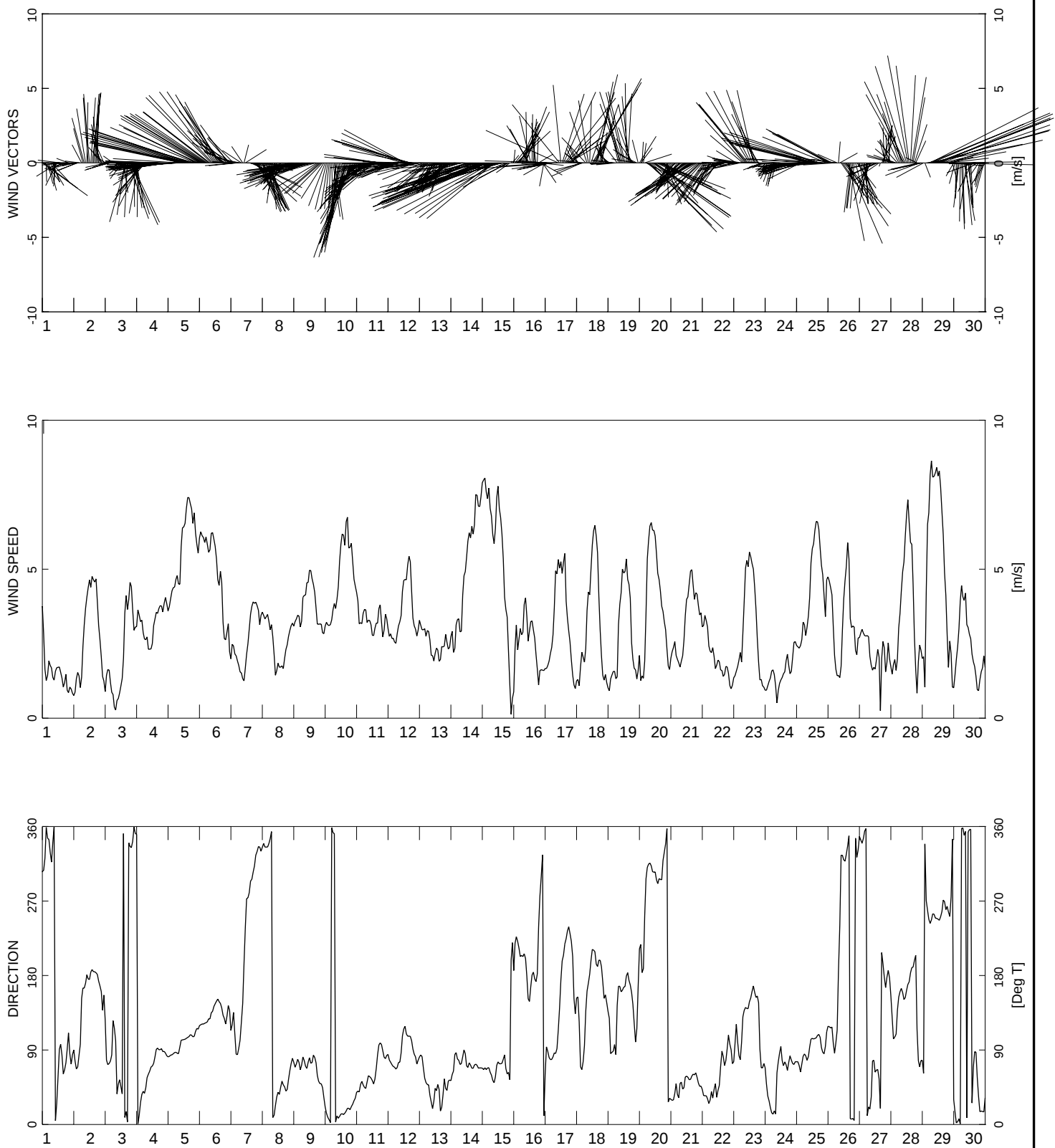
EBA Engineering Consultants Ltd. 

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
March 2006**

PROJECT NO. Y22101057	DWN RED	CHK JAS	REV 0
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Figure B-19



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
April 2006**

PROJECT NO.
Y22101057

DWN
RED

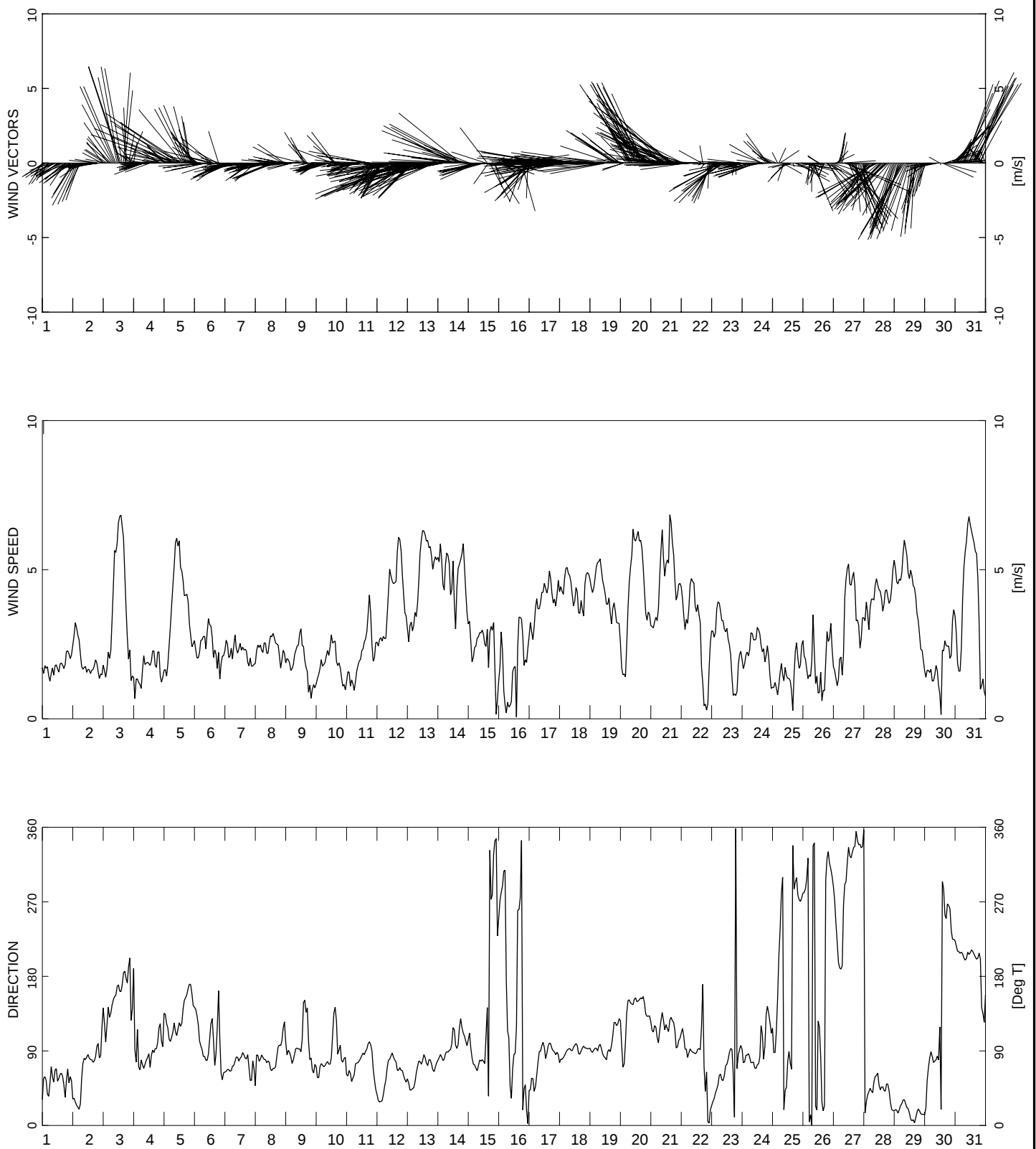
CHK
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Figure B-20



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**Tyhee Station
Wind Data
May 2006**

PROJECT NO.
Y22101057

DWN
RED

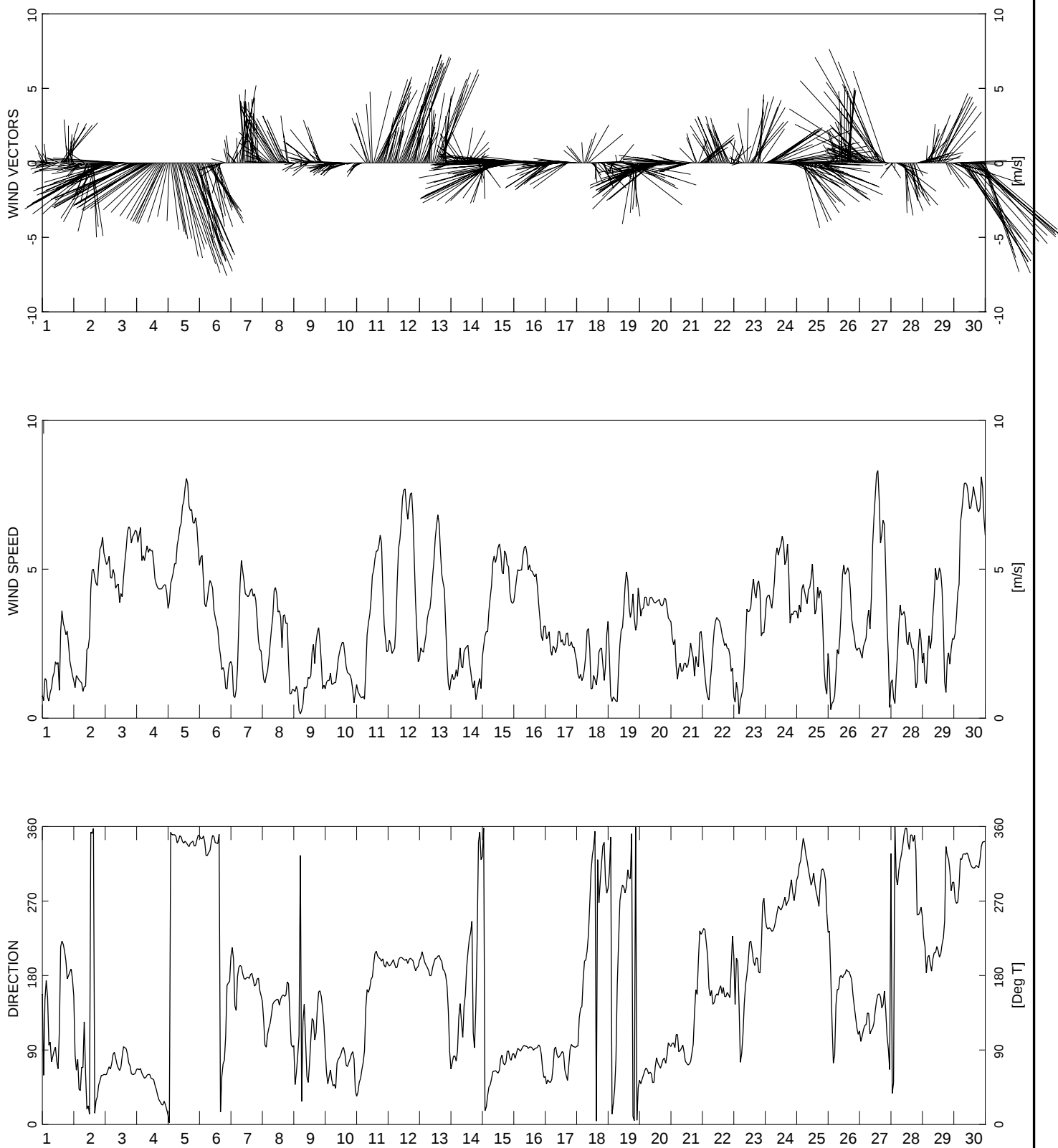
CHK
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Figure B-21



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
June 2006**

PROJECT NO.
Y22101057

DWN
RED

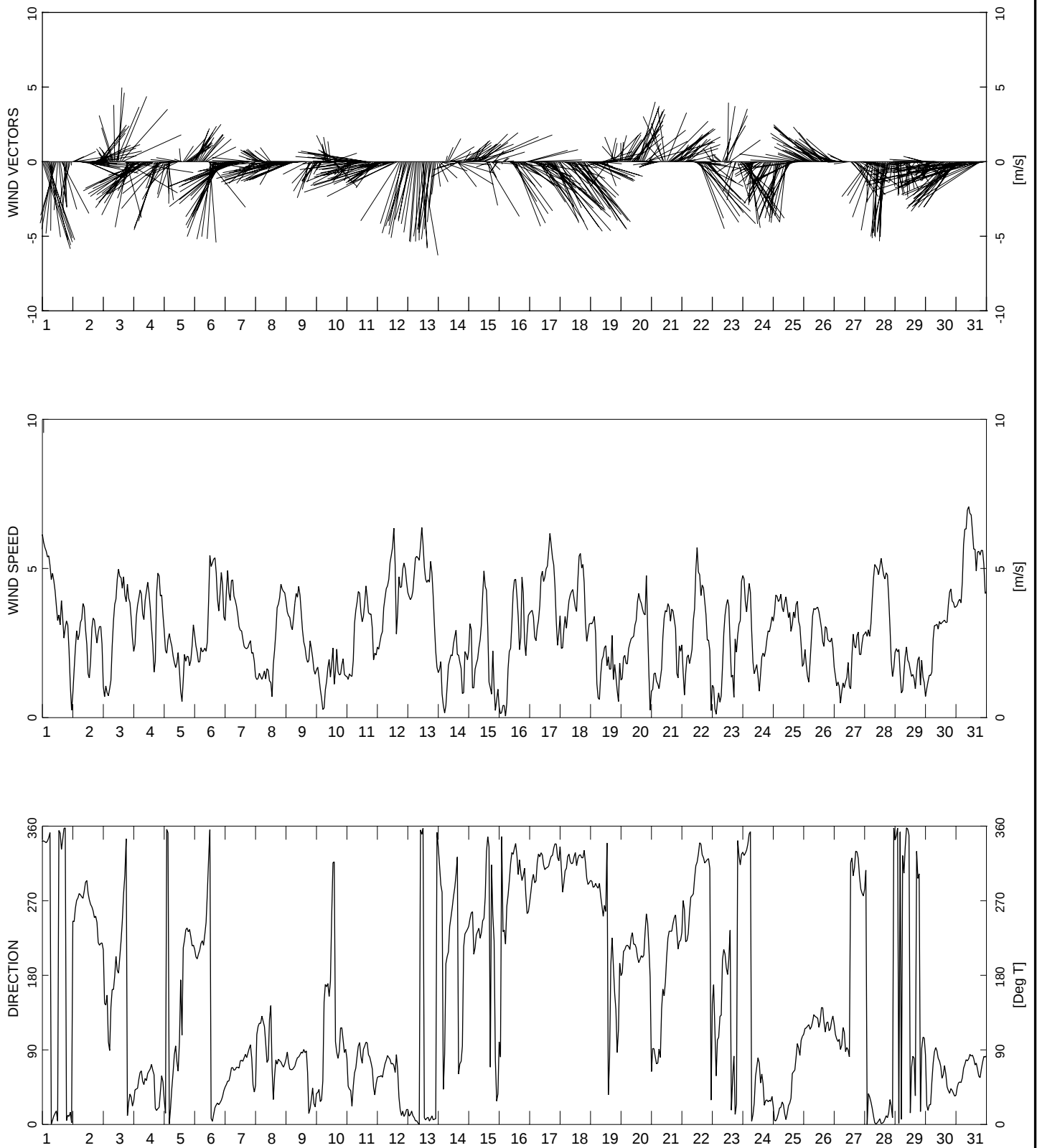
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Figure B-22



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**Tyhee Station
Wind Data
July 2006**

PROJECT NO.
Y22101057

DWN
RED

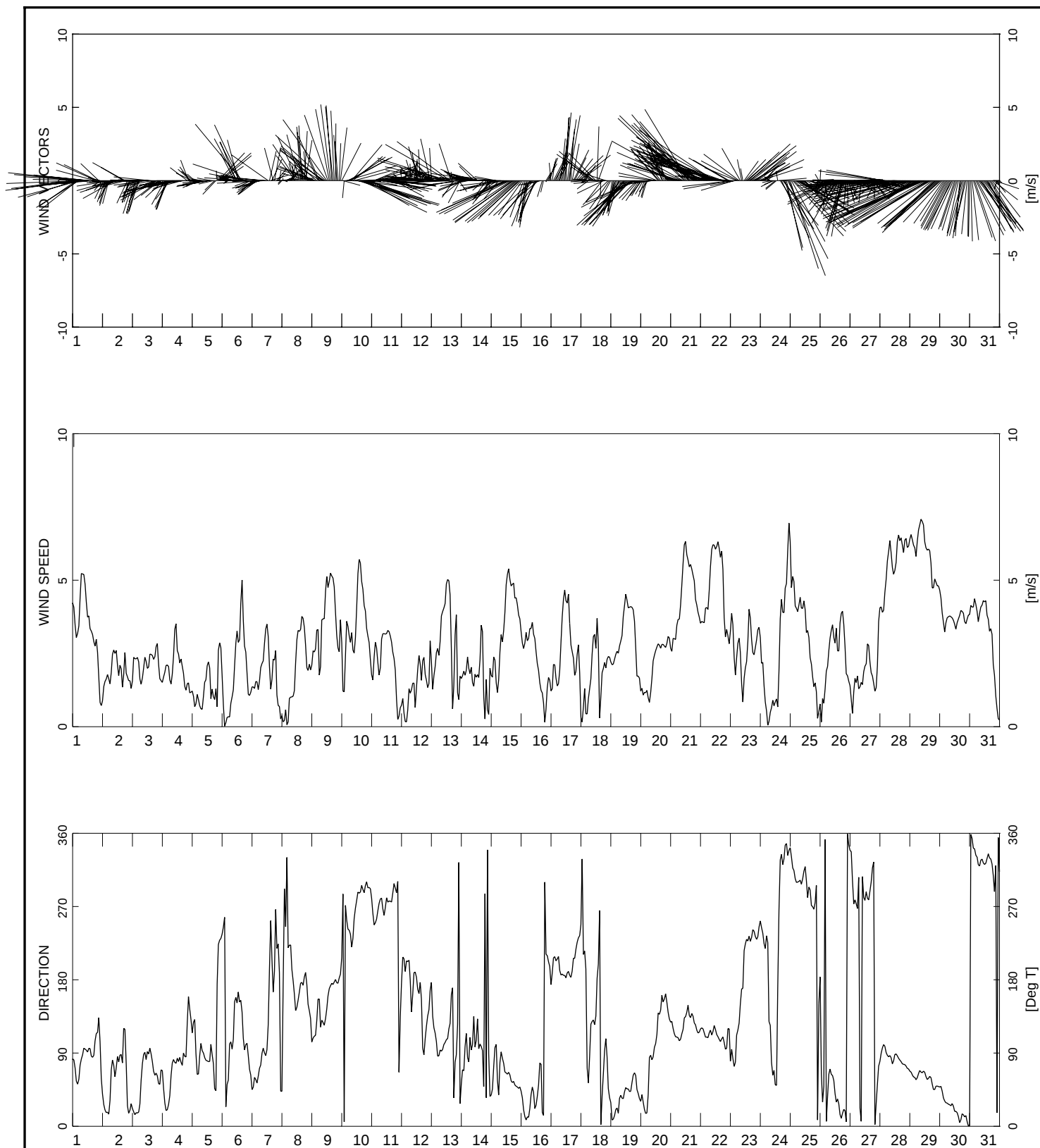
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Figure B-23



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**Tyhee Station
Wind Data
August 2006**

PROJECT NO.
Y22101057

DWN
RED

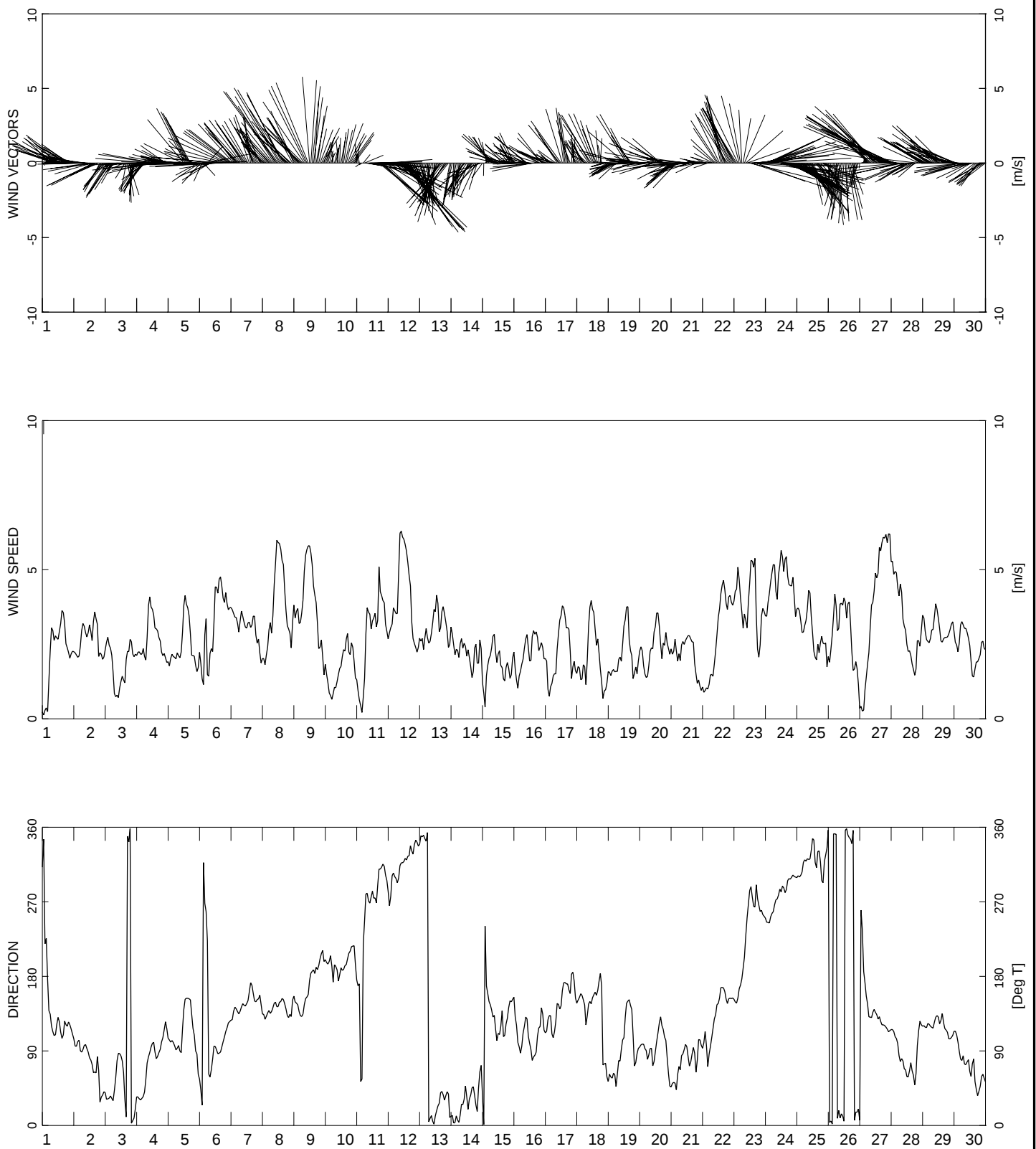
CHK
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Figure B-24



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**Tyhee Station
Wind Data
September 2006**

PROJECT NO.
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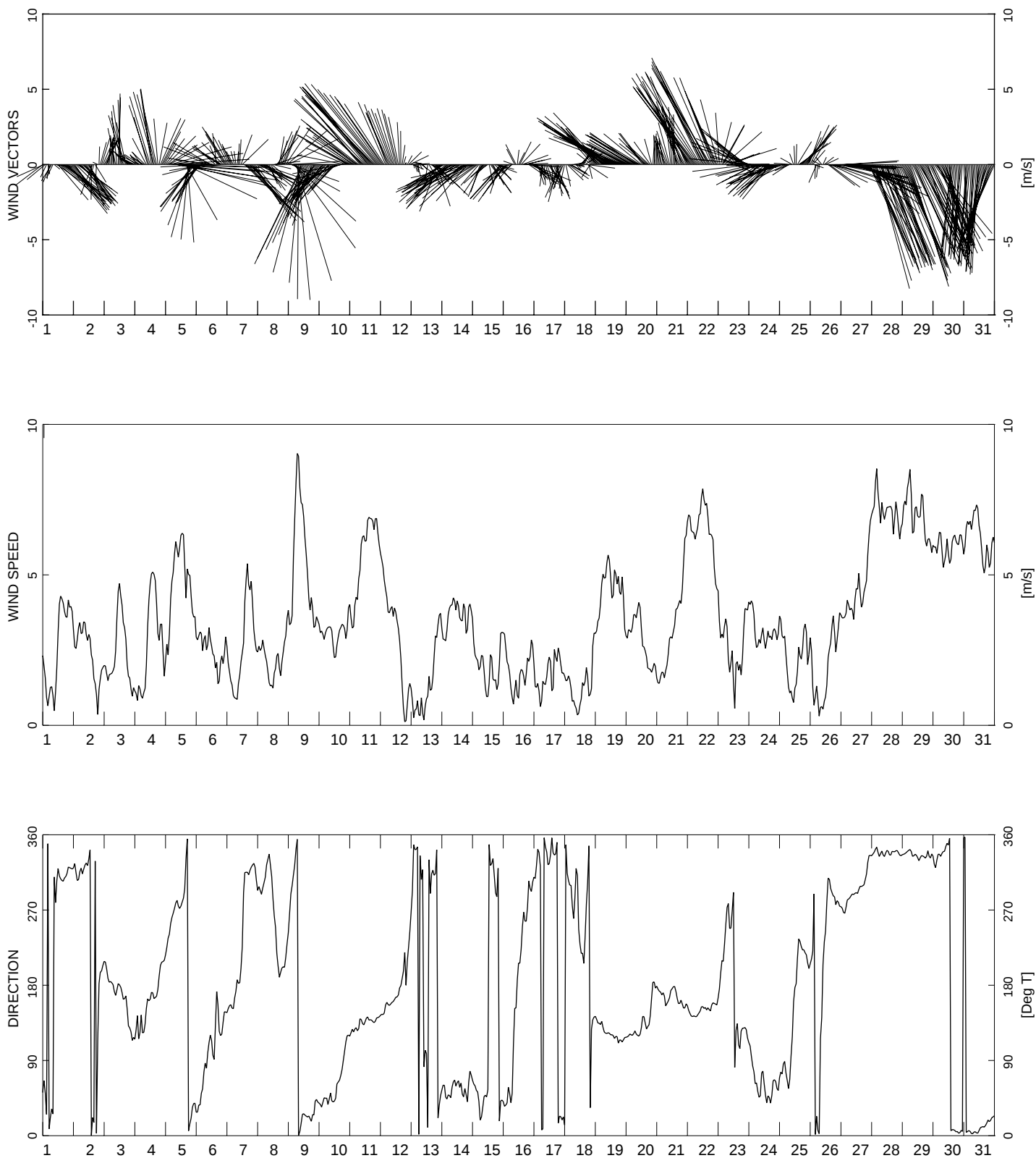
DWN
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Figure B-25



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
October 2006**

PROJECT NO.
Y22101057

DWN
RED

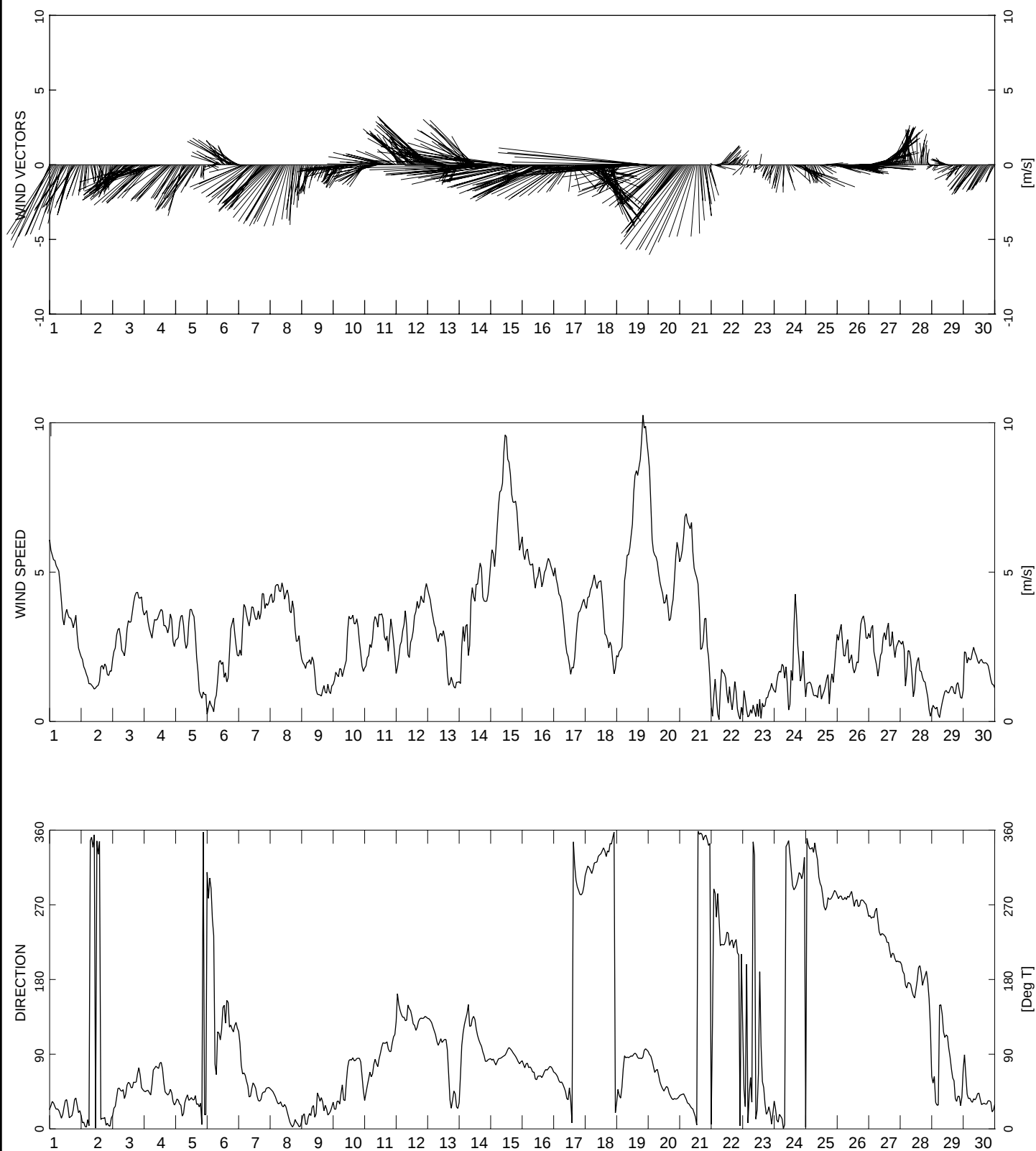
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Figure B-26



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**Tyhee Station
Wind Data
November 2006**

PROJECT NO.
Y22101057

DWN
RED

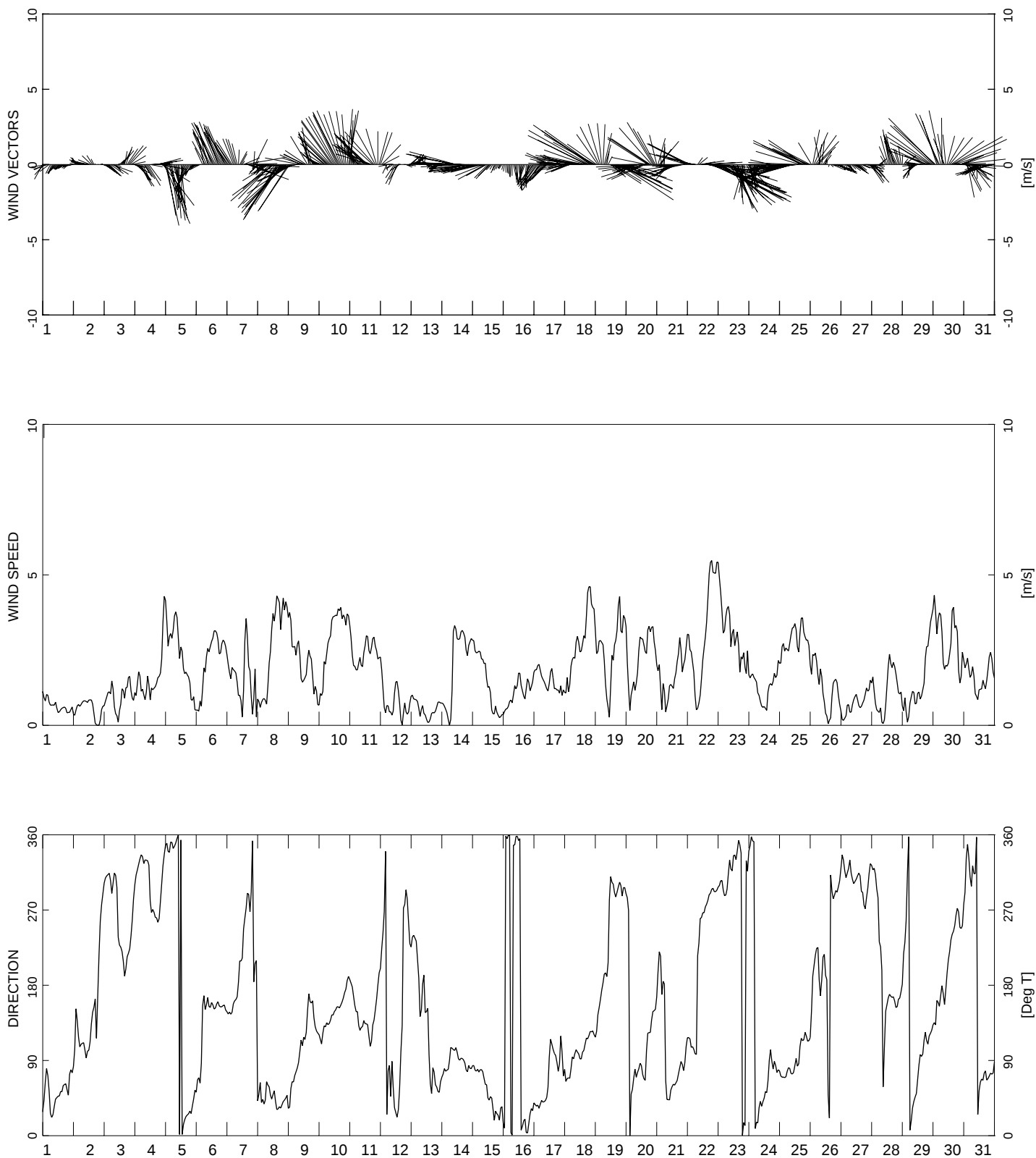
CHK
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Figure B-27



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**Tyhee Station
Wind Data
December 2006**

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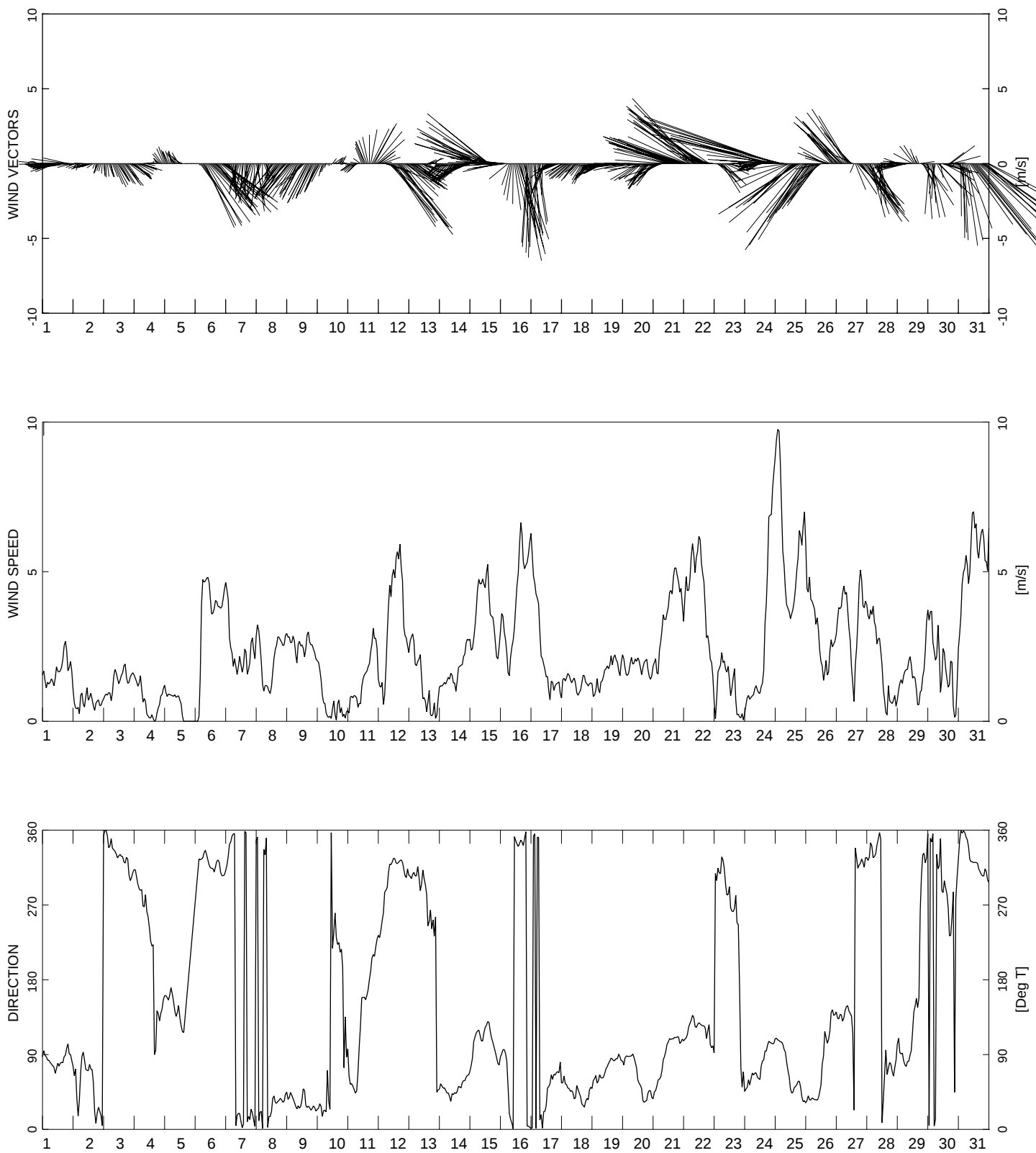
DWN
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Figure B-28



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
January 2007**

PROJECT NO.
Y22101057

DWN
RED

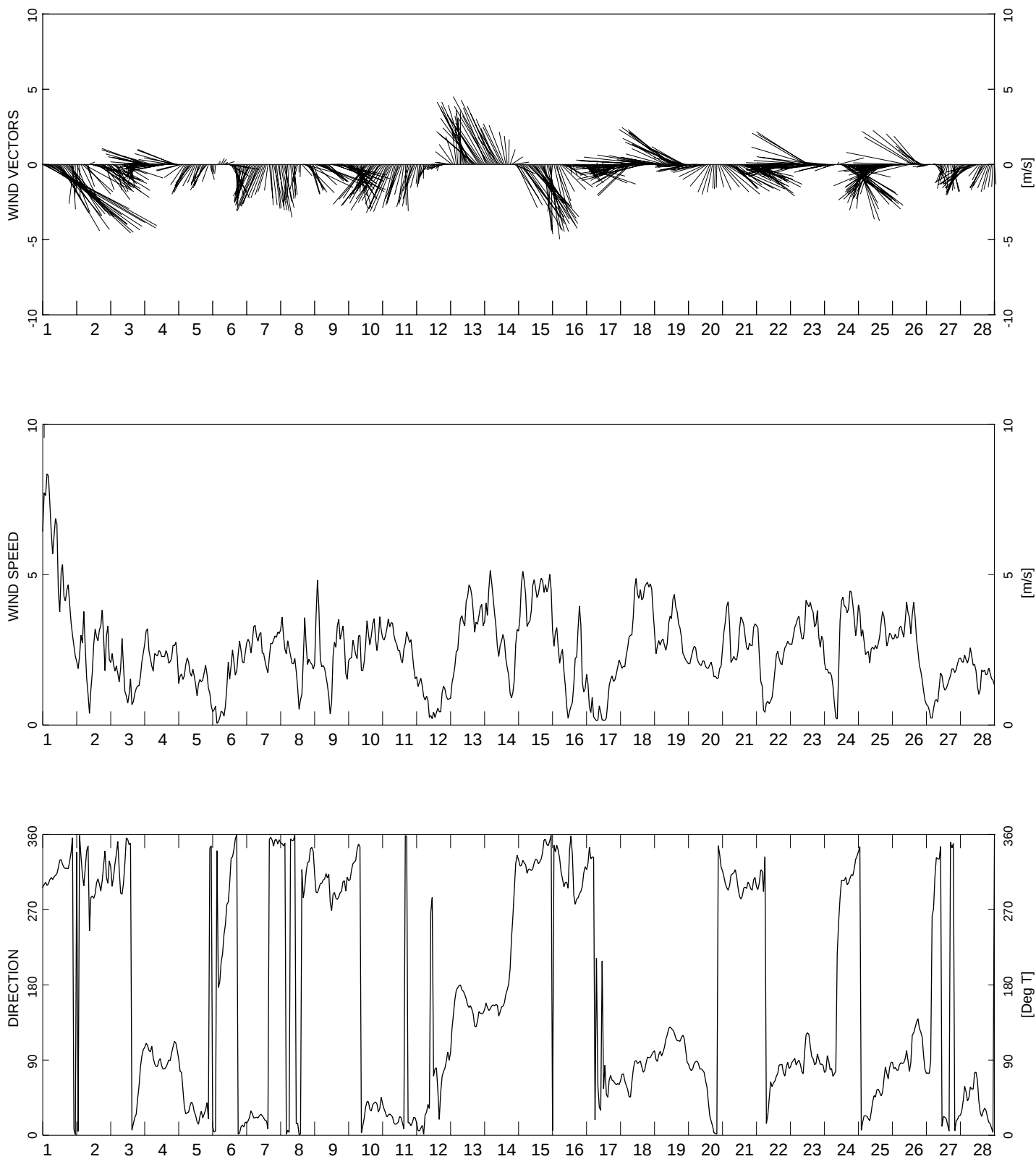
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Figure B-29



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**Tyhee Station
Wind Data
February 2007**

PROJECT NO.
Y22101057

DWN
RED

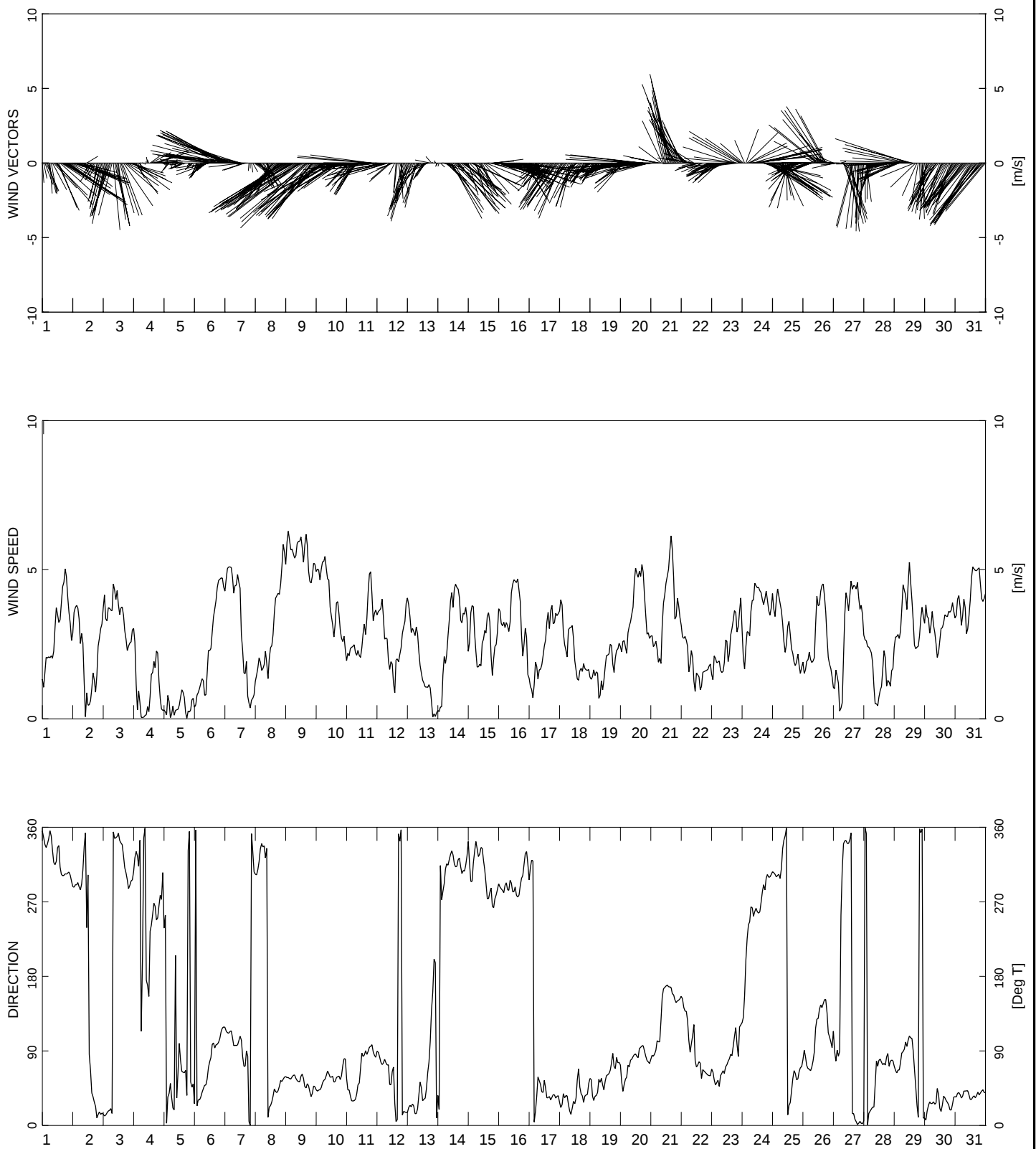
CHK
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Figure B-30



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**Tyhee Station
Wind Data
March 2007**

PROJECT NO.
Y22101057

DWN
RED

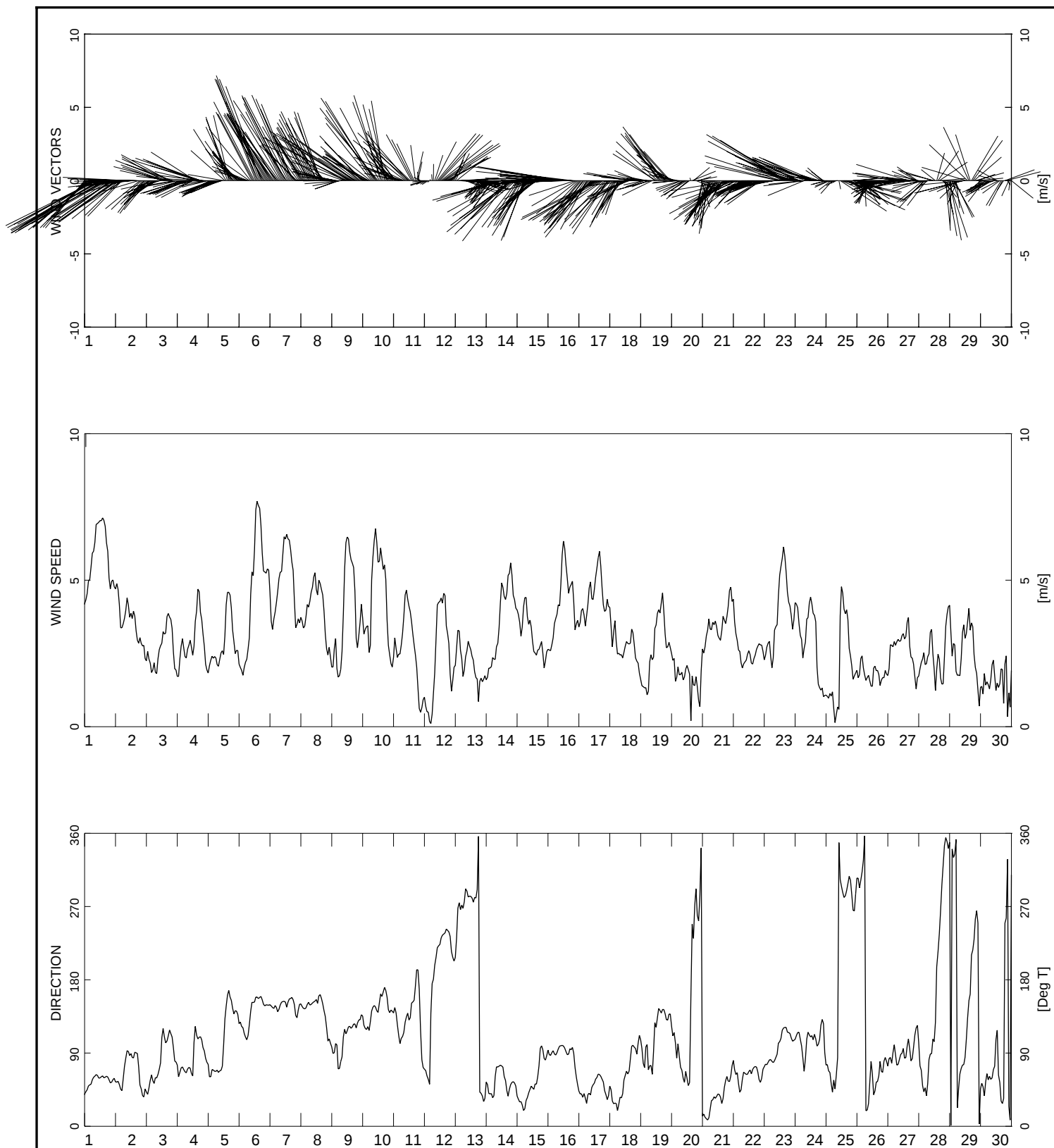
CHK
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Figure B-31



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
April 2007**

PROJECT NO.
Y22101057

DWN
RED

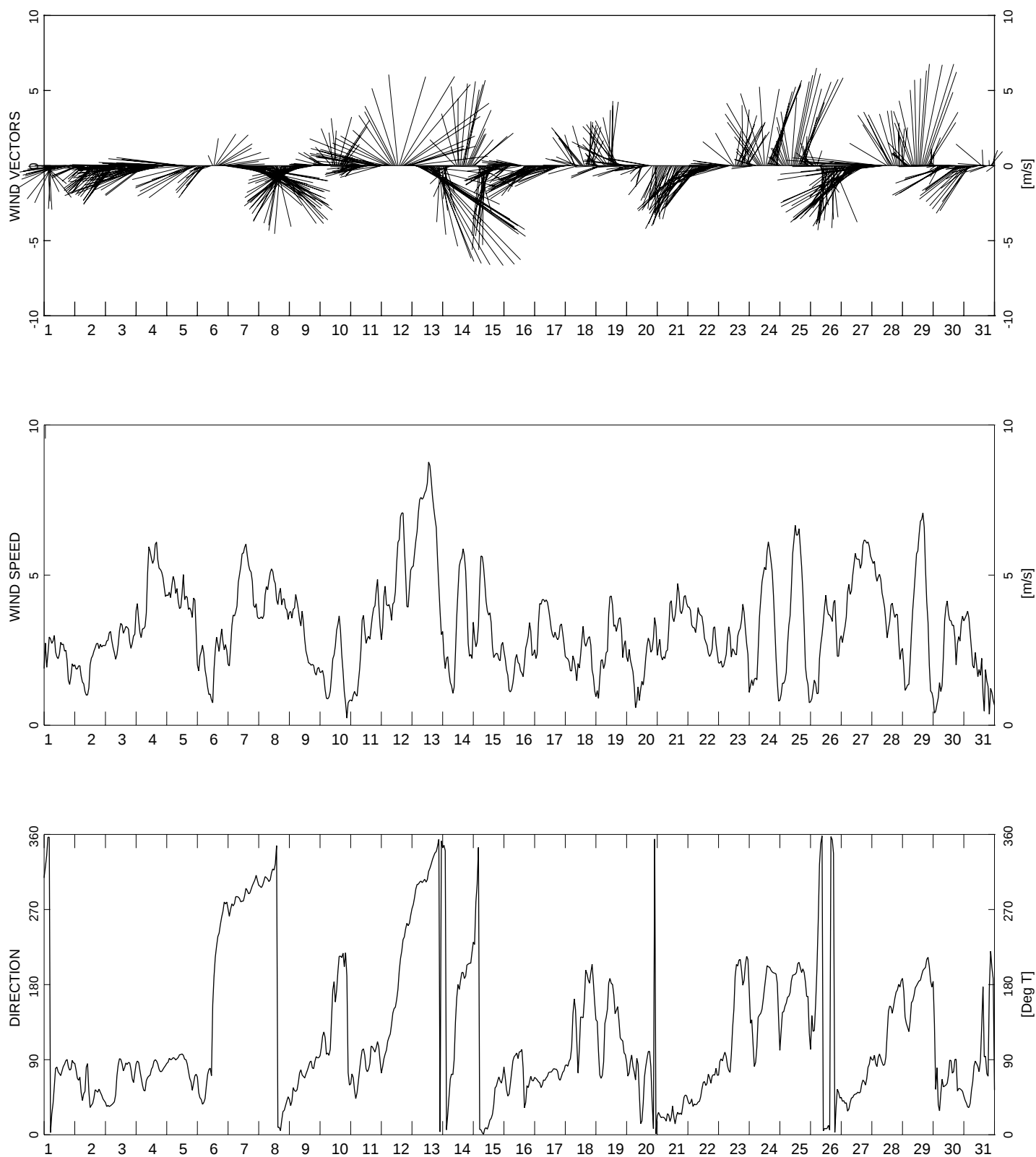
CHK
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Figure B-32



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
May 2007**

PROJECT NO.
Y22101057

DWN
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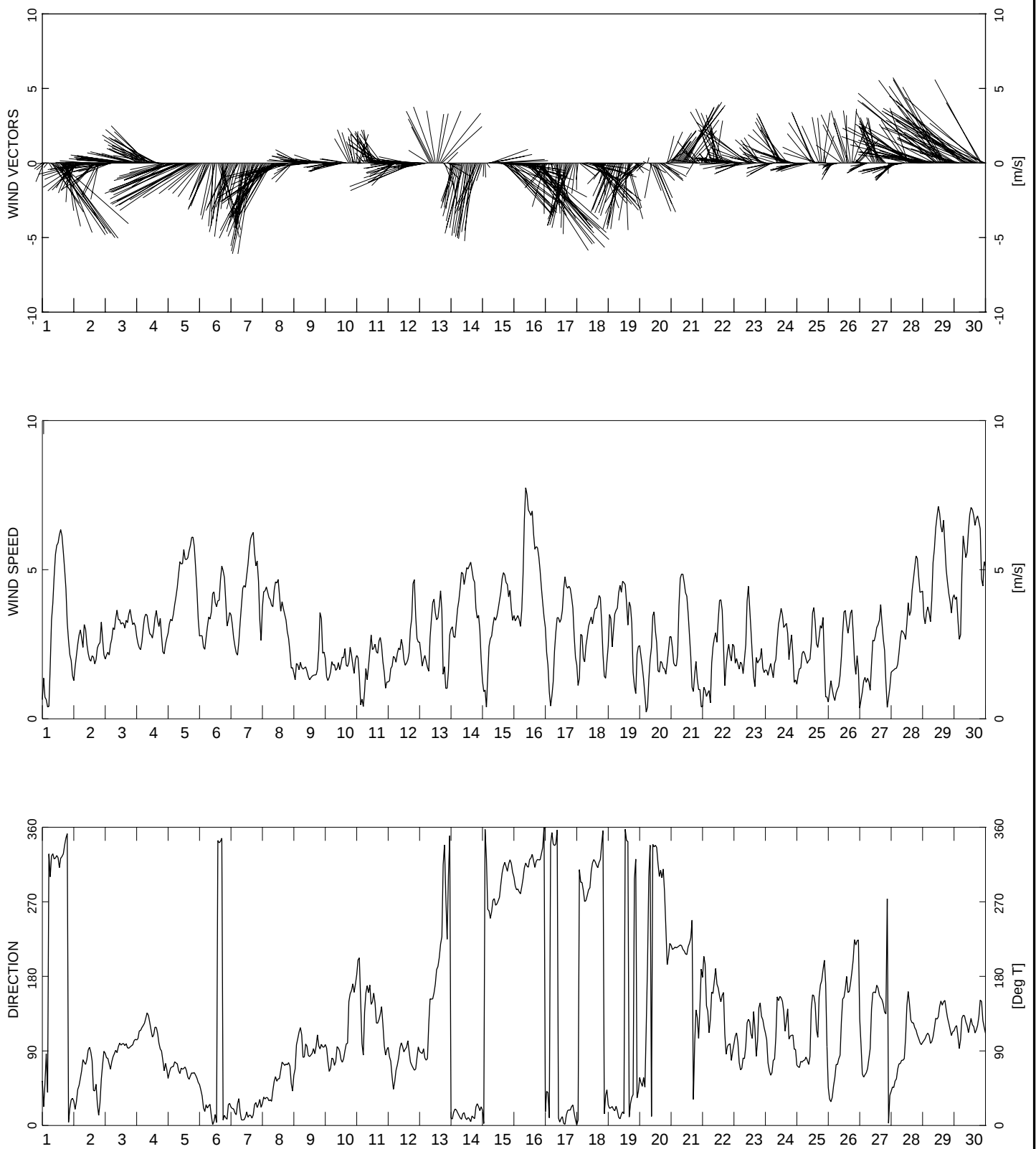
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Figure B-33



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
June 2007**

PROJECT NO.
Y22101057

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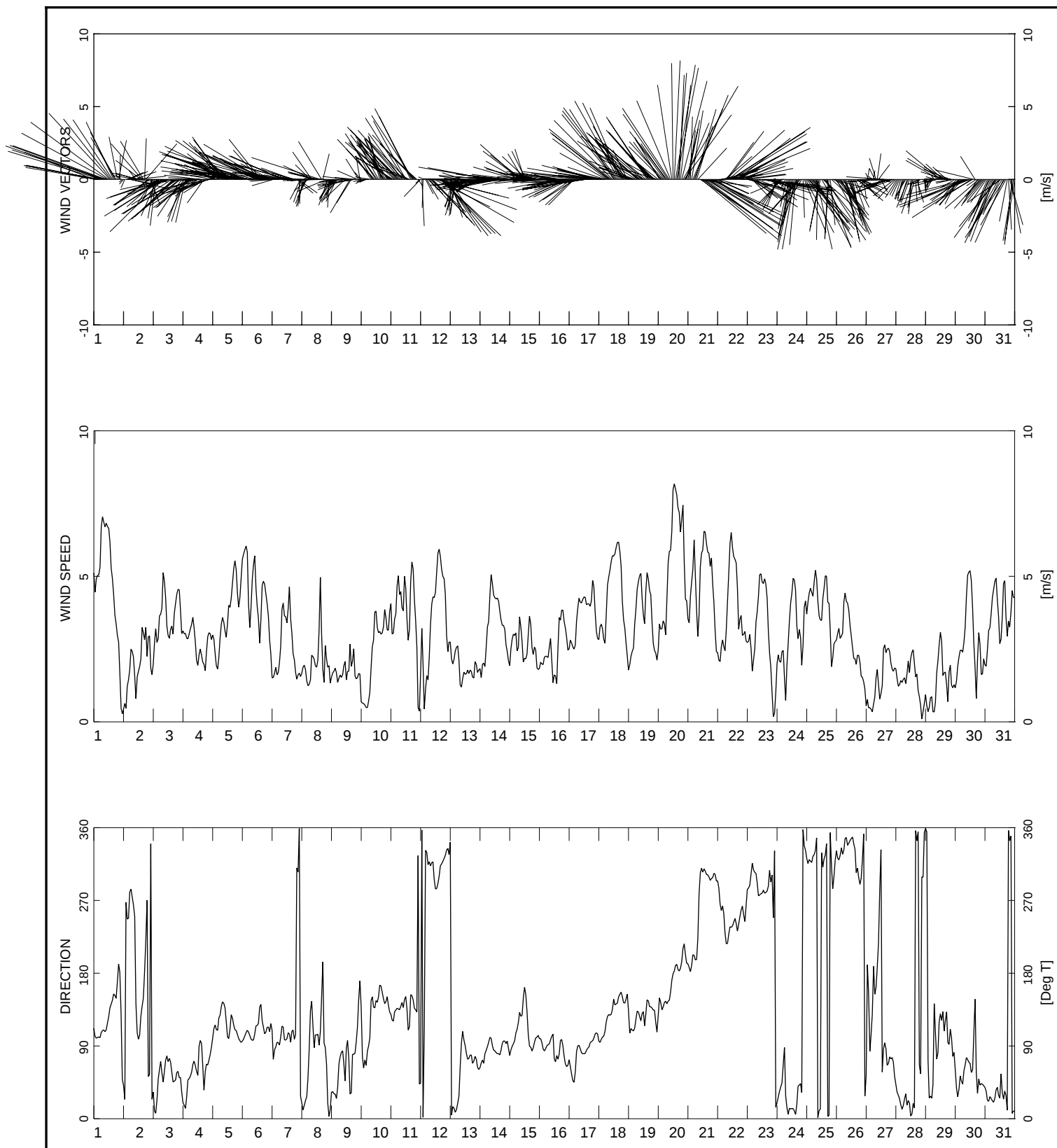
DWN
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Figure B-34



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
July 2007**

PROJECT NO.
Y22101057

DWN
RED

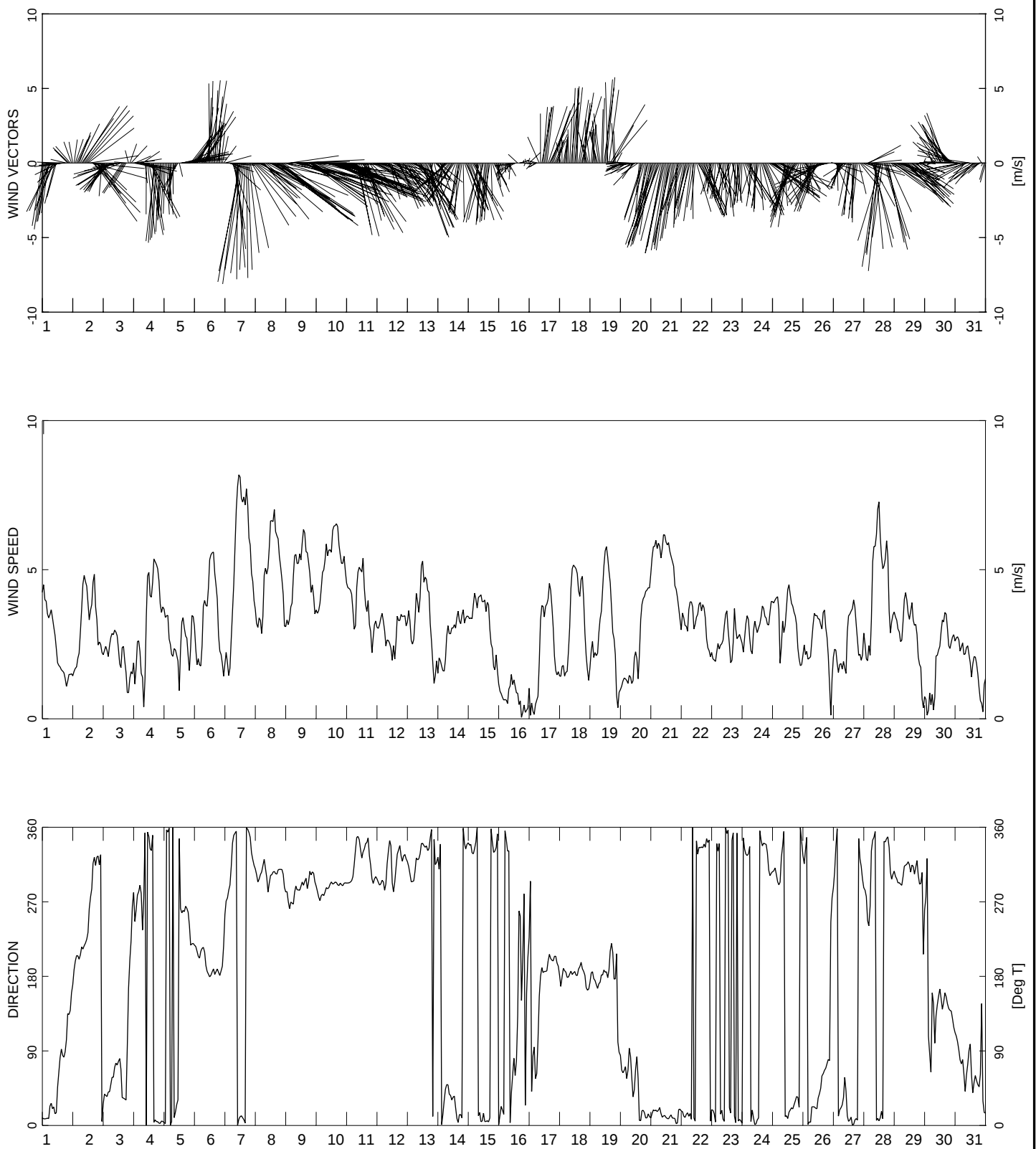
CHK
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Figure B-35



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
August 2007**

PROJECT NO.
Y22101057

DWN
RED

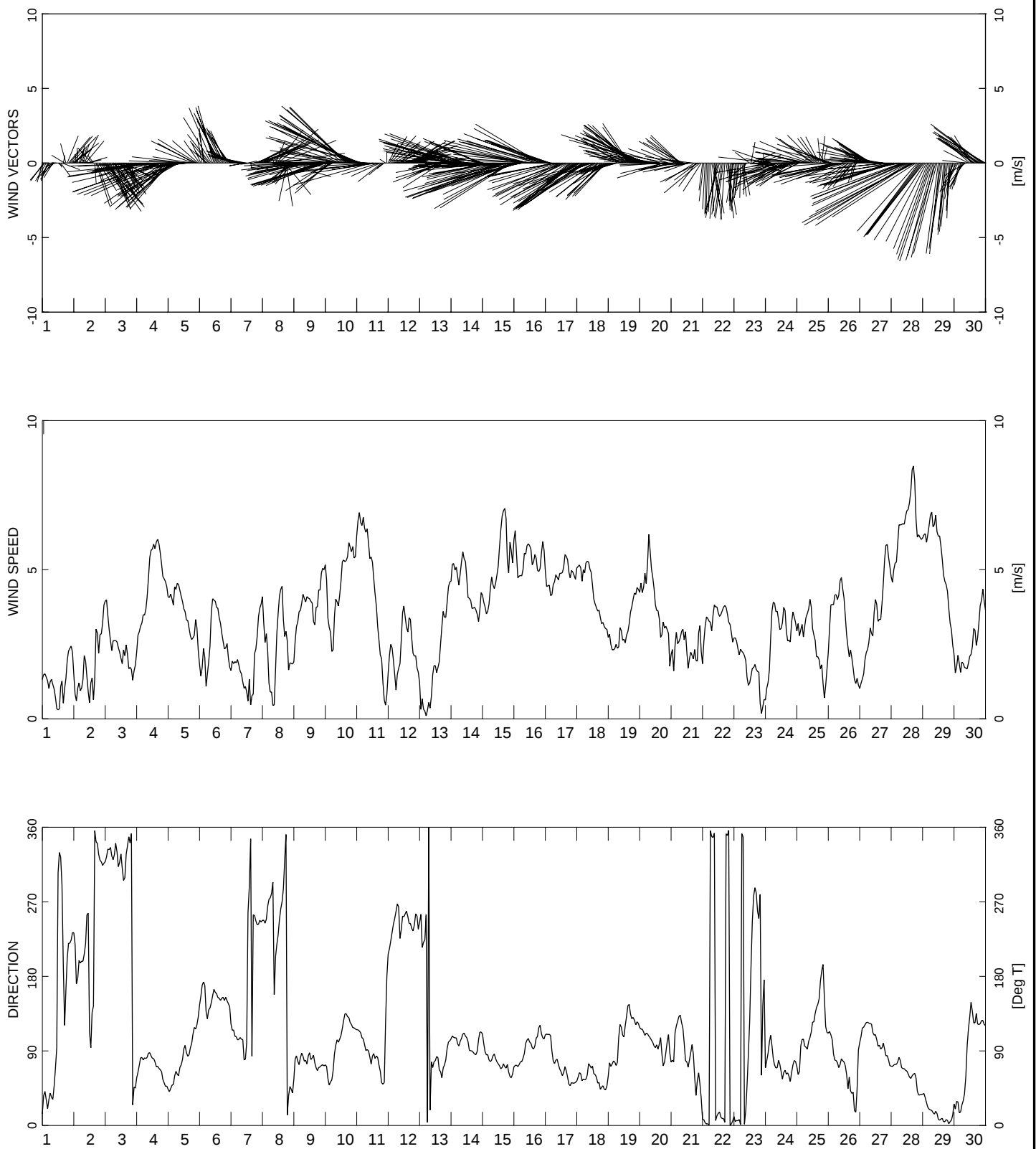
CHK
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Figure B-36



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
September 2007**

PROJECT NO.
Y22101057

DWN
RED

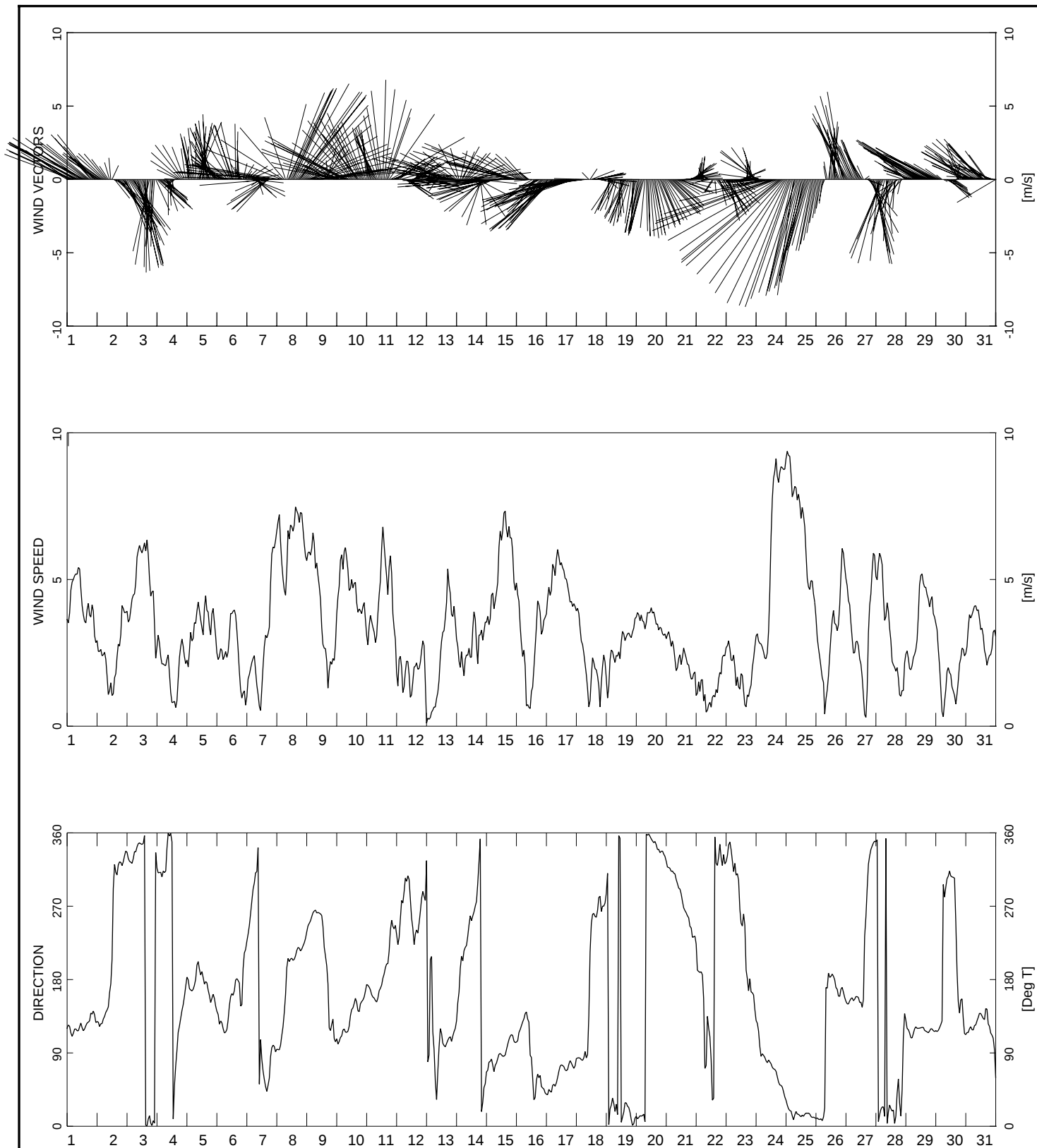
CHK
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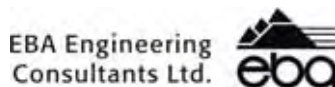
DATE
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Figure B-37



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
October 2007**

PROJECT NO.
Y22101057

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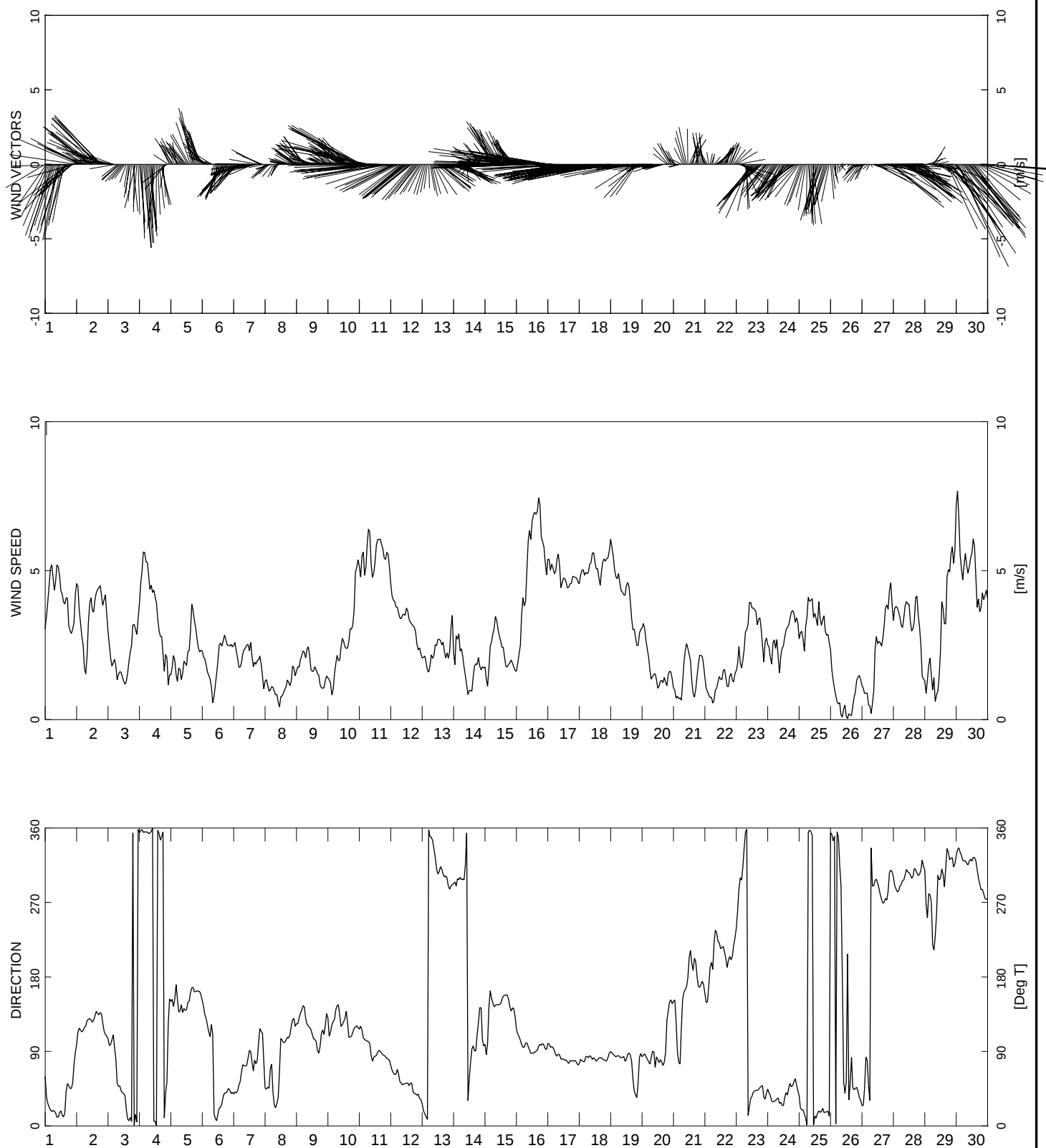
DWN
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Figure B-38



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
November 2007**

PROJECT NO.
Y22101057

DWN
RED

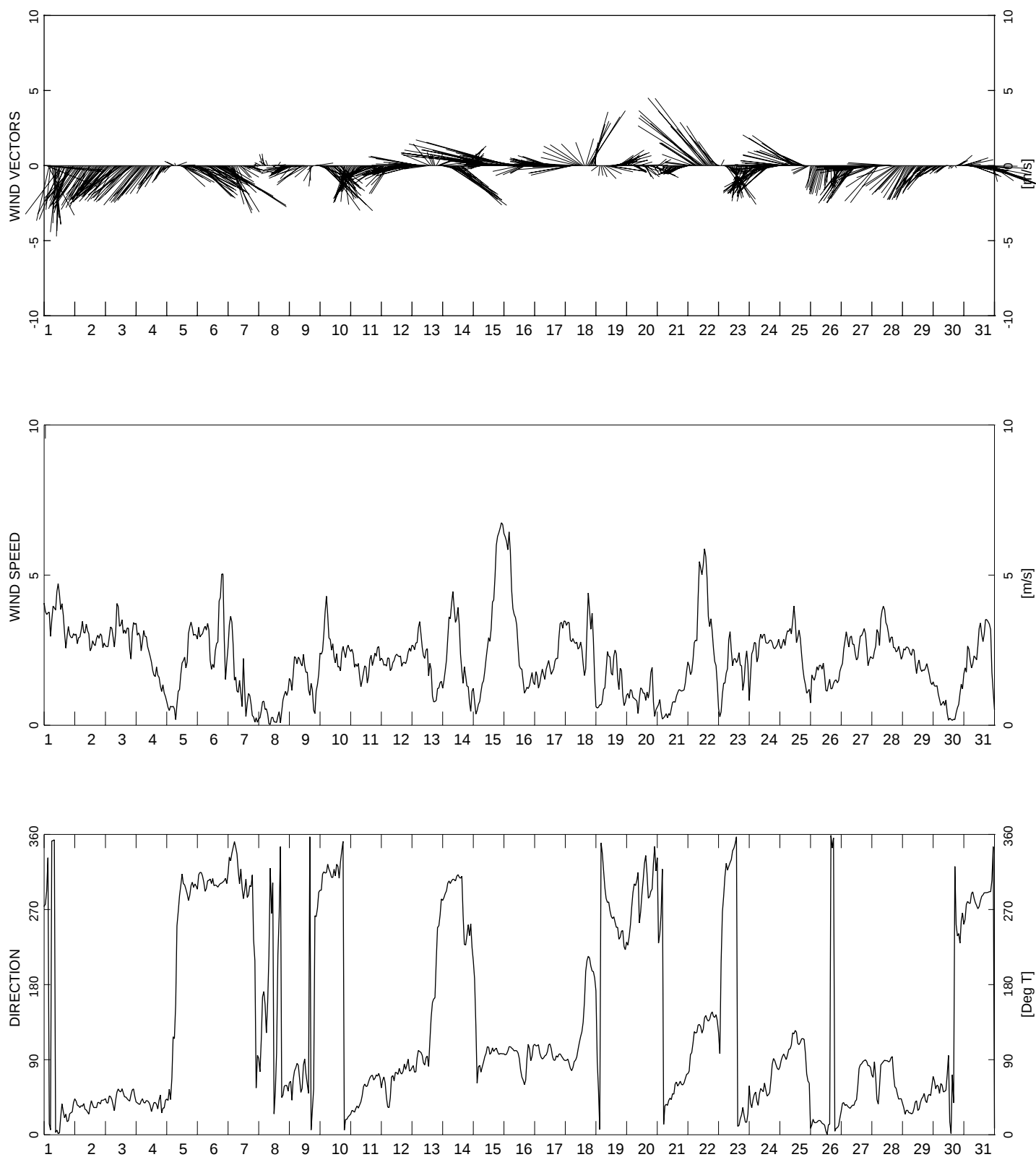
CHK
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Figure B-39



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
December 2007**

PROJECT NO.
Y22101057

DWN
RED

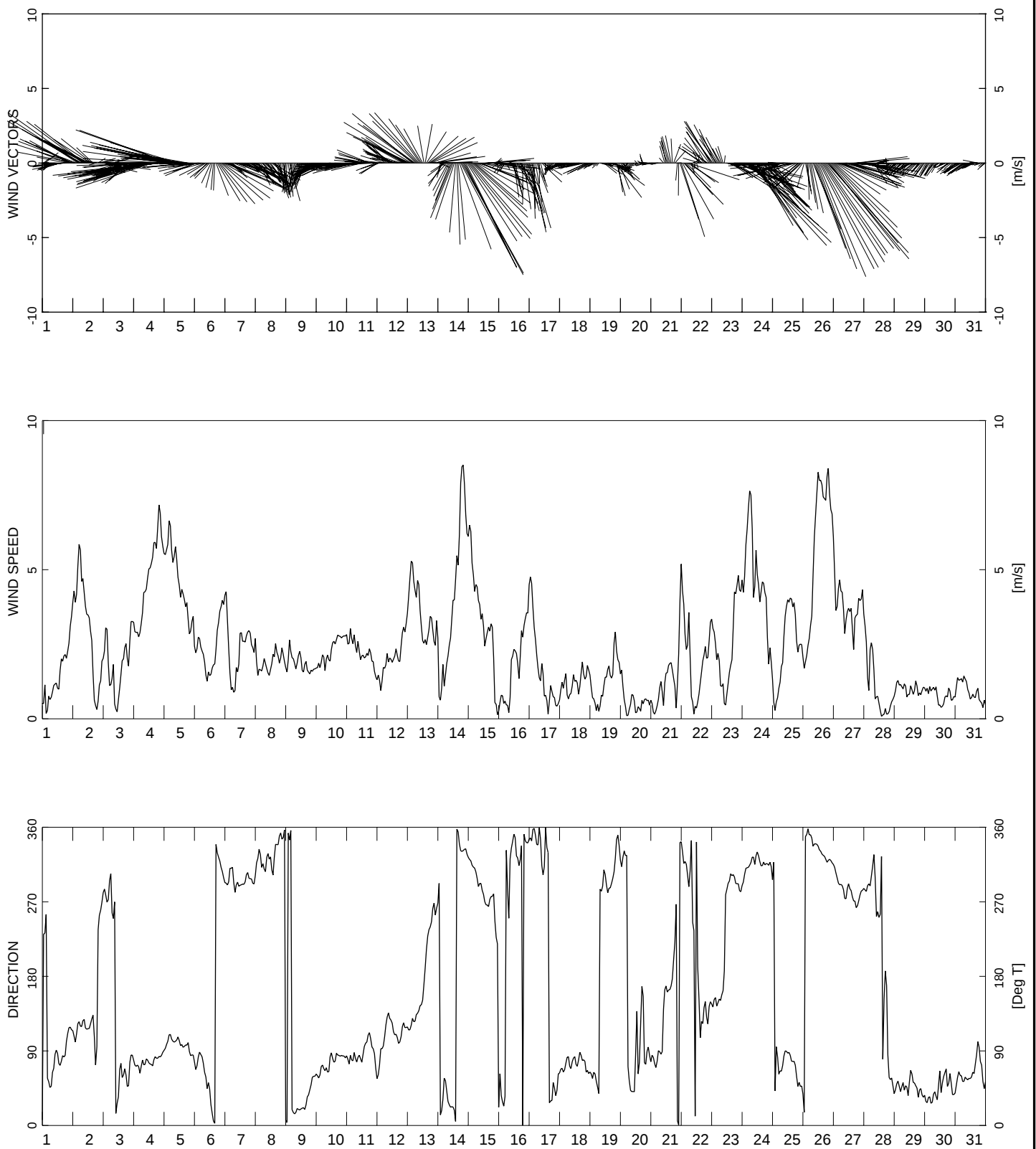
CHK
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Figure B-40



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
January 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

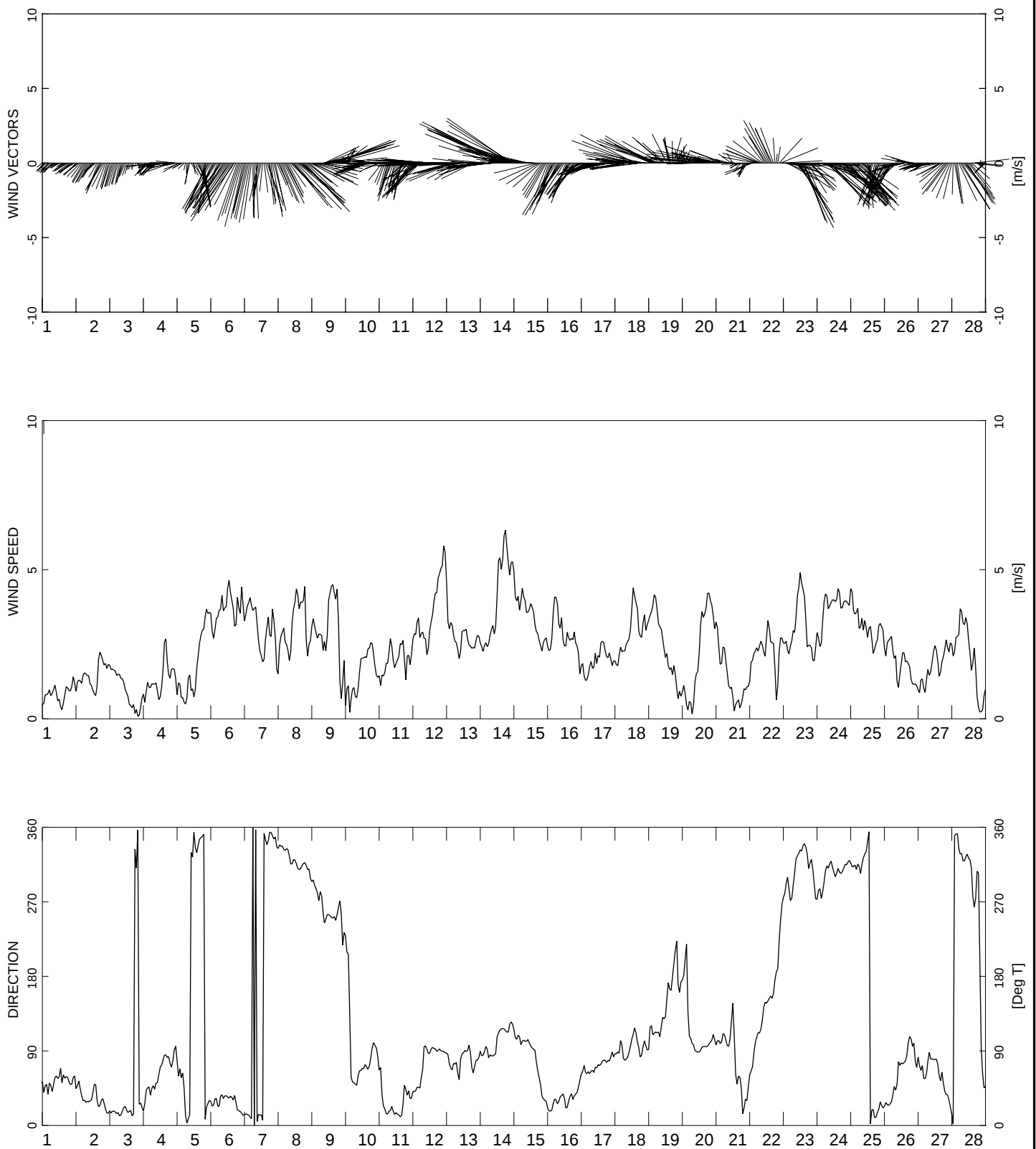
CHK
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Figure B-41



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
February 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

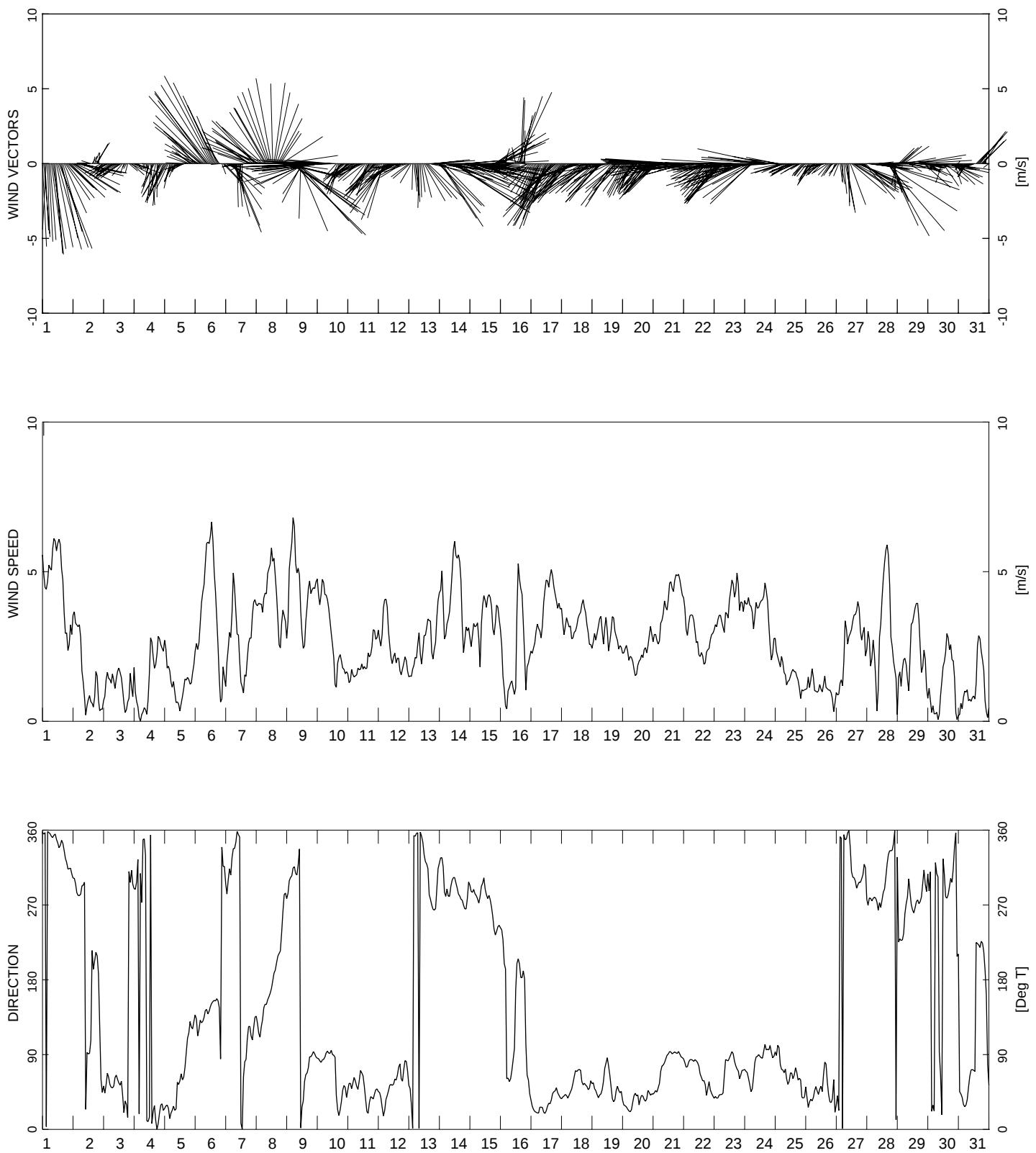
CHK
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Figure B-42



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
March 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

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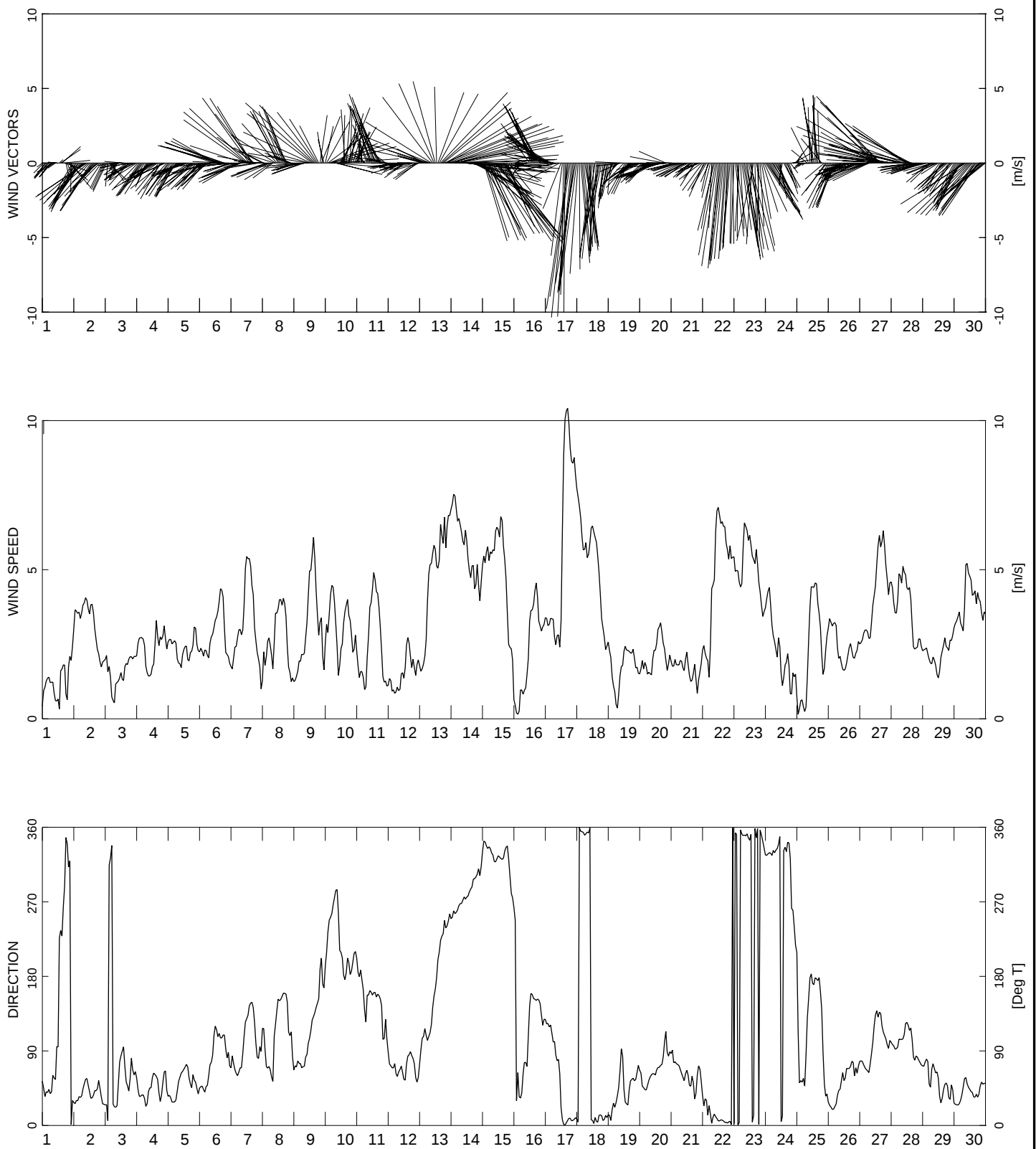
DWN
RED

DATE
July 2009

CHK
JAS

REV
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Figure B-43



NOTES

CLIENT

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
April 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

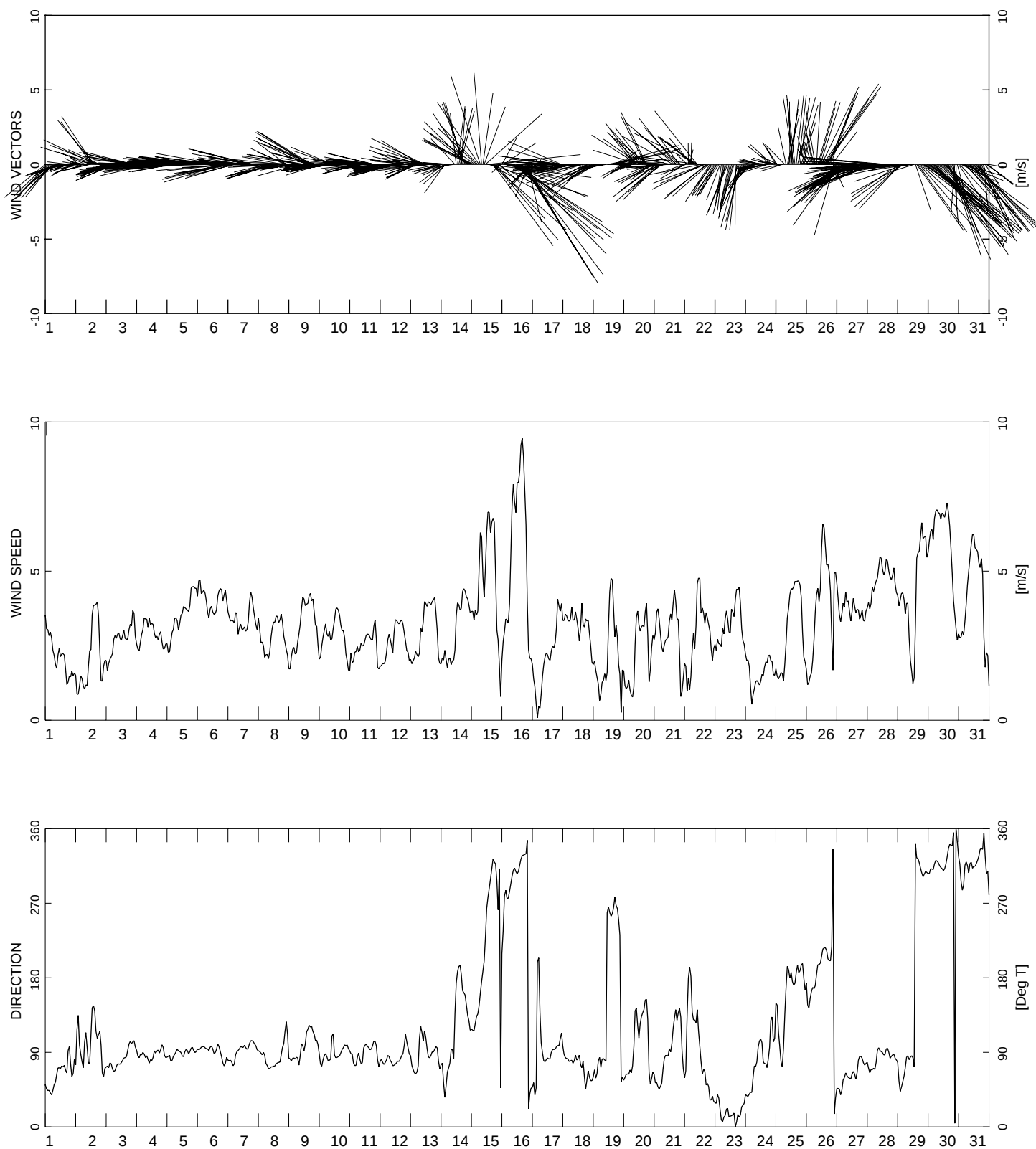
CHK
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Figure B-44



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
May 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

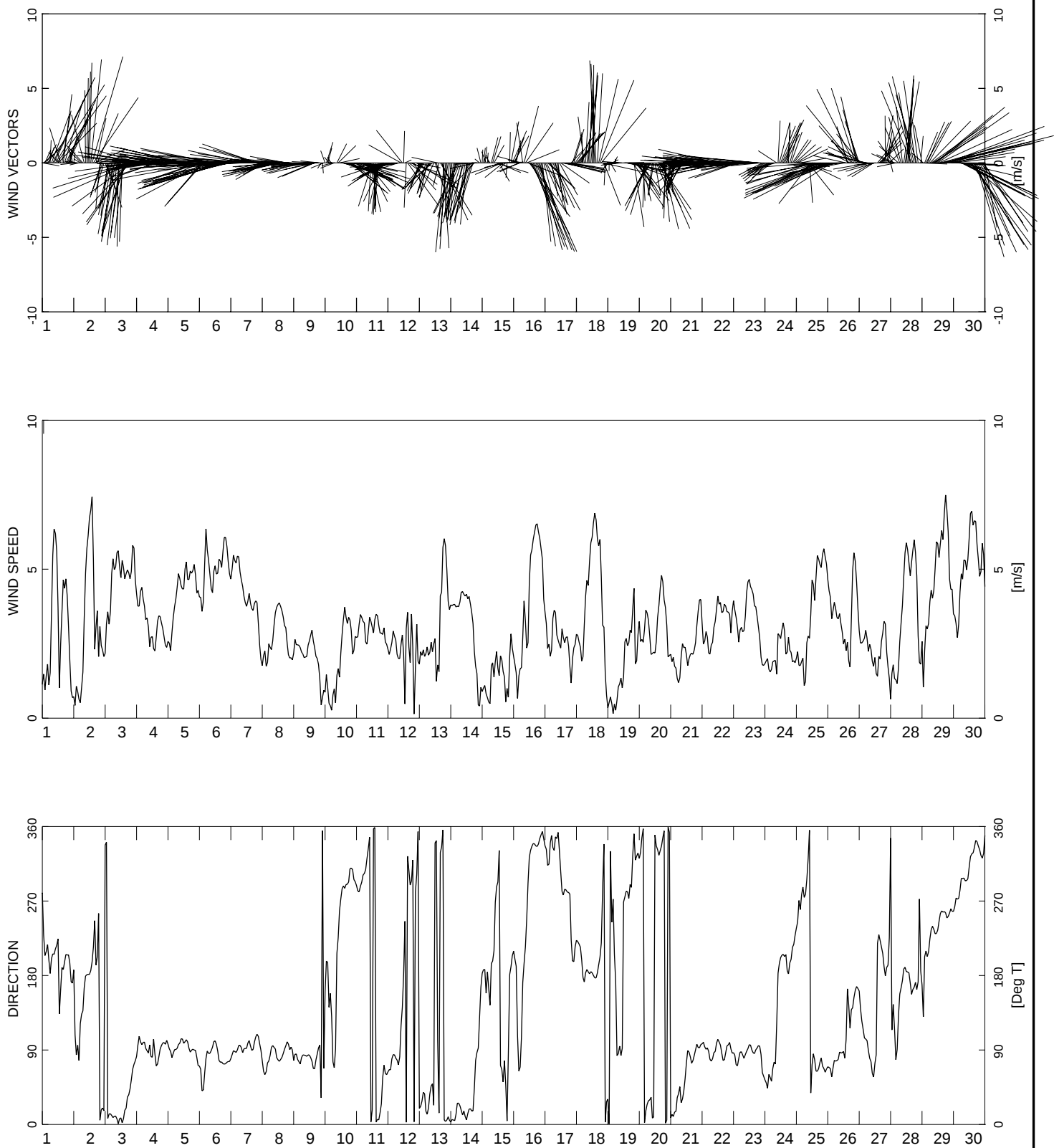
CHK
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Figure B-45



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
June 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

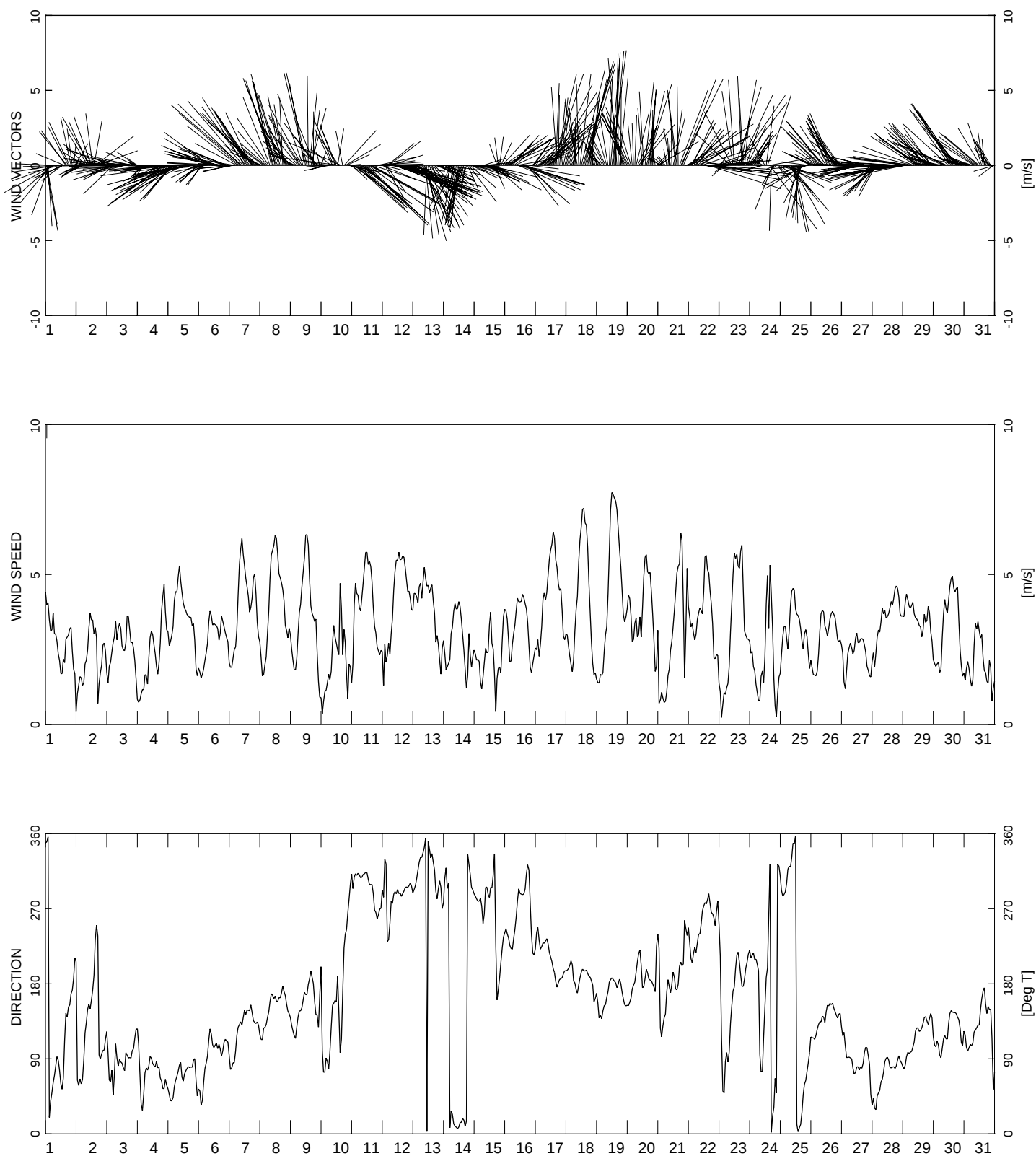
CHK
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Figure B-46



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
July 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

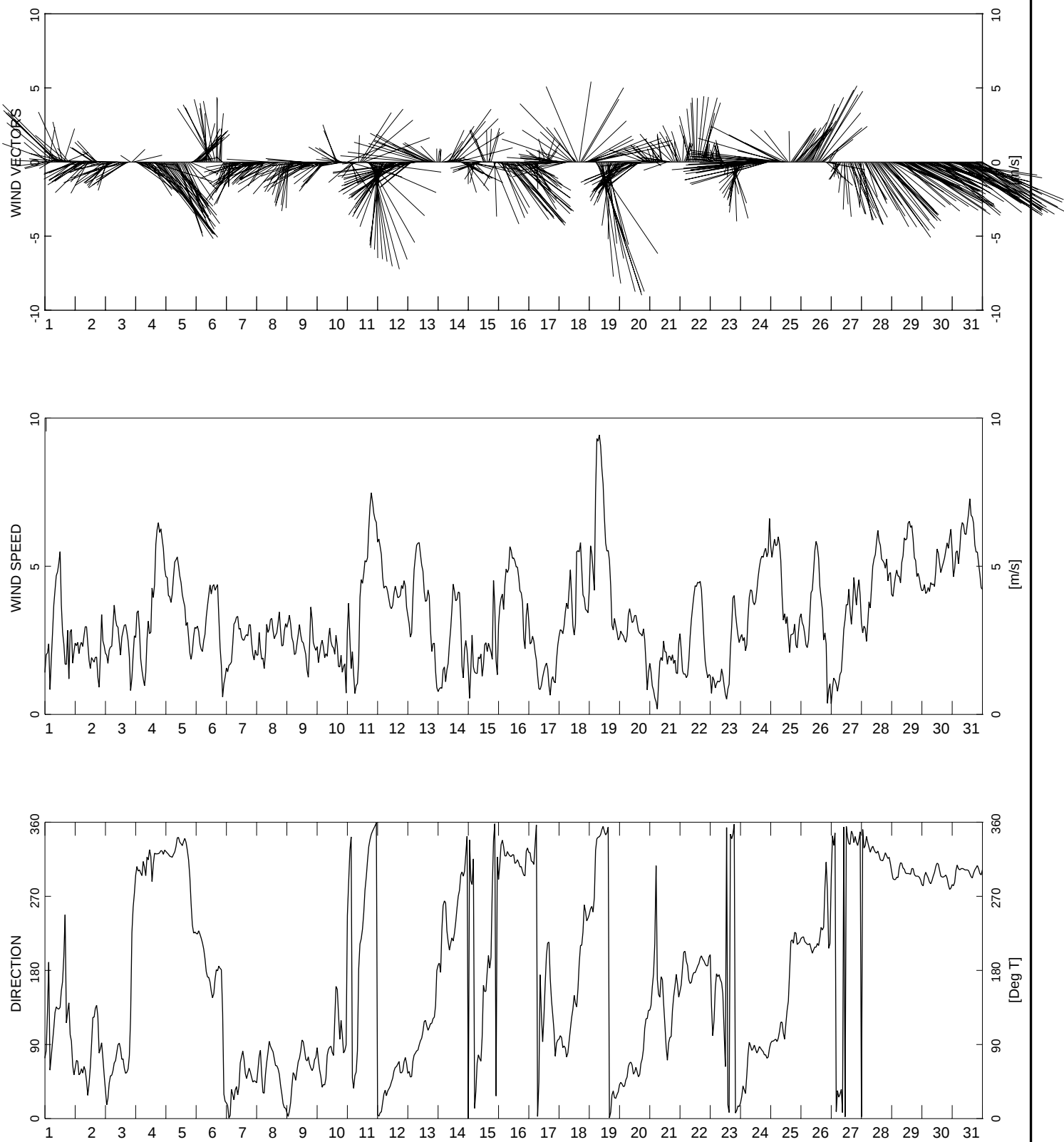
CHK
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Figure B-47



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
August 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

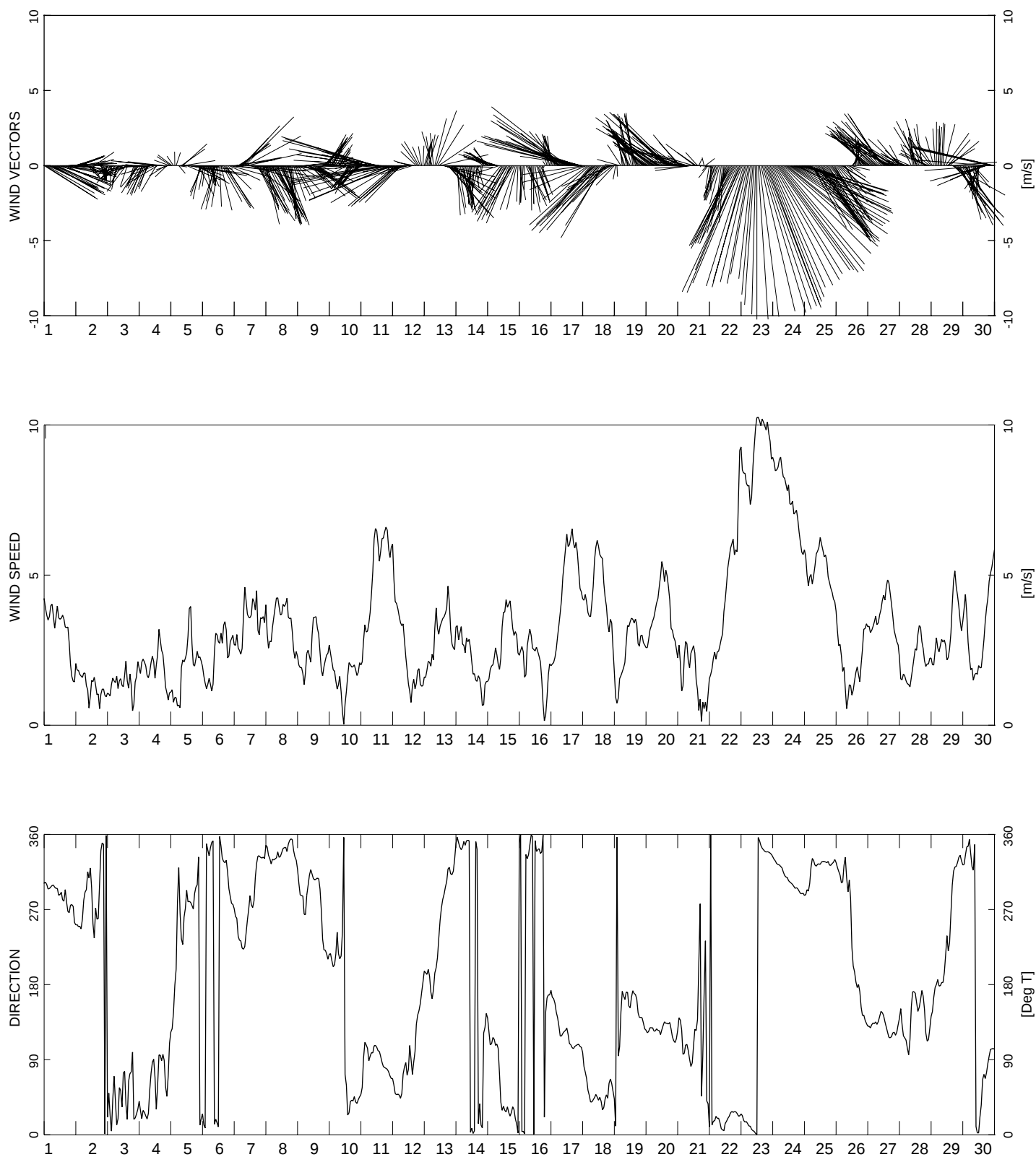
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Figure B-48



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
September 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
Y22101057

DWN
RED

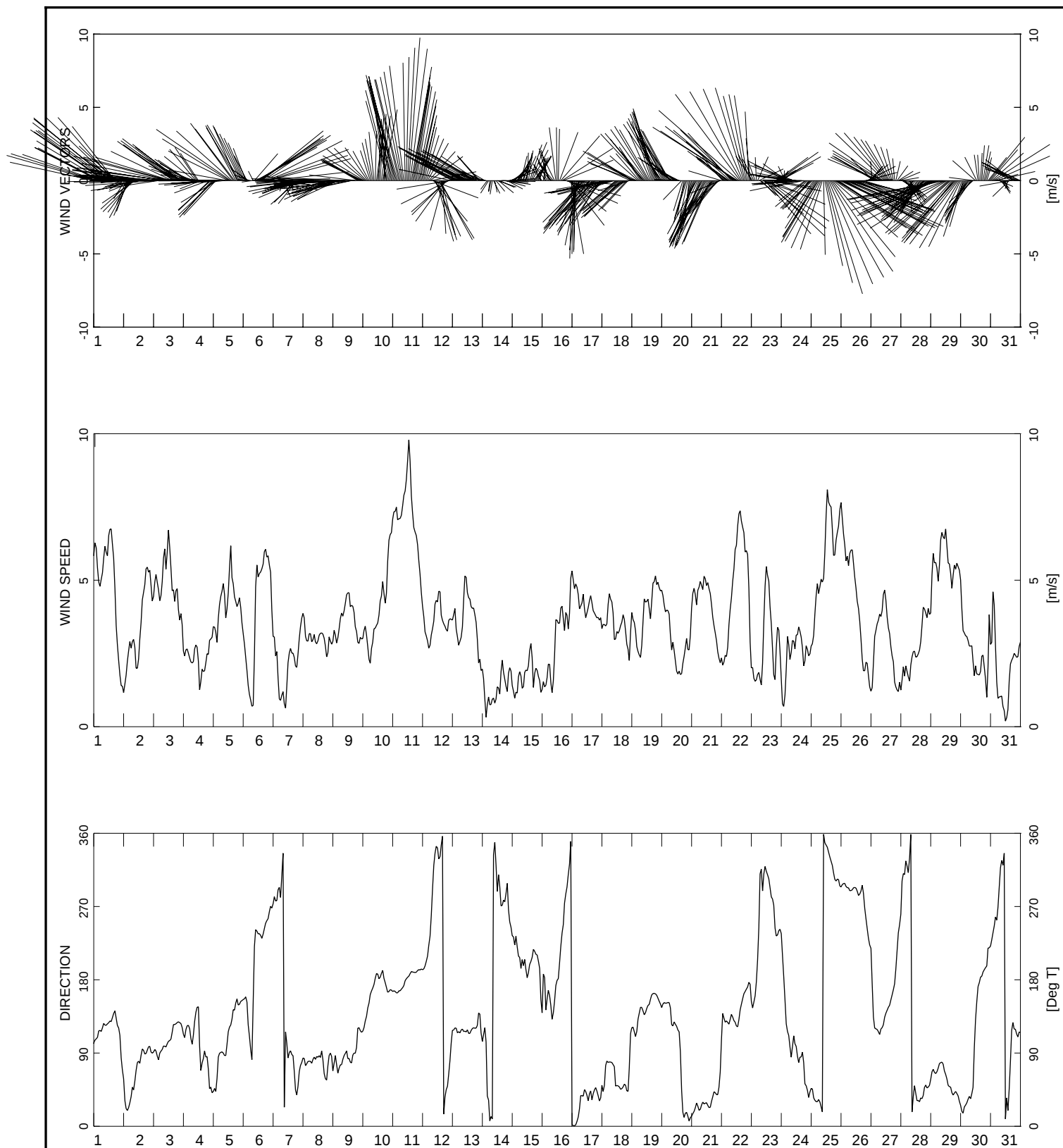
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Figure B-49



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
October 2008**

**EBA Engineering
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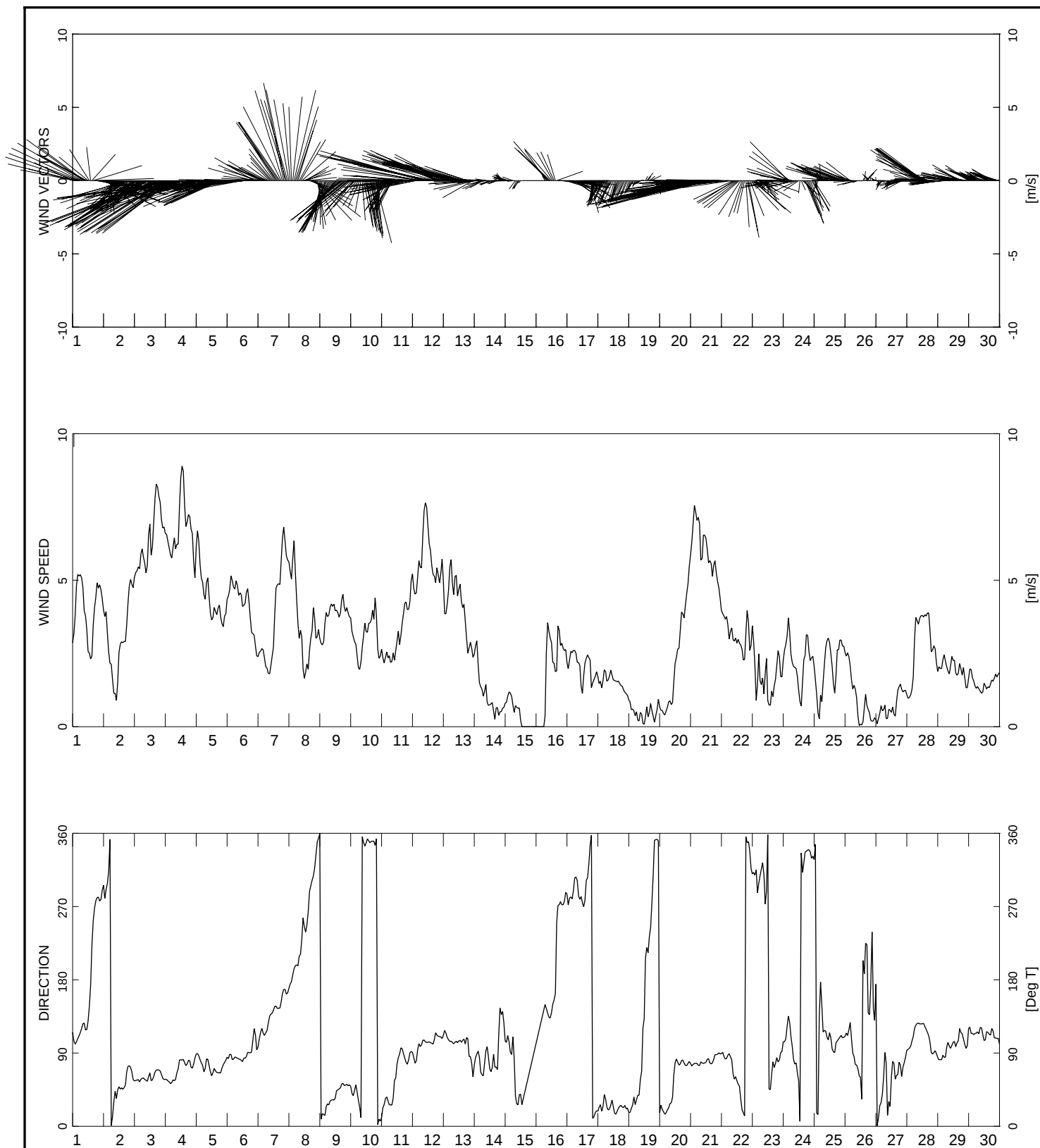
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Figure B-50



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**Tyhee Station
Wind Data
November 2008**

**EBA Engineering
Consultants Ltd.**



PROJECT NO.
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RED

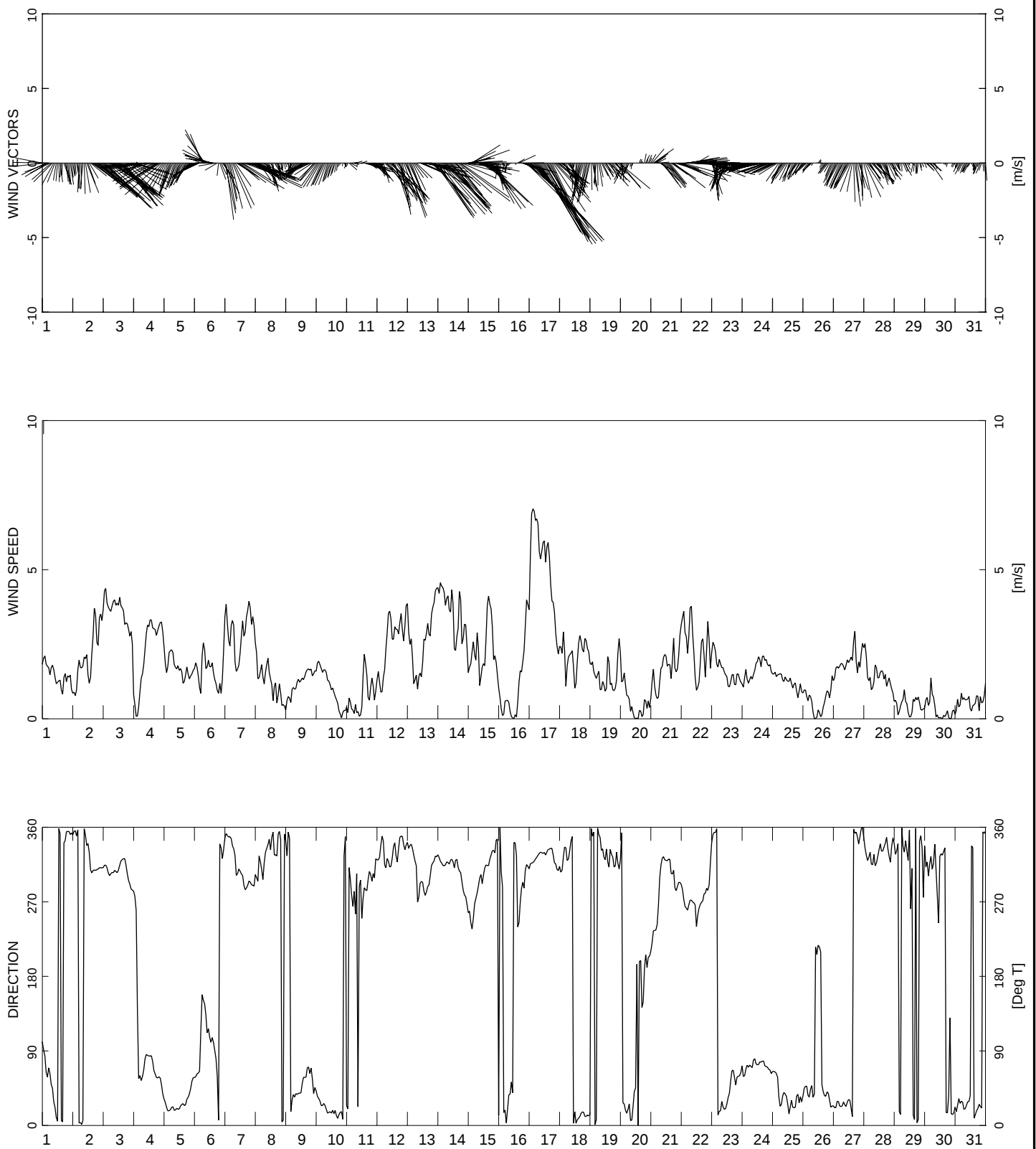
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Figure B-51



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Data
December 2008**

**EBA Engineering
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PROJECT NO.
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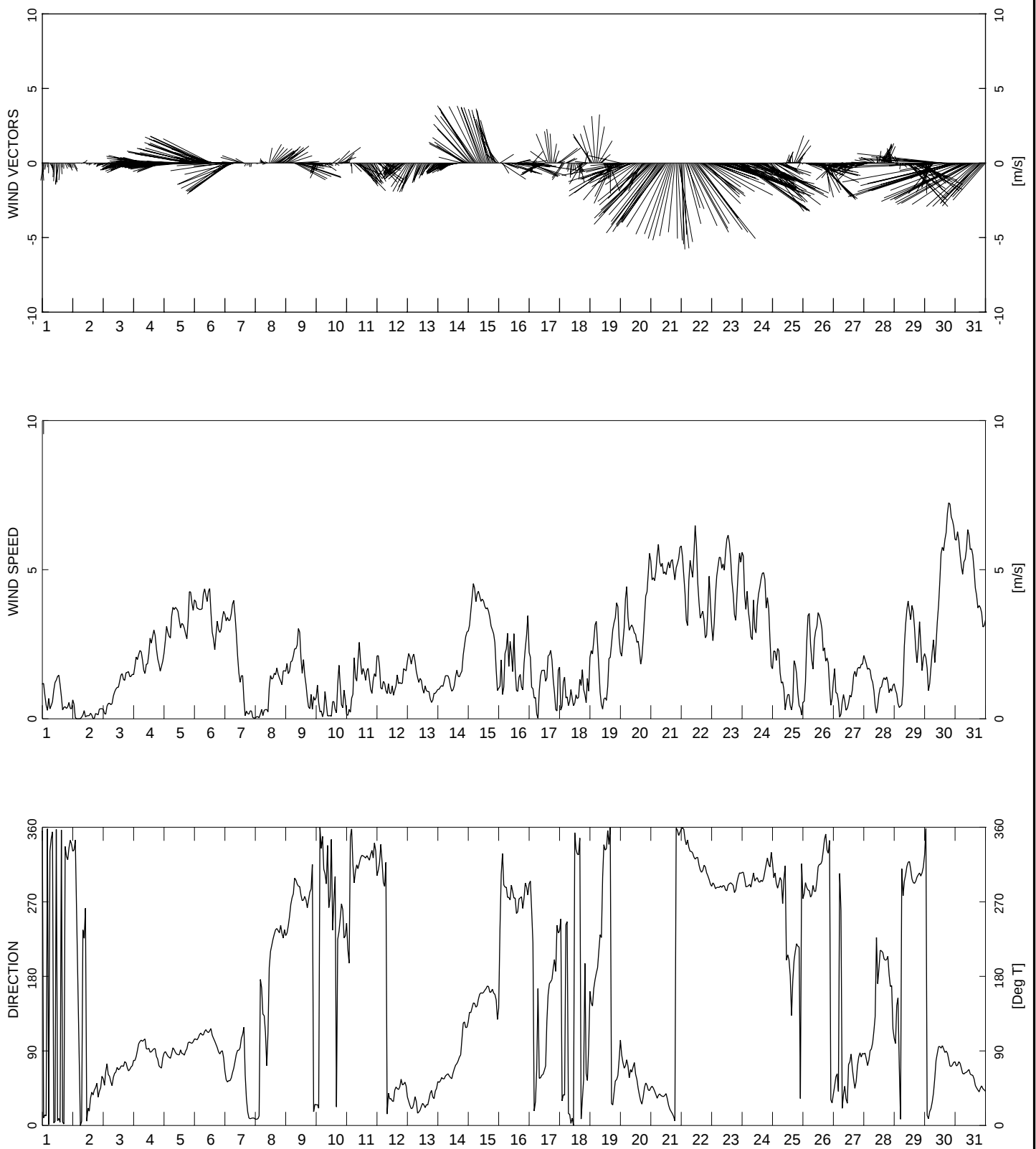
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Figure B-52



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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

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Wind Data
January 2009**

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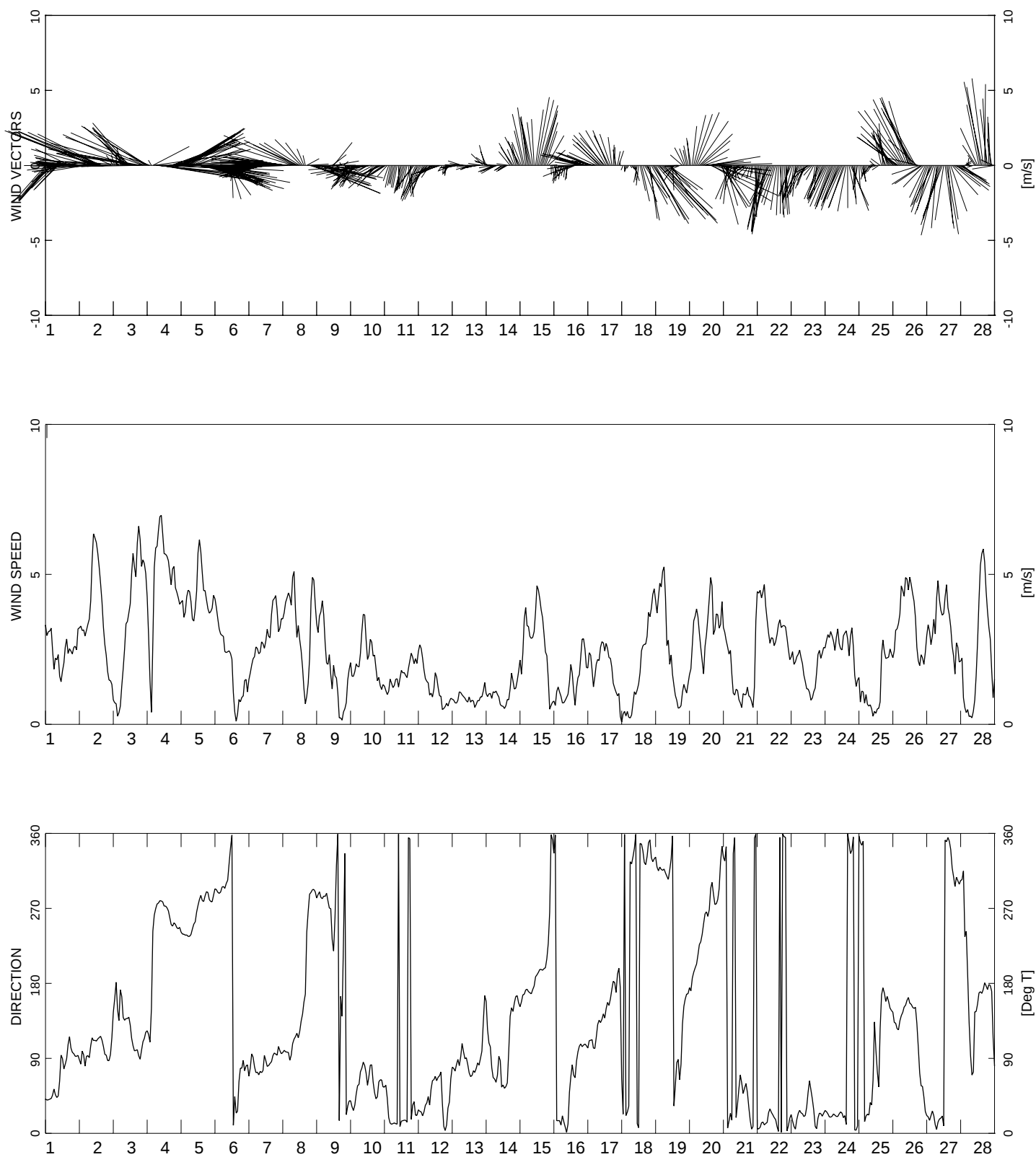
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Figure B-53



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Wind Data
February 2009**

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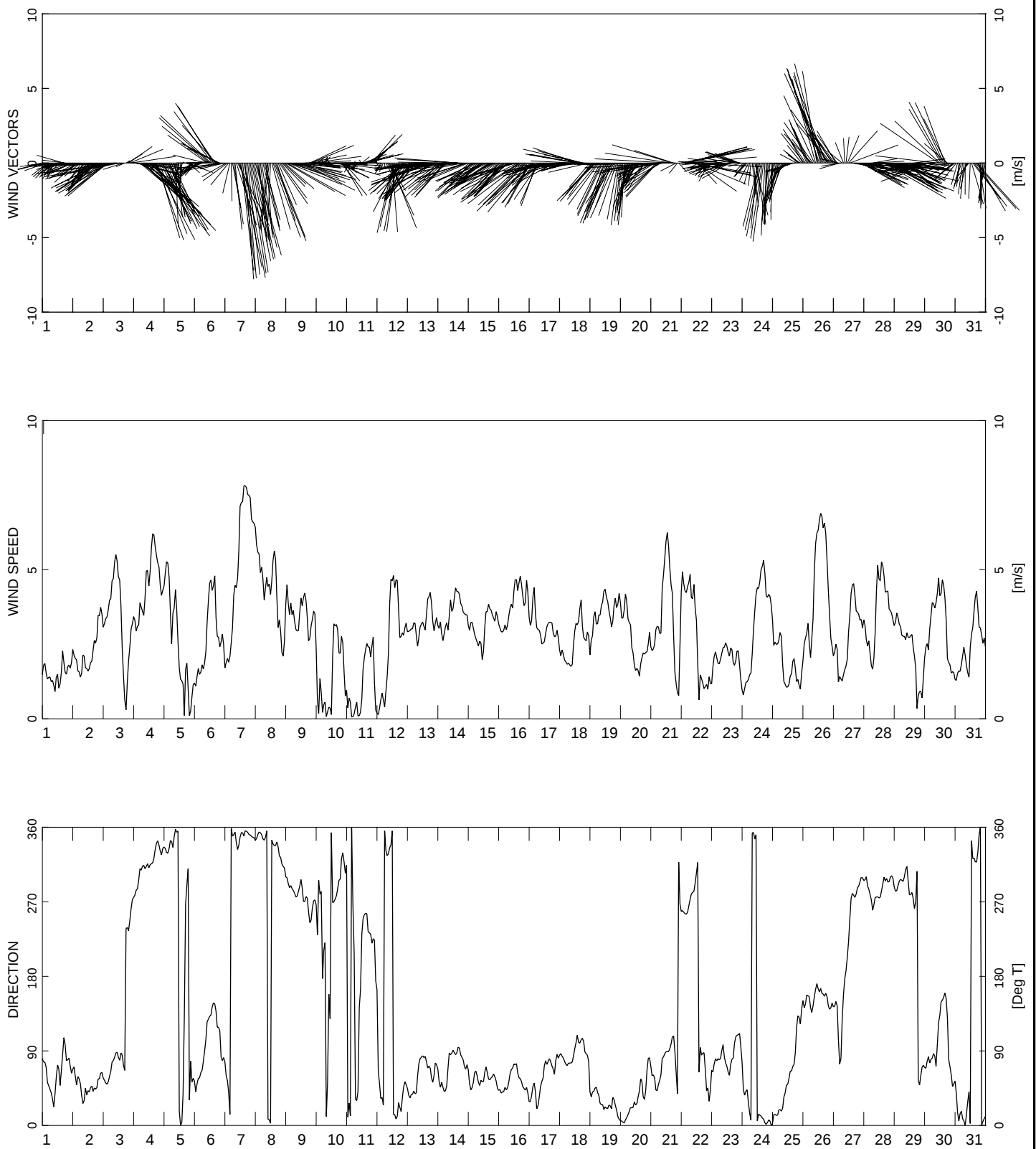
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Figure B-54



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**Tyhee Station
Wind Data
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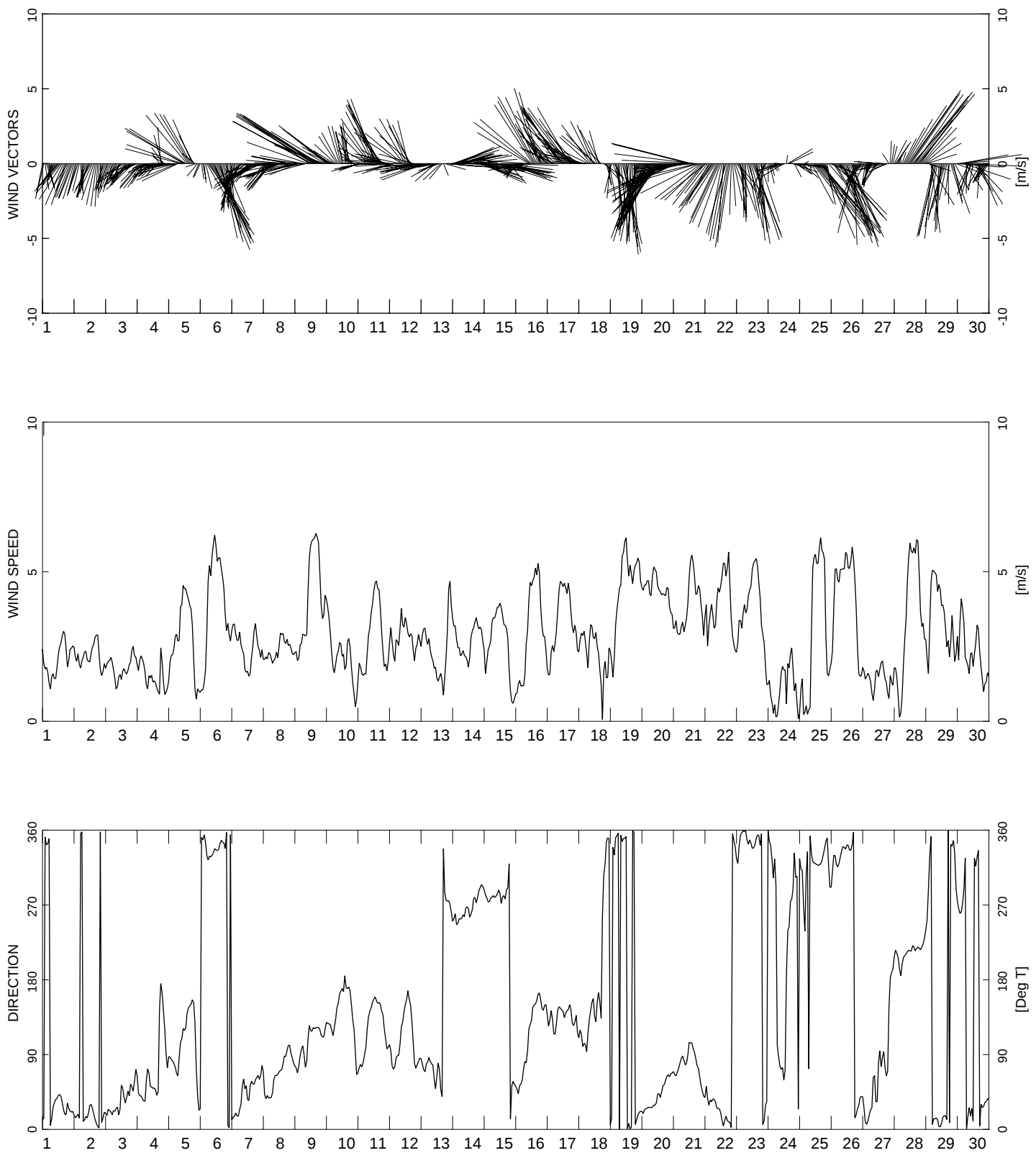
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Figure B-55



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**Tyhee Station
Wind Data
April 2009**

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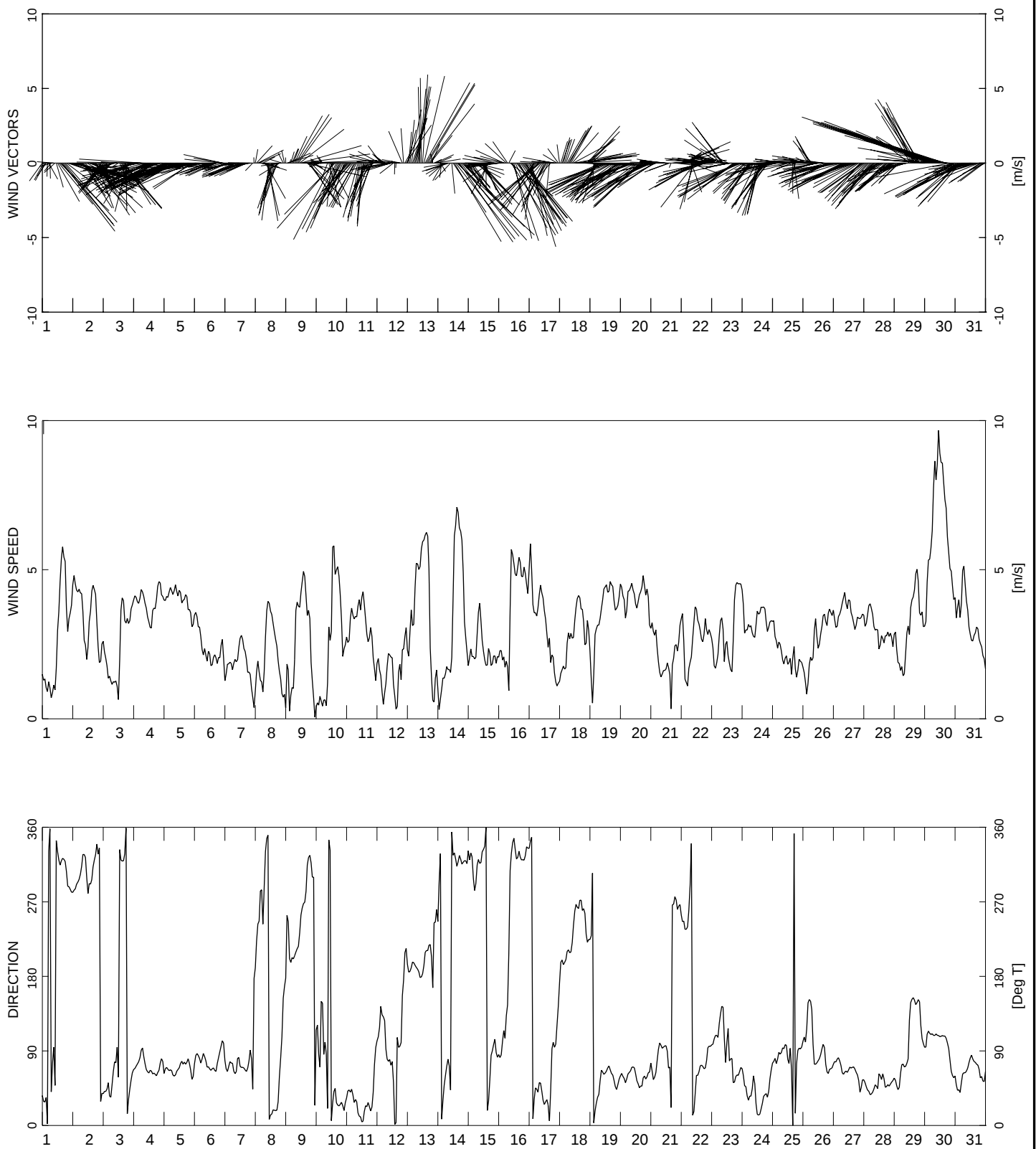
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Figure B-56



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**Tyhee Station
Wind Data
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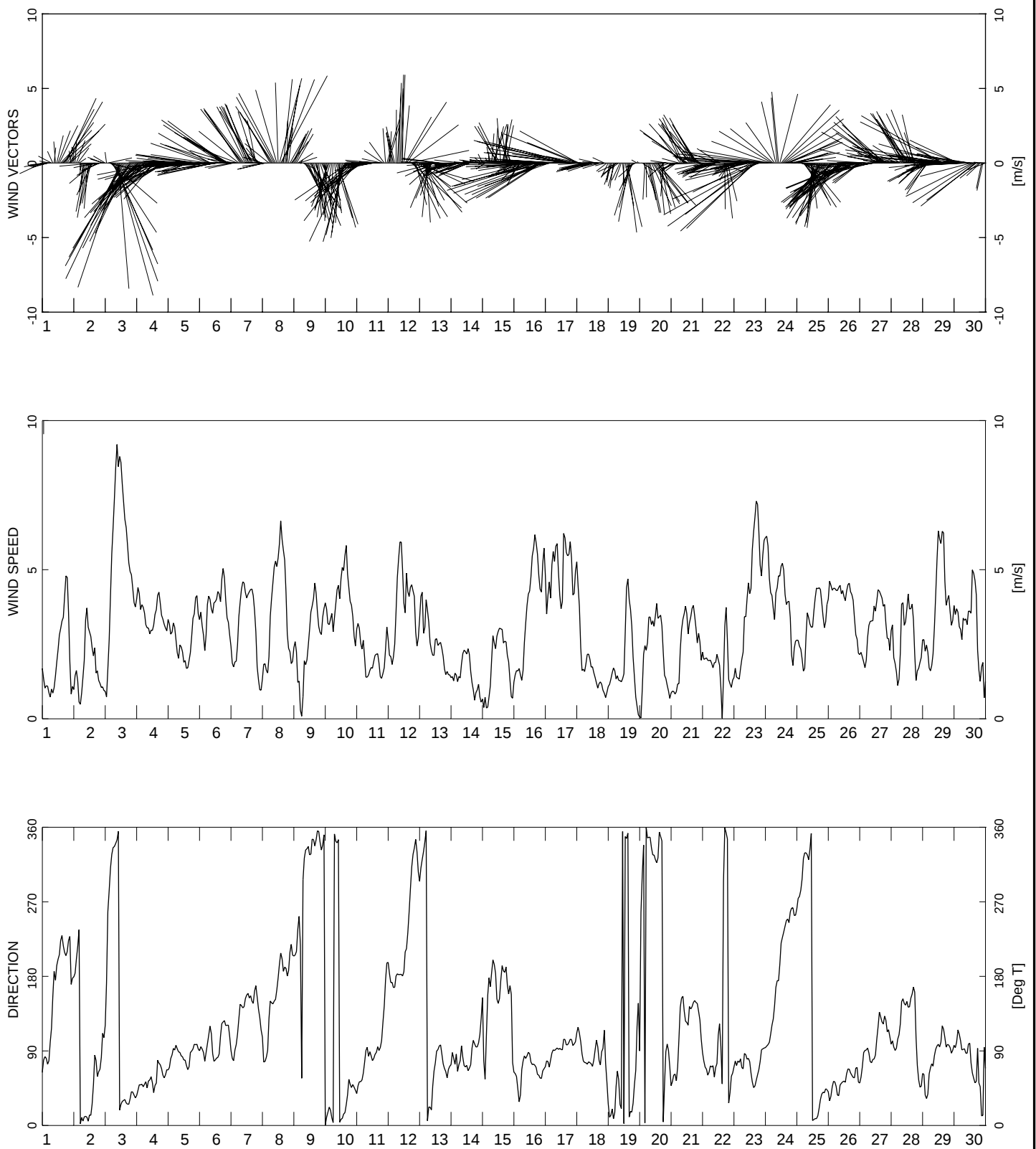
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Figure B-57



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**Tyhee Station
Wind Data
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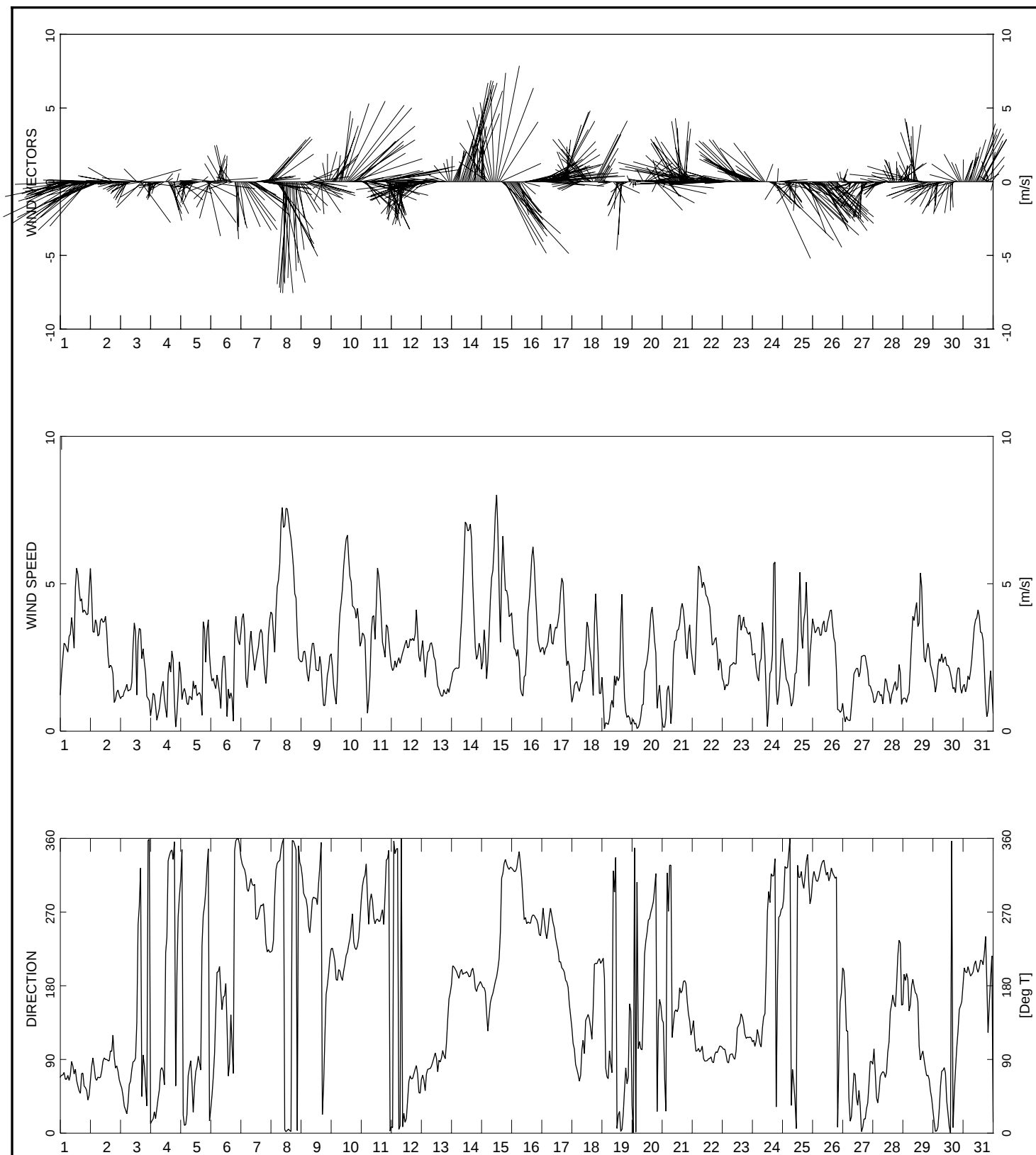
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Figure B-58



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**Tyhee Station
Wind Data
July 2009**

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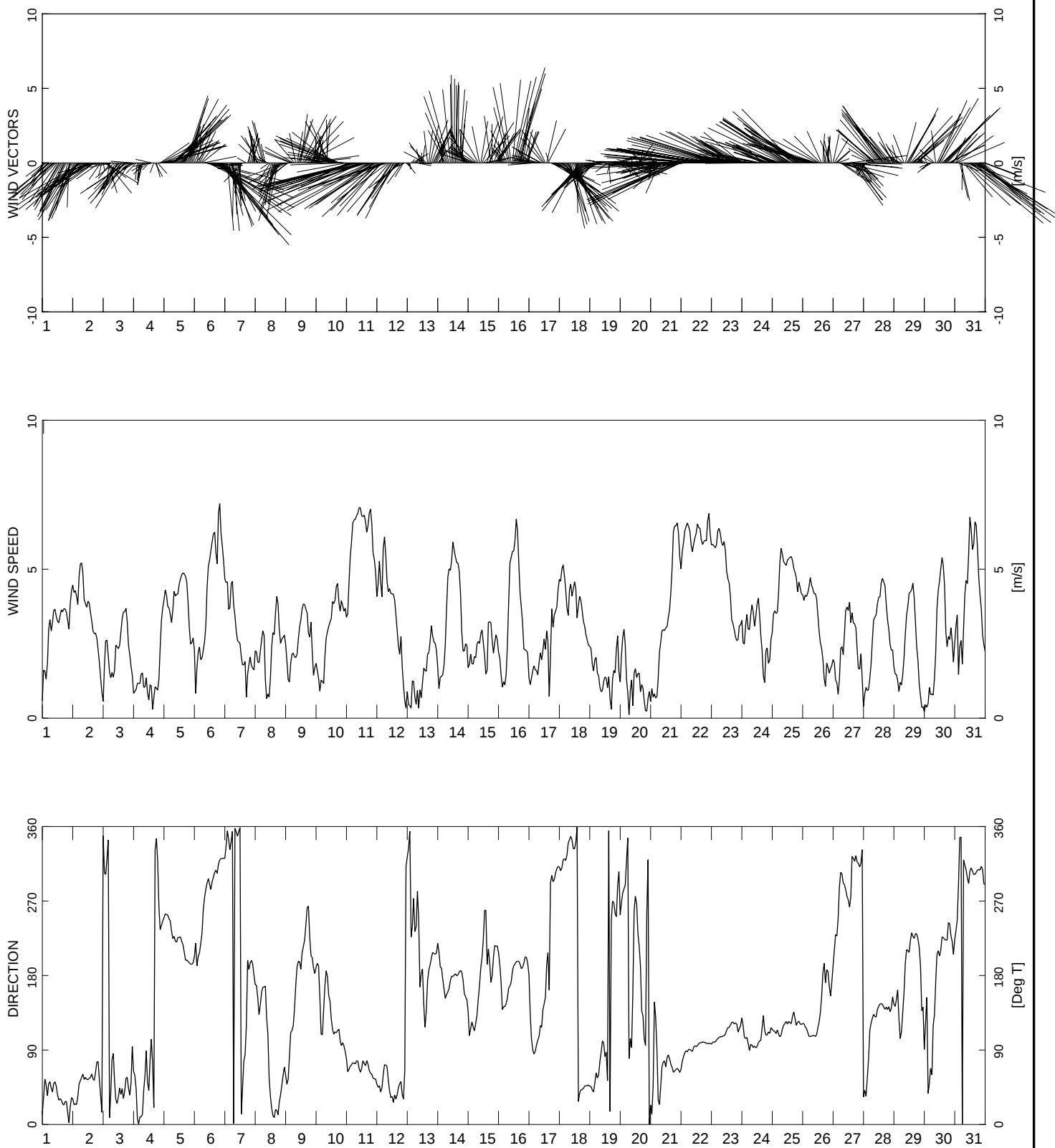
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Figure B-59



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**Tyhee Station
Wind Data
August 2009**

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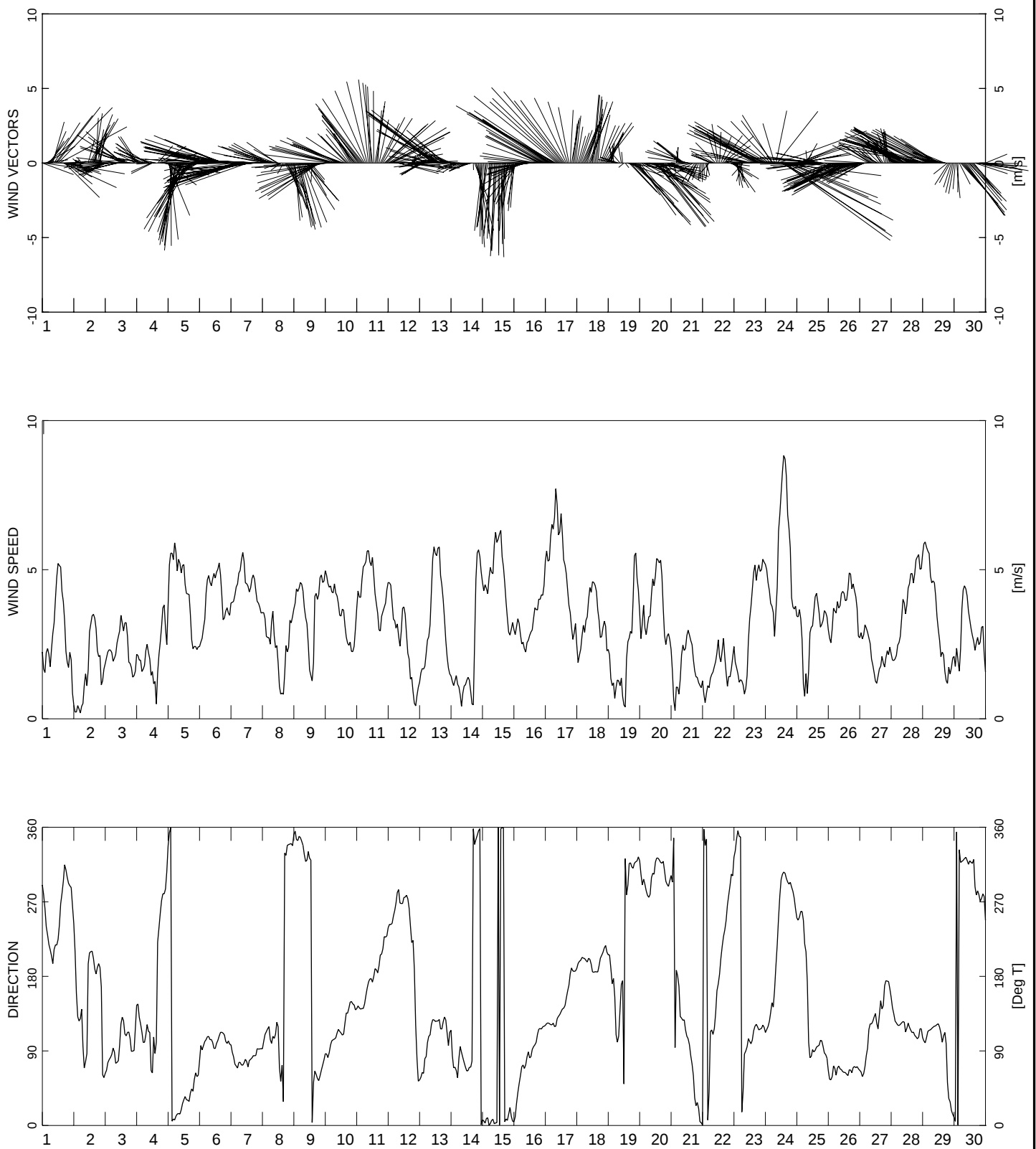
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Figure B-60



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**Tyhee Station
Wind Data
September 2009**

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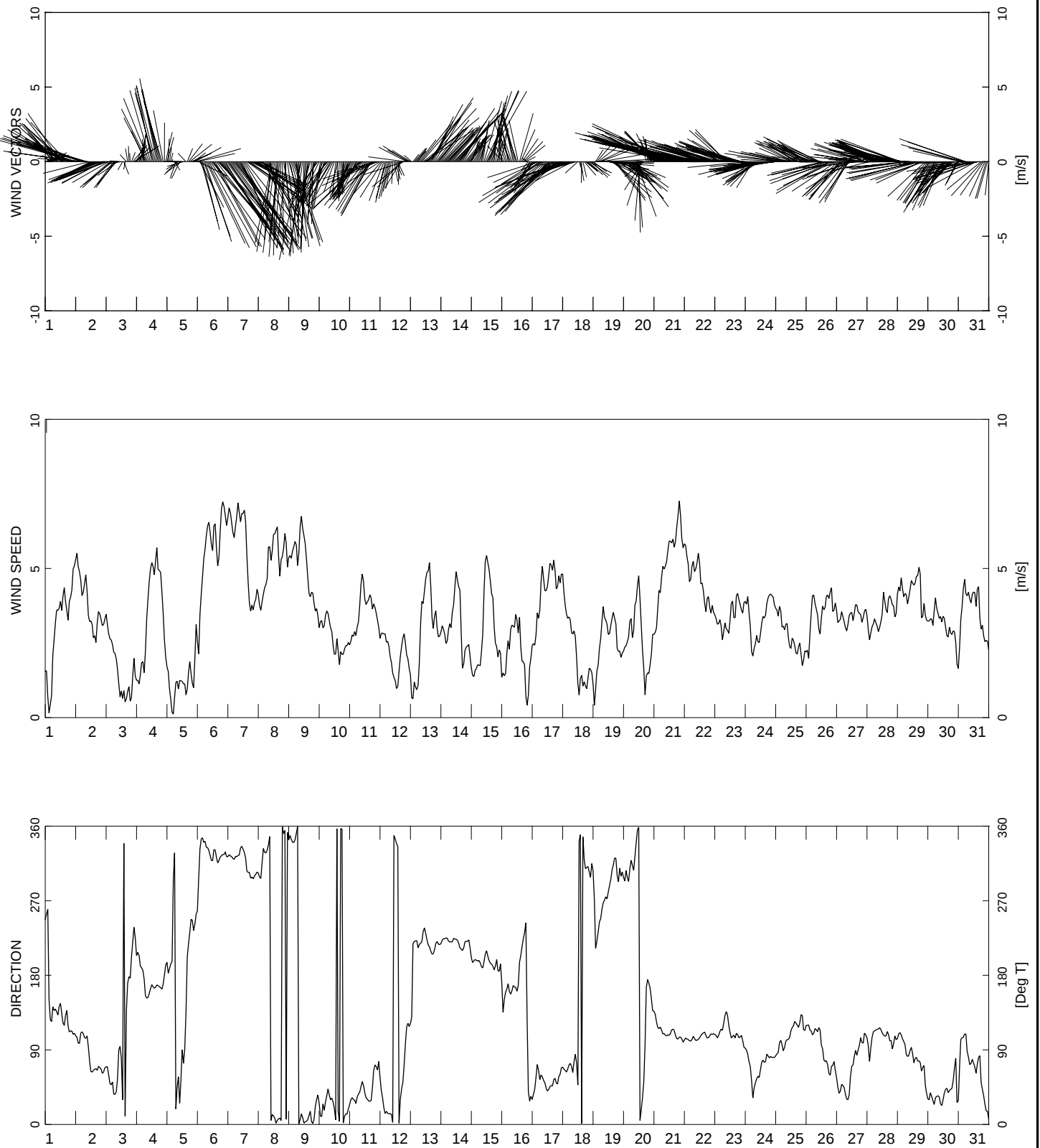
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Figure B-61



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**Tyhee Station
Wind Data
October 2009**

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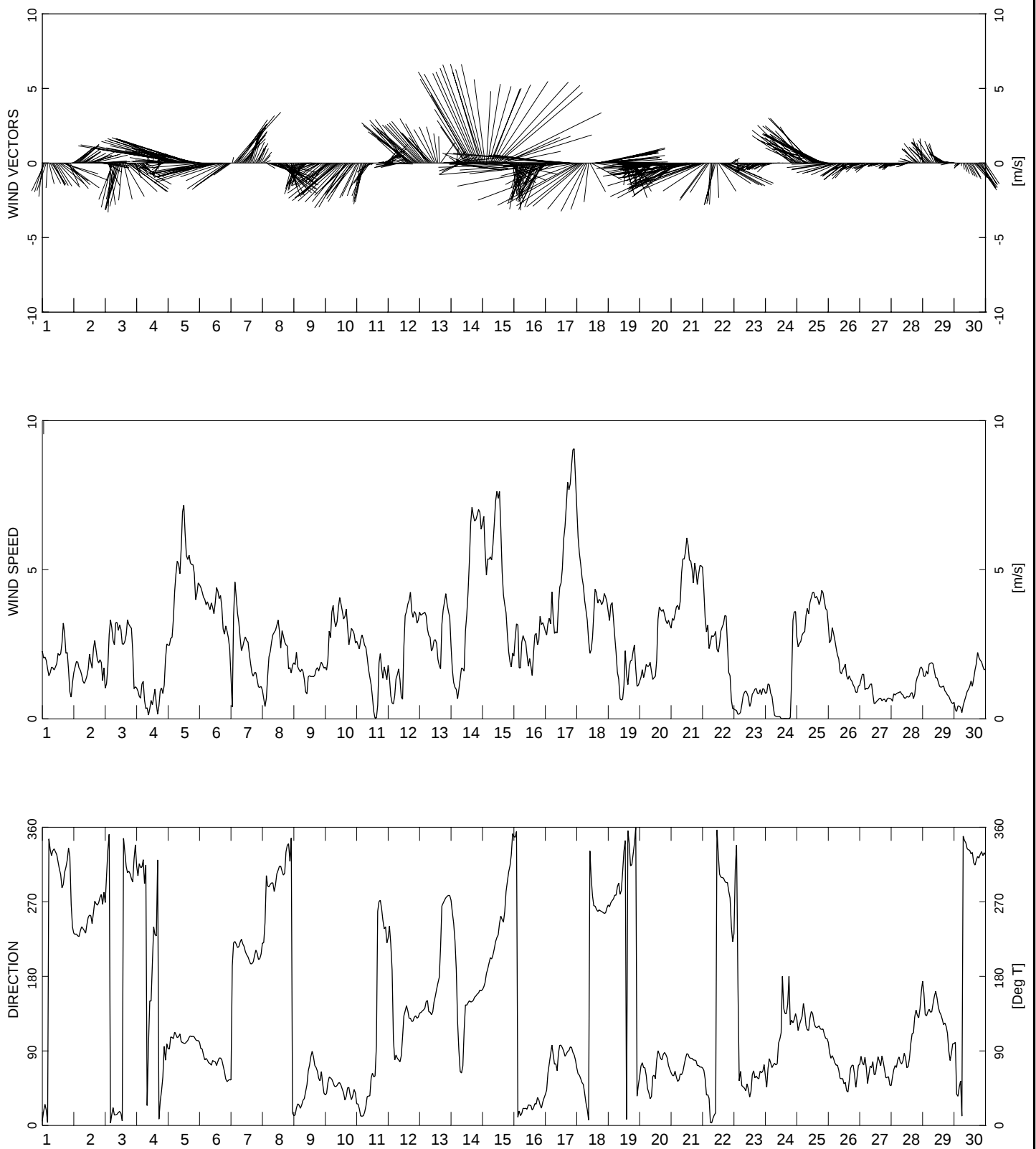
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Figure B-62



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**Tyhee Station
Wind Data
November 2009**

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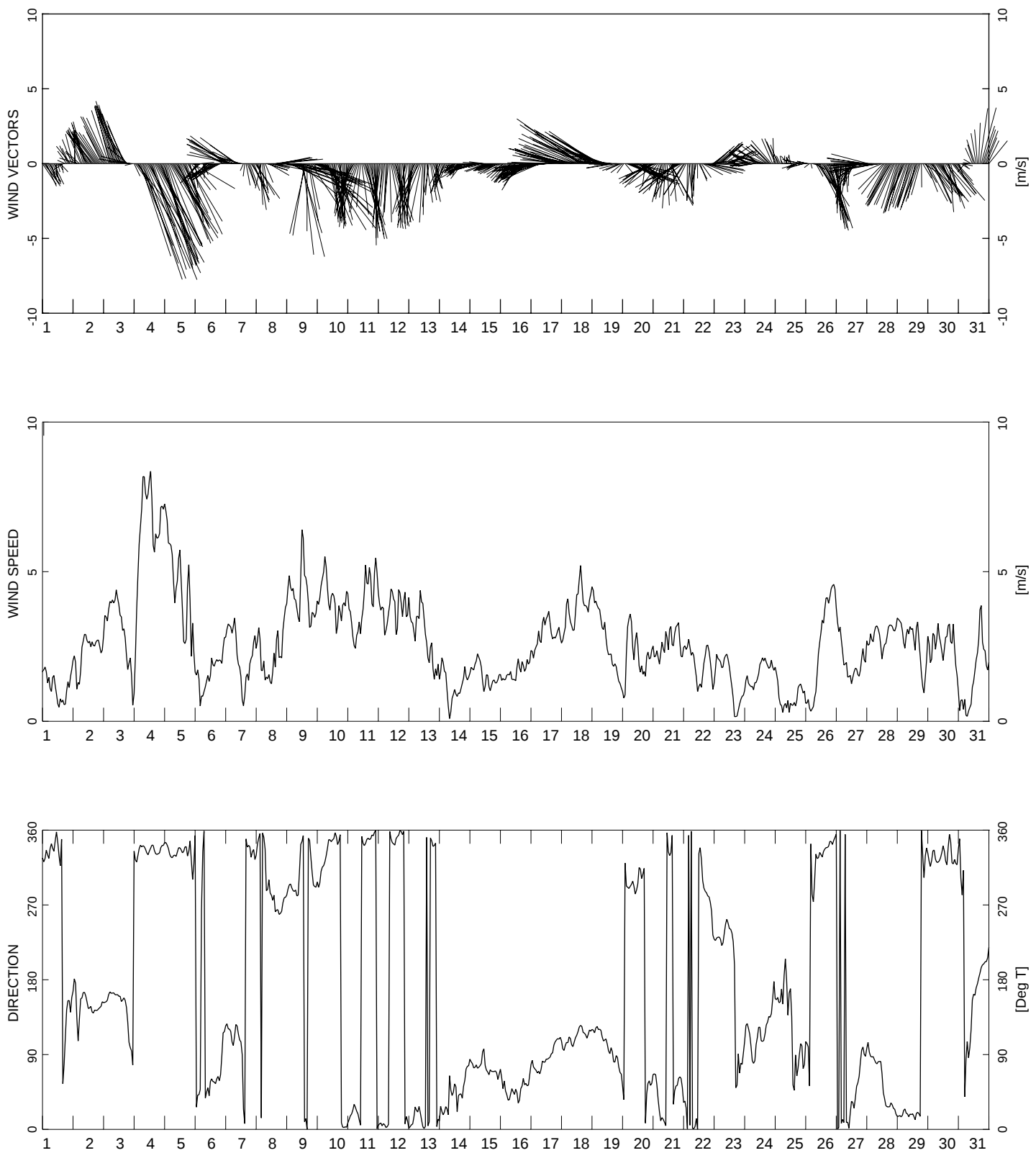
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Figure B-63



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**Tyhee Station
Wind Data
December 2009**

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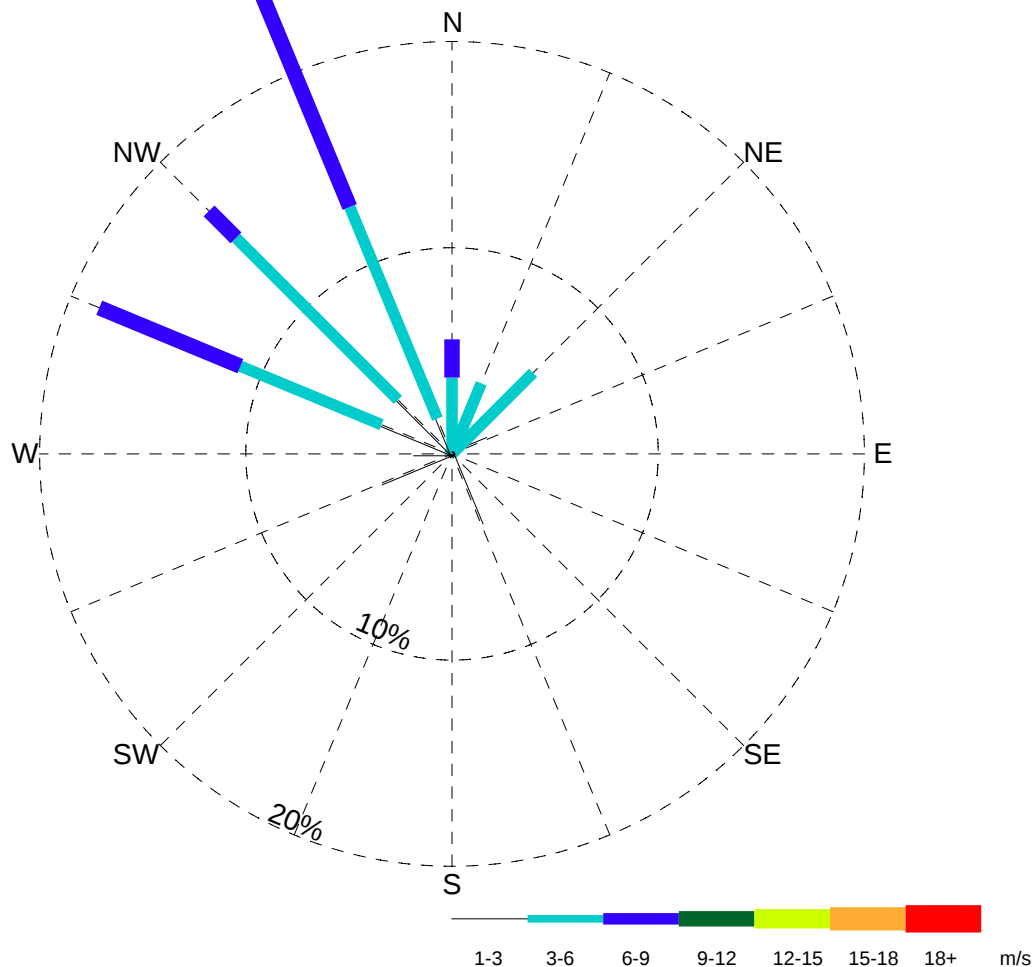
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February 2010

Figure B-64

APPENDIX

APPENDIX C MONTHLY WIND ROSES – SEPTEMBER 2004 TO DECEMBER 2008



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	1.85	-	-	-	-	-	-	1.85
NE	-	-	5.56	-	-	-	-	-	5.56
NNE	-	-	3.70	-	-	-	-	-	3.70
N	-	-	3.70	1.85	-	-	-	-	5.56
NNW	-	1.85	11.11	16.67	-	-	-	-	29.63
NW	-	3.70	11.11	1.85	-	-	-	-	16.67
WNW	-	3.70	7.41	7.41	-	-	-	-	18.52
W	-	1.85	-	-	-	-	-	-	1.85
WSW	-	3.70	-	-	-	-	-	-	3.70
SW	-	-	-	-	-	-	-	-	-
SSW	-	-	-	-	-	-	-	-	-
S	-	-	-	-	-	-	-	-	-
SSE	-	3.70	-	-	-	-	-	-	3.70
SE	-	-	-	-	-	-	-	-	-
ESE	-	-	-	-	-	-	-	-	-
E	-	-	-	-	-	-	-	-	-
Calm	9.26	-	-	-	-	-	-	-	9.26
Total (%)	9.26	20.37	42.59	27.78	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 3 days

Start Date: Sep. 28, 2004

End Date: Sep. 30, 2004

NOTES

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**Tyhee Station
Wind Rose
September 2004**

PROJECT NO.
Y22101057

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TM

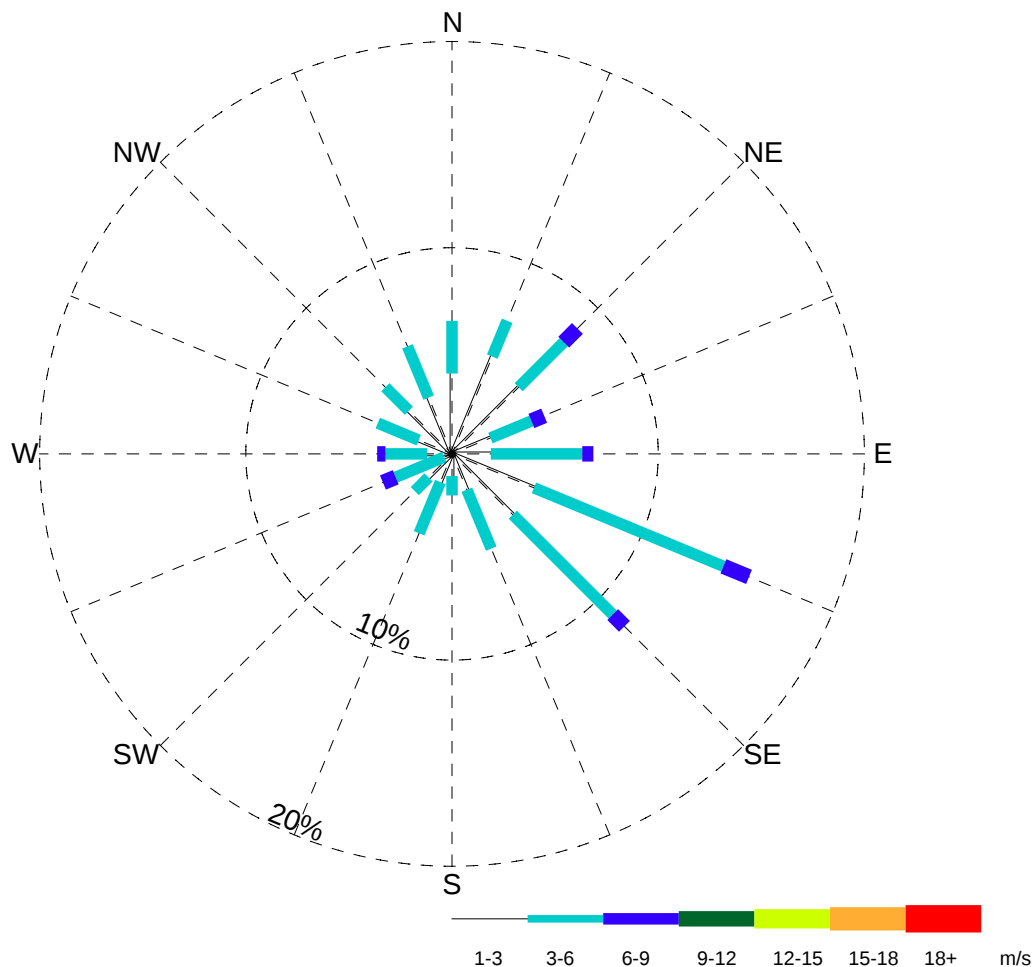
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Figure C-01



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.02	2.15	0.67	-	-	-	-	4.84
NE	-	4.57	3.09	0.94	-	-	-	-	8.60
NNE	-	5.11	1.88	-	-	-	-	-	6.99
N	-	3.90	2.55	-	-	-	-	-	6.45
NNW	-	2.96	2.69	-	-	-	-	-	5.64
NW	-	2.96	1.61	-	-	-	-	-	4.57
WNW	-	1.75	2.15	-	-	-	-	-	3.90
W	-	1.21	2.02	0.40	-	-	-	-	3.63
WSW	-	0.40	2.55	0.67	-	-	-	-	3.63
SW	-	1.61	0.94	-	-	-	-	-	2.55
SSW	-	1.48	2.69	-	-	-	-	-	4.17
S	-	1.08	0.94	-	-	-	-	-	2.02
SSE	-	1.88	3.09	-	-	-	-	-	4.97
SE	-	4.17	6.86	0.81	-	-	-	-	11.83
ESE	-	4.30	9.95	1.34	-	-	-	-	15.59
E	-	1.88	4.43	0.54	-	-	-	-	6.86
Calm	3.76	-	-	-	-	-	-	-	3.76
Total (%)	3.76	41.26	49.60	5.38	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Oct. 01, 2004

End Date: Oct. 31, 2004

NOTES

CLIENT



EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
October 2004**

PROJECT NO.
Y22101057

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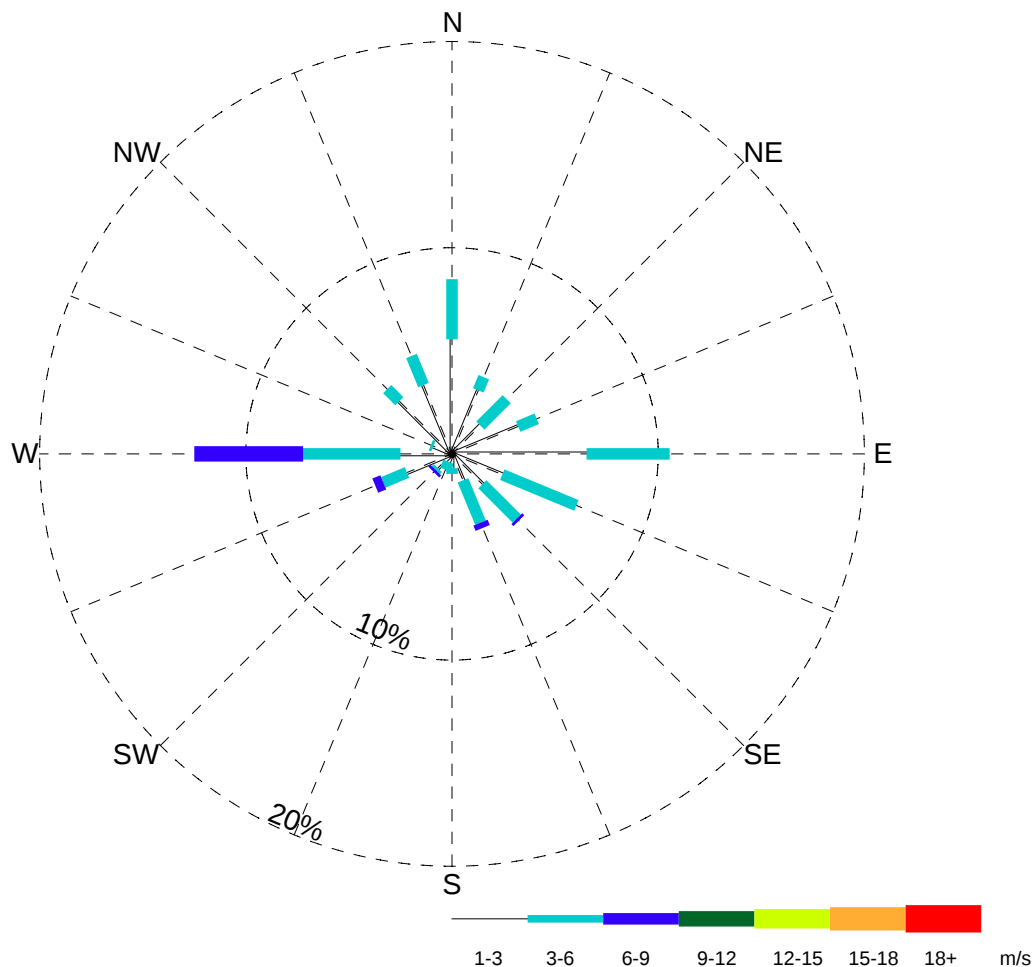
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Figure C-02



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.47	0.97	-	-	-	-	-	4.44
NE	-	1.94	1.81	-	-	-	-	-	3.75
NNE	-	3.33	0.69	-	-	-	-	-	4.03
N	-	5.56	2.92	-	-	-	-	-	8.47
NNW	-	3.61	1.53	-	-	-	-	-	5.14
NW	-	3.61	0.83	-	-	-	-	-	4.44
WNW	-	0.97	0.14	-	-	-	-	-	1.11
W	-	2.50	4.72	5.28	-	-	-	-	12.50
WSW	-	2.36	1.25	0.42	-	-	-	-	4.03
SW	-	0.97	0.14	0.14	-	-	-	-	1.25
SSW	-	0.42	0.42	-	-	-	-	-	0.83
S	-	0.69	0.28	-	-	-	-	-	0.97
SSE	-	1.39	2.22	0.28	-	-	-	-	3.89
SE	-	2.08	2.36	0.14	-	-	-	-	4.58
ESE	-	2.64	3.89	-	-	-	-	-	6.53
E	-	6.53	4.03	-	-	-	-	-	10.56
Calm	23.47	-	-	-	-	-	-	-	23.47
Total (%)	23.47	42.08	28.19	6.25	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Nov. 01, 2004

End Date: Nov. 30, 2004

NOTES

CLIENT



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
November 2004**

PROJECT NO.
Y22101057

DWN
TM

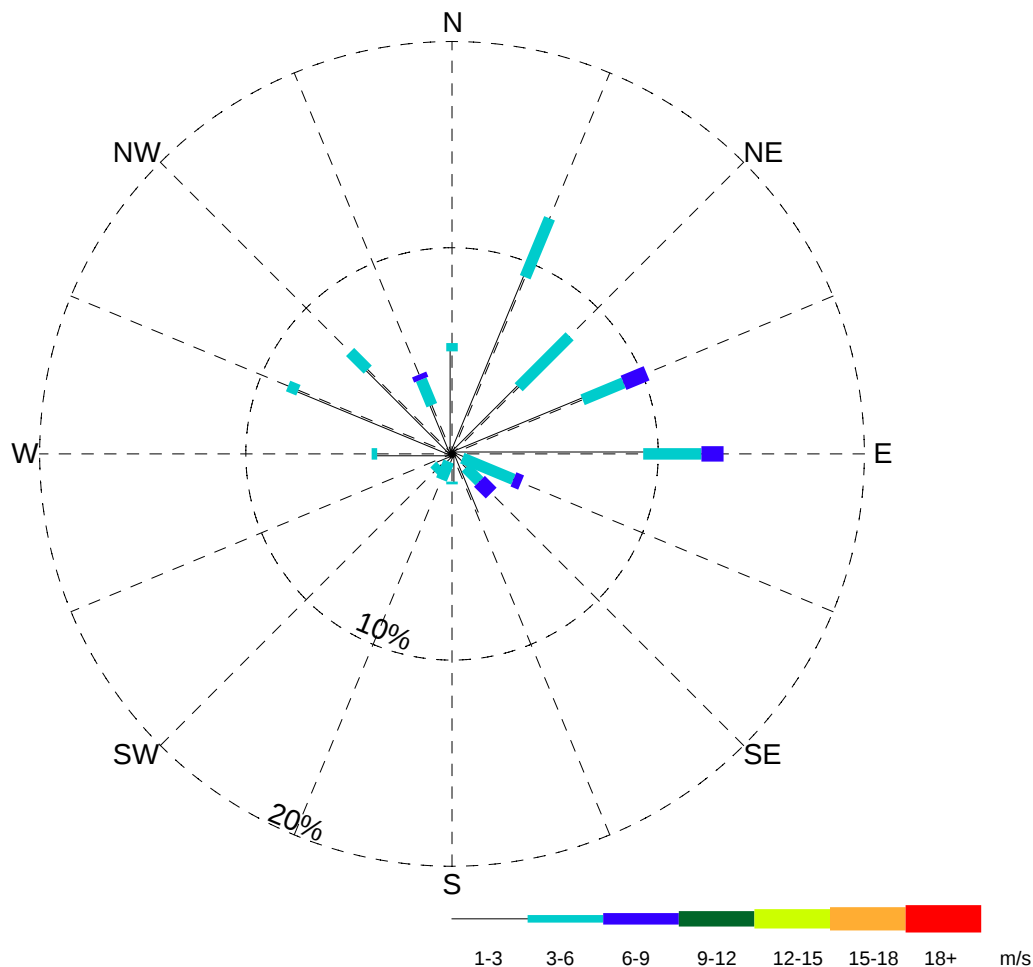
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Figure C-03



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.86	2.15	1.21	-	-	-	-	10.22
NE	-	4.57	3.49	-	-	-	-	-	8.06
NNE	-	9.27	3.09	-	-	-	-	-	12.37
N	-	4.97	0.40	-	-	-	-	-	5.38
NNW	-	2.55	1.34	0.27	-	-	-	-	4.17
NW	-	5.78	1.21	-	-	-	-	-	6.99
WNW	-	8.06	0.54	-	-	-	-	-	8.60
W	-	3.63	0.27	-	-	-	-	-	3.90
WSW	-	0.81	-	-	-	-	-	-	0.81
SW	-	0.81	0.40	-	-	-	-	-	1.21
SSW	-	0.40	0.94	-	-	-	-	-	1.34
S	-	1.34	0.13	-	-	-	-	-	1.48
SSE	-	3.09	-	-	-	-	-	-	3.09
SE	-	0.94	0.94	0.81	-	-	-	-	2.69
ESE	-	0.54	2.69	0.40	-	-	-	-	3.63
E	-	9.27	2.82	1.08	-	-	-	-	13.17
Calm	12.90	-	-	-	-	-	-	-	12.90
Total (%)	12.90	62.90	20.43	3.76	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Dec. 01, 2004

End Date: Dec. 31, 2004

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
December 2004**

PROJECT NO.
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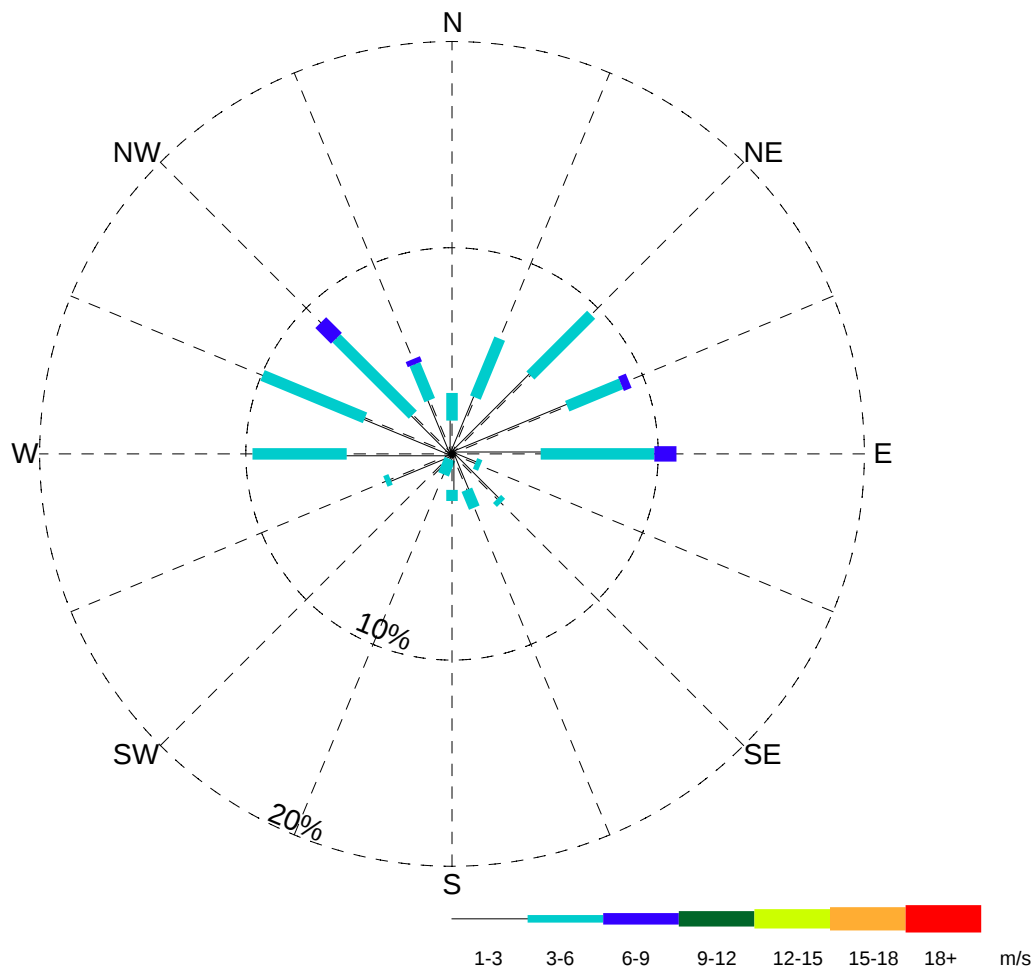
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Figure C-04



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.05	2.82	0.40	-	-	-	-	9.27
NE	-	5.38	4.17	-	-	-	-	-	9.54
NNE	-	2.96	3.09	-	-	-	-	-	6.05
N	-	1.61	1.34	-	-	-	-	-	2.96
NNW	-	2.82	1.88	0.27	-	-	-	-	4.97
NW	-	2.69	5.24	1.08	-	-	-	-	9.01
WNW	-	4.57	5.38	-	-	-	-	-	9.95
W	-	5.11	4.57	-	-	-	-	-	9.68
WSW	-	3.23	0.27	-	-	-	-	-	3.49
SW	-	1.34	-	-	-	-	-	-	1.34
SSW	-	0.27	0.81	-	-	-	-	-	1.08
S	-	1.75	0.54	-	-	-	-	-	2.29
SSE	-	1.88	0.94	-	-	-	-	-	2.82
SE	-	3.09	0.27	-	-	-	-	-	3.36
ESE	-	1.21	0.27	-	-	-	-	-	1.48
E	-	4.30	5.51	1.08	-	-	-	-	10.89
Calm	11.83	-	-	-	-	-	-	-	11.83
Total (%)	11.83	48.25	37.10	2.82	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Jan. 01, 2005

End Date: Jan. 31, 2005

NOTES

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**Tyhee Station
Wind Rose
January 2005**

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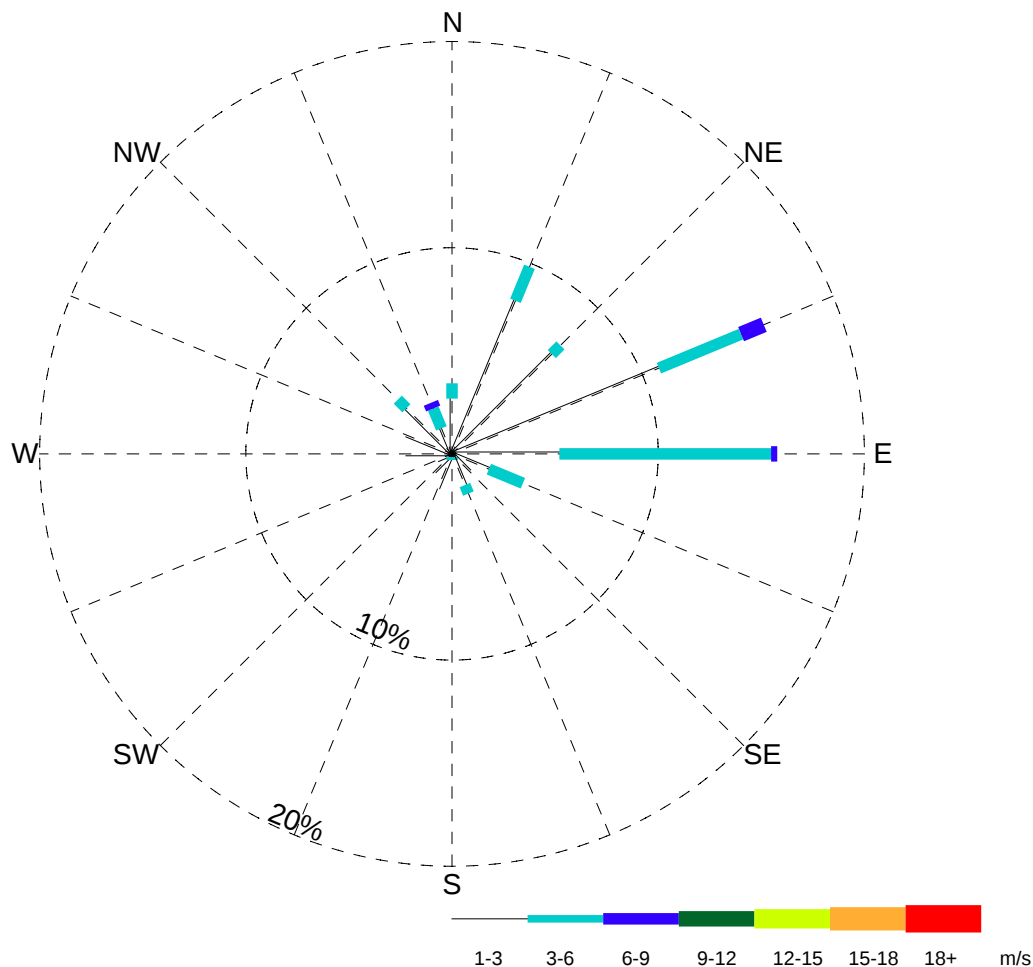
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Figure C-05



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.86	4.32	1.19	-	-	-	-	16.37
NE	-	6.84	0.60	-	-	-	-	-	7.44
NNE	-	8.04	1.79	-	-	-	-	-	9.82
N	-	2.68	0.74	-	-	-	-	-	3.42
NNW	-	1.34	1.04	0.30	-	-	-	-	2.68
NW	-	3.12	0.60	-	-	-	-	-	3.72
WNW	-	2.38	-	-	-	-	-	-	2.38
W	-	2.23	-	-	-	-	-	-	2.23
WSW	-	0.74	-	-	-	-	-	-	0.74
SW	-	1.19	-	-	-	-	-	-	1.19
SSW	-	1.79	-	-	-	-	-	-	1.79
S	-	0.15	0.15	-	-	-	-	-	0.30
SSE	-	1.64	0.45	-	-	-	-	-	2.08
SE	-	1.19	-	-	-	-	-	-	1.19
ESE	-	1.93	1.79	-	-	-	-	-	3.72
E	-	5.21	10.27	0.30	-	-	-	-	15.77
Calm	25.15	-	-	-	-	-	-	-	25.15
Total (%)	25.15	51.34	21.73	1.79	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 28 days

Start Date: Feb. 01, 2005

End Date: Feb. 28, 2005

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
February 2005**

PROJECT NO.
Y22101057

DWN
TM

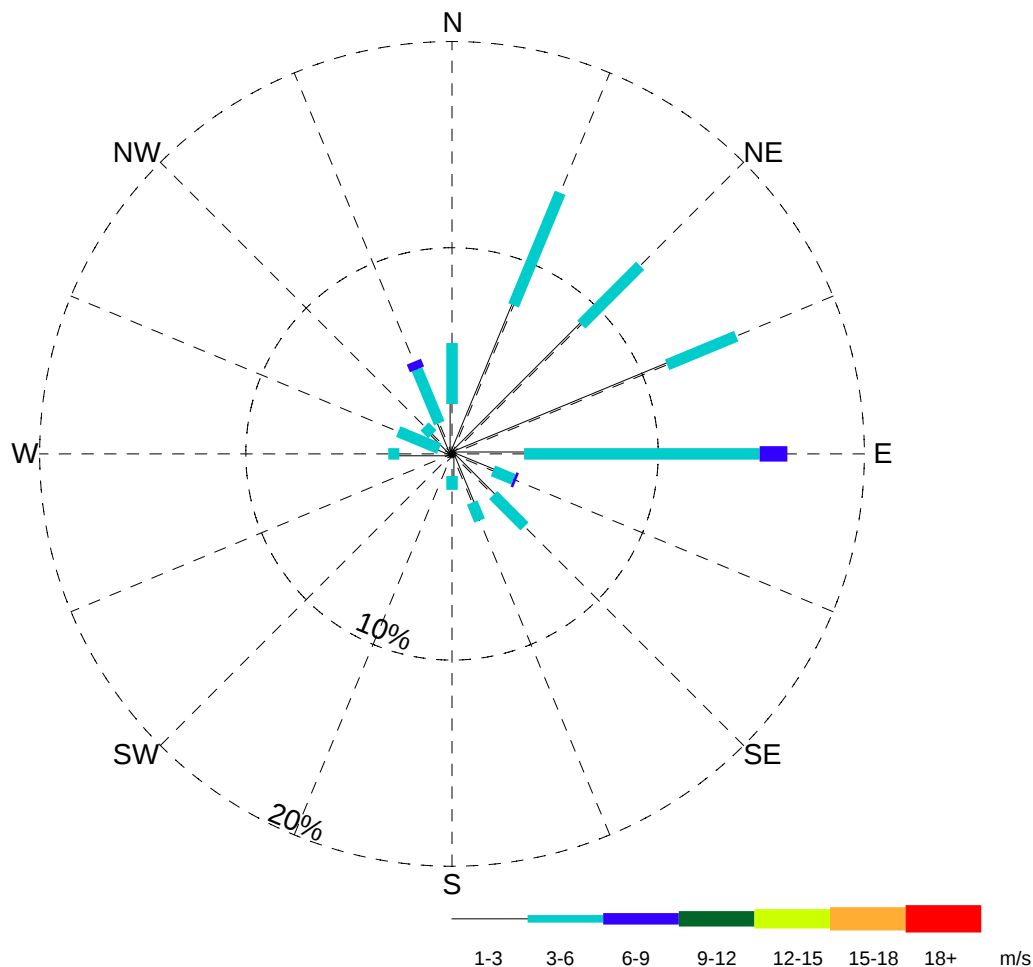
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Figure C-06



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	11.29	3.63	-	-	-	-	-	14.92
NE	-	8.87	4.03	-	-	-	-	-	12.90
NNE	-	7.80	5.91	-	-	-	-	-	13.71
N	-	2.42	2.96	-	-	-	-	-	5.38
NNW	-	1.61	2.82	0.40	-	-	-	-	4.84
NW	-	1.34	0.54	-	-	-	-	-	1.88
WNW	-	0.67	2.15	-	-	-	-	-	2.82
W	-	2.55	0.54	-	-	-	-	-	3.09
WSW	-	0.27	-	-	-	-	-	-	0.27
SW	-	0.40	-	-	-	-	-	-	0.40
SSW	-	0.13	-	-	-	-	-	-	0.13
S	-	1.08	0.67	-	-	-	-	-	1.75
SSE	-	2.55	0.94	-	-	-	-	-	3.49
SE	-	2.82	2.15	-	-	-	-	-	4.97
ESE	-	2.15	1.08	0.13	-	-	-	-	3.36
E	-	3.49	11.43	1.34	-	-	-	-	16.26
Calm	9.81	-	-	-	-	-	-	-	9.81
Total (%)	9.81	49.46	38.84	1.88	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Mar. 01, 2005

End Date: Mar. 31, 2005

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
March 2005**

PROJECT NO.
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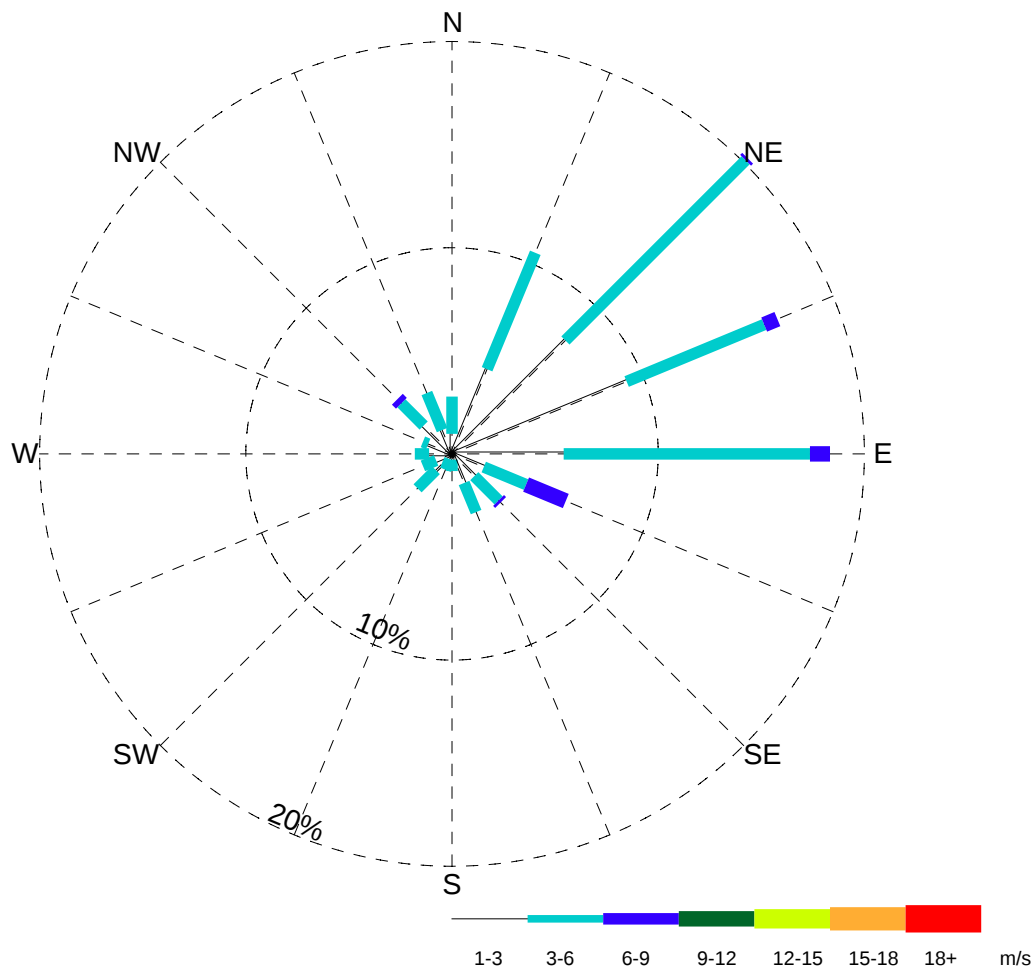
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Figure C-07



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	9.17	7.22	0.69	-	-	-	-	17.08
NE	-	7.78	12.36	0.14	-	-	-	-	20.28
NNE	-	4.44	6.11	-	-	-	-	-	10.56
N	-	0.97	1.81	-	-	-	-	-	2.78
NNW	-	1.25	1.94	-	-	-	-	-	3.19
NW	-	1.94	1.53	0.28	-	-	-	-	3.75
WNW	-	1.25	0.28	-	-	-	-	-	1.53
W	-	1.11	0.69	-	-	-	-	-	1.81
WSW	-	0.83	0.69	-	-	-	-	-	1.53
SW	-	1.11	1.25	-	-	-	-	-	2.36
SSW	-	0.28	0.56	-	-	-	-	-	0.83
S	-	0.28	0.56	-	-	-	-	-	0.83
SSE	-	1.53	1.53	-	-	-	-	-	3.06
SE	-	1.53	1.67	0.14	-	-	-	-	3.33
ESE	-	1.67	2.22	2.08	-	-	-	-	5.97
E	-	5.42	11.94	0.97	-	-	-	-	18.33
Calm	2.78	-	-	-	-	-	-	-	2.78
Total (%)	2.78	40.56	52.36	4.31	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Apr. 01, 2005

End Date: Apr. 30, 2005

NOTES

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**Tyhee Station
Wind Rose
April 2005**

PROJECT NO.
Y22101057

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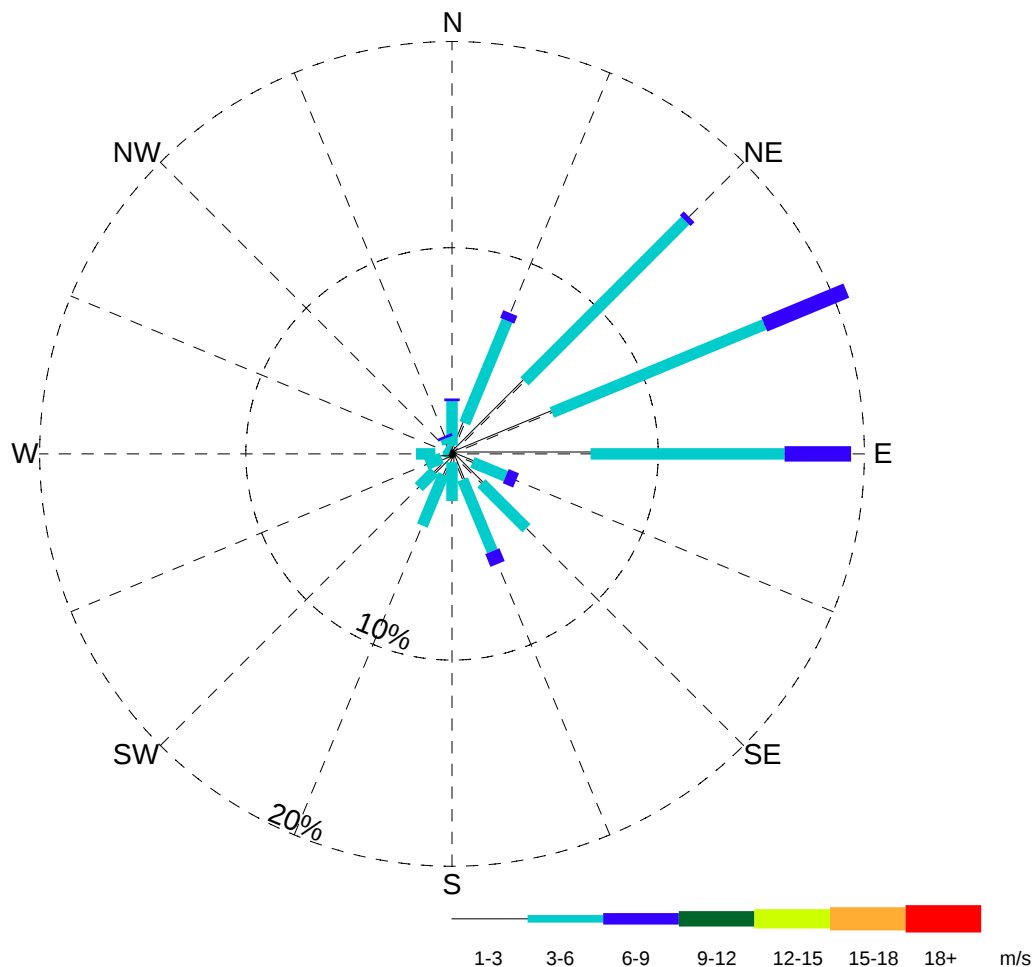
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Figure C-08



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.24	11.16	4.30	-	-	-	-	20.70
NE	-	4.97	11.02	0.27	-	-	-	-	16.26
NNE	-	1.61	5.38	0.40	-	-	-	-	7.39
N	-	0.40	2.15	0.13	-	-	-	-	2.69
NNW	-	0.54	0.27	0.13	-	-	-	-	0.94
NW	-	0.27	0.13	-	-	-	-	-	0.40
WNW	-	0.13	0.27	-	-	-	-	-	0.40
W	-	0.81	0.94	-	-	-	-	-	1.75
WSW	-	0.54	0.81	-	-	-	-	-	1.34
SW	-	1.21	1.08	-	-	-	-	-	2.29
SSW	-	1.08	2.69	-	-	-	-	-	3.76
S	-	0.40	1.88	-	-	-	-	-	2.29
SSE	-	1.34	3.76	0.67	-	-	-	-	5.78
SE	-	2.02	3.09	-	-	-	-	-	5.11
ESE	-	1.08	1.75	0.54	-	-	-	-	3.36
E	-	6.72	9.41	3.23	-	-	-	-	19.35
Calm	6.18	-	-	-	-	-	-	-	6.18
Total (%)	6.18	28.36	55.78	9.68	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: May. 01, 2005

End Date: May. 31, 2005

NOTES

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**Tyhee Station
Wind Rose
May 2005**

PROJECT NO.
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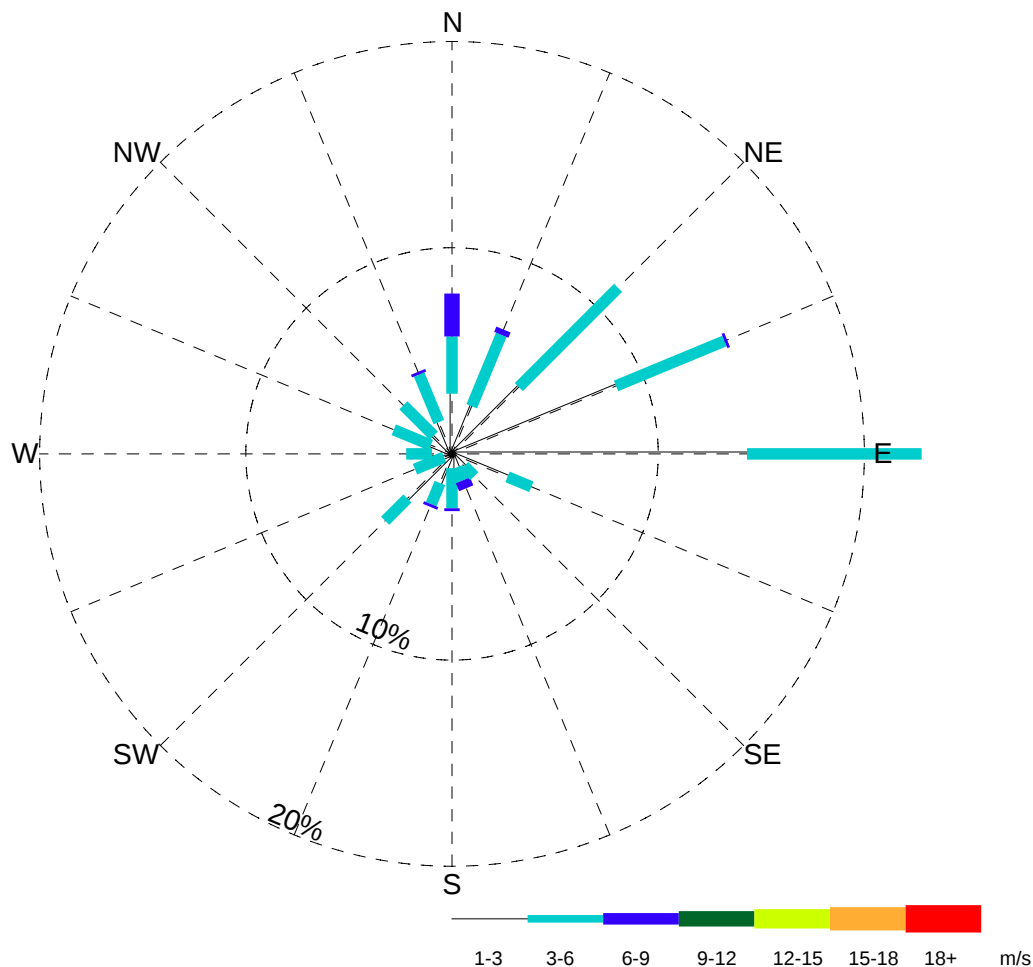
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Figure C-09



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	8.61	5.69	0.14	-	-	-	-	14.44
NE	-	4.58	6.81	-	-	-	-	-	11.39
NNE	-	2.50	3.75	0.28	-	-	-	-	6.53
N	-	2.92	2.78	2.08	-	-	-	-	7.78
NNW	-	1.67	2.50	0.14	-	-	-	-	4.31
NW	-	1.25	2.08	-	-	-	-	-	3.33
WNW	-	1.11	1.94	-	-	-	-	-	3.06
W	-	0.97	1.25	-	-	-	-	-	2.22
WSW	-	0.42	1.53	-	-	-	-	-	1.94
SW	-	3.06	1.53	-	-	-	-	-	4.58
SSW	-	1.53	1.11	0.14	-	-	-	-	2.78
S	-	0.69	1.94	0.14	-	-	-	-	2.78
SSE	-	0.69	0.69	0.42	-	-	-	-	1.81
SE	-	0.83	0.69	-	-	-	-	-	1.53
ESE	-	2.92	1.25	-	-	-	-	-	4.17
E	-	14.31	8.47	-	-	-	-	-	22.78
Calm	4.58	-	-	-	-	-	-	-	4.58
Total (%)	4.58	48.06	44.03	3.33	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: June 01, 2005

End Date: June 30, 2005

NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
June 2005**

PROJECT NO.
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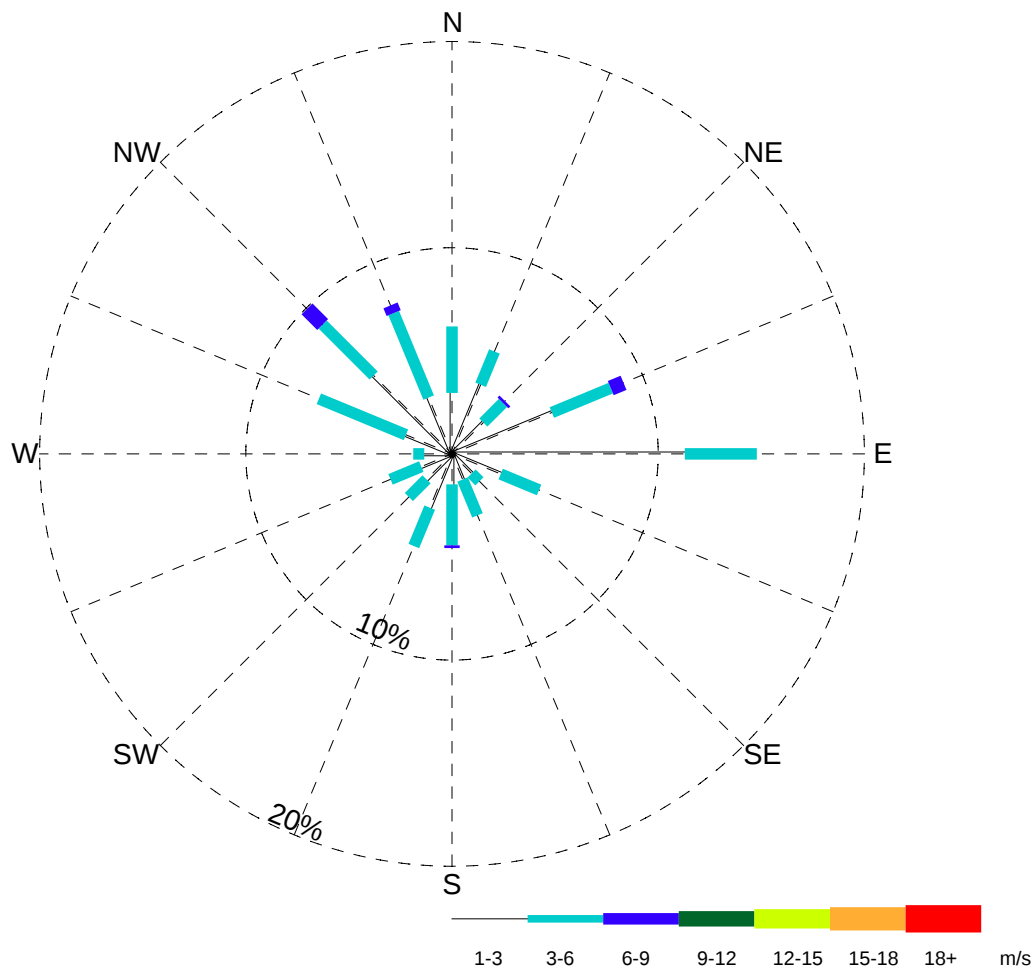
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Figure C-10



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.24	3.09	0.67	-	-	-	-	9.01
NE	-	2.15	1.34	0.13	-	-	-	-	3.63
NNE	-	3.63	1.75	-	-	-	-	-	5.38
N	-	2.96	3.23	-	-	-	-	-	6.18
NNW	-	2.96	4.43	0.40	-	-	-	-	7.80
NW	-	5.38	3.49	1.08	-	-	-	-	9.95
WNW	-	2.42	4.57	-	-	-	-	-	6.99
W	-	1.34	0.54	-	-	-	-	-	1.88
WSW	-	1.61	1.61	-	-	-	-	-	3.23
SW	-	1.75	1.21	-	-	-	-	-	2.96
SSW	-	2.82	2.02	-	-	-	-	-	4.84
S	-	1.48	2.96	0.13	-	-	-	-	4.57
SSE	-	1.34	1.88	-	-	-	-	-	3.23
SE	-	1.34	0.54	-	-	-	-	-	1.88
ESE	-	2.55	2.02	-	-	-	-	-	4.57
E	-	11.29	3.49	-	-	-	-	-	14.78
Calm	9.14	-	-	-	-	-	-	-	9.14
Total (%)	9.14	50.27	38.17	2.42	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: July 01, 2005

End Date: July 31, 2005

NOTES

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**Tyhee Station
Wind Rose
July 2005**

PROJECT NO.
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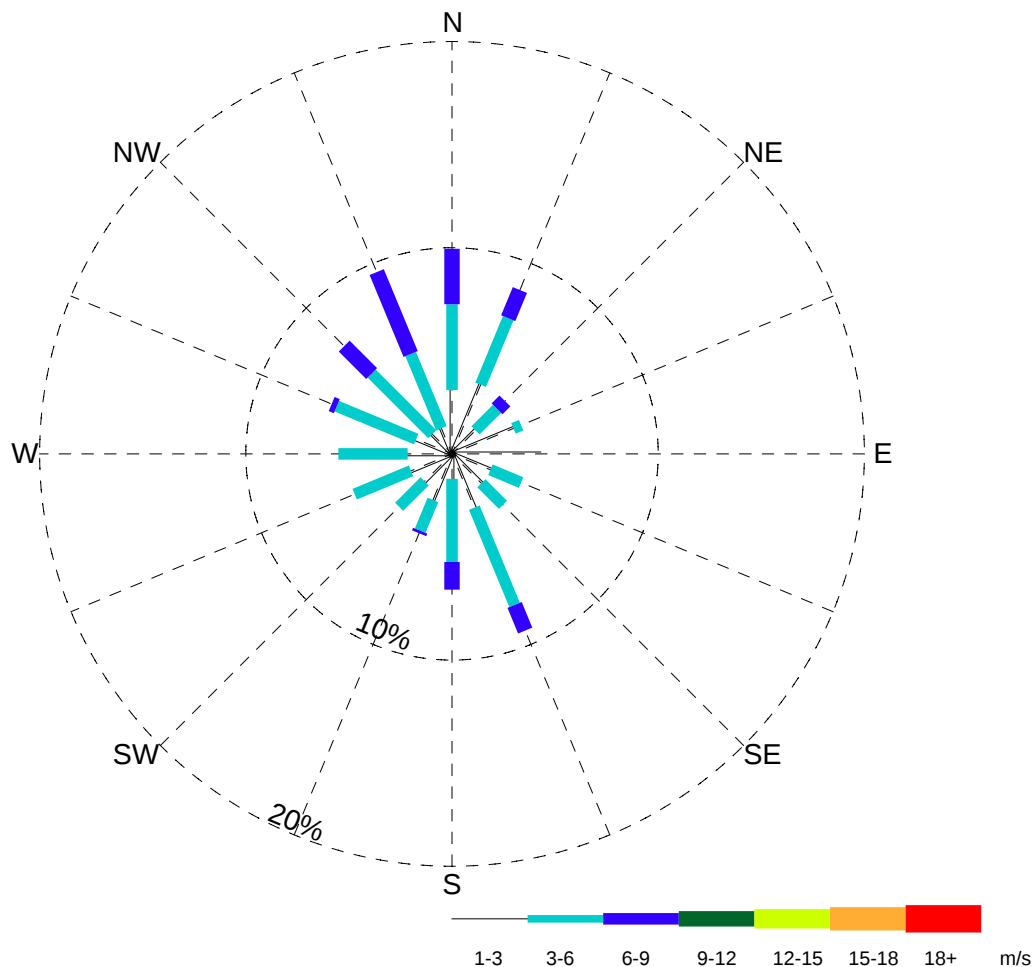
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Figure C-11



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.23	0.40	-	-	-	-	-	3.63
NE	-	1.61	1.48	0.54	-	-	-	-	3.63
NNE	-	3.63	3.49	1.48	-	-	-	-	8.60
N	-	3.09	4.17	2.69	-	-	-	-	9.95
NNW	-	1.34	3.90	4.30	-	-	-	-	9.54
NW	-	1.34	4.17	1.88	-	-	-	-	7.39
WNW	-	1.88	4.17	0.27	-	-	-	-	6.32
W	-	2.15	3.36	-	-	-	-	-	5.51
WSW	-	2.15	2.96	-	-	-	-	-	5.11
SW	-	1.88	1.75	-	-	-	-	-	3.63
SSW	-	2.42	1.61	0.13	-	-	-	-	4.17
S	-	1.21	4.03	1.34	-	-	-	-	6.59
SSE	-	2.82	5.11	1.34	-	-	-	-	9.27
SE	-	2.02	1.48	-	-	-	-	-	3.49
ESE	-	2.02	1.61	-	-	-	-	-	3.63
E	-	4.30	-	-	-	-	-	-	4.30
Calm	5.24	-	-	-	-	-	-	-	5.24
Total (%)	5.24	37.10	43.68	13.98	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Aug. 01, 2005

End Date: Aug. 31, 2005

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
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PROJECT NO.
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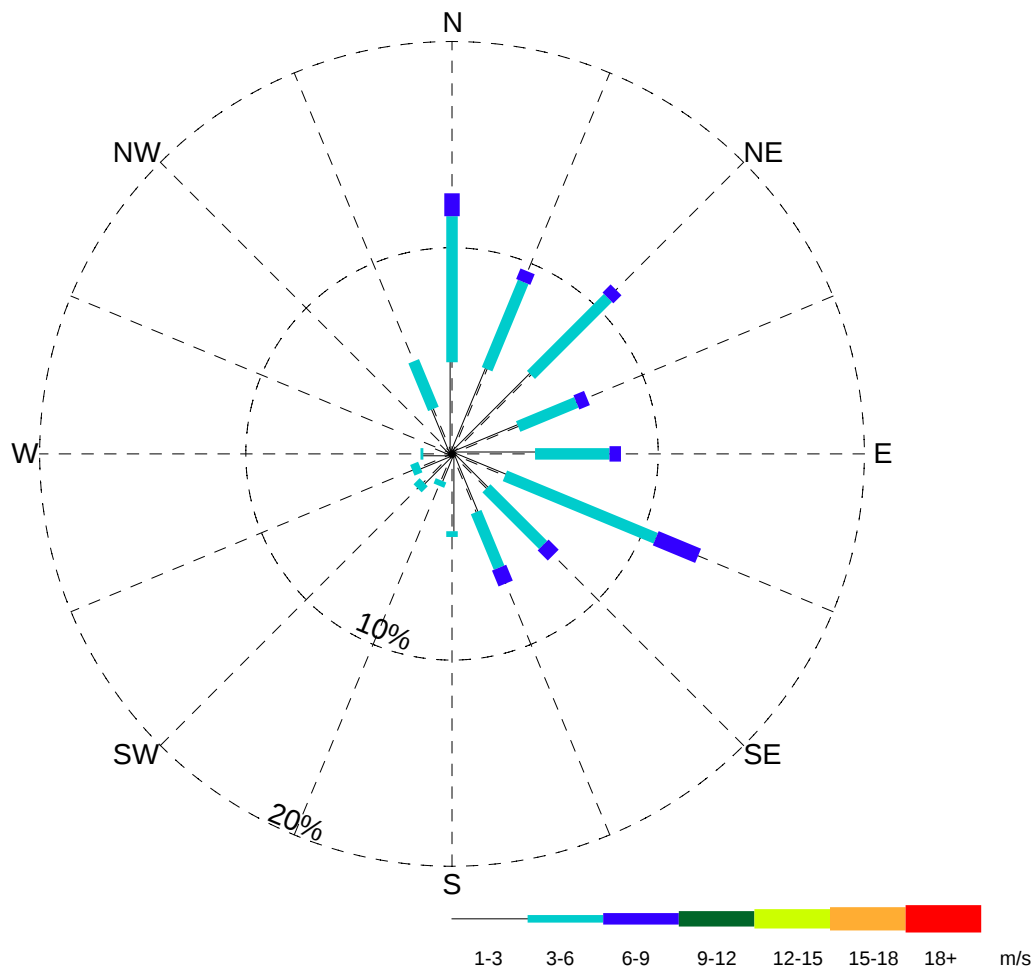
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Figure C-12



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.47	3.06	0.56	-	-	-	-	7.08
NE	-	5.42	5.28	0.56	-	-	-	-	11.25
NNE	-	4.44	4.58	0.56	-	-	-	-	9.58
N	-	4.44	7.08	1.11	-	-	-	-	12.64
NNW	-	2.36	2.50	-	-	-	-	-	4.86
NW	-	0.69	-	-	-	-	-	-	0.69
WNW	-	0.83	-	-	-	-	-	-	0.83
W	-	1.39	0.14	-	-	-	-	-	1.53
WSW	-	1.67	0.42	-	-	-	-	-	2.08
SW	-	1.94	0.42	-	-	-	-	-	2.36
SSW	-	1.39	0.28	-	-	-	-	-	1.67
S	-	3.75	0.28	-	-	-	-	-	4.03
SSE	-	3.06	2.92	0.83	-	-	-	-	6.81
SE	-	2.36	3.89	0.69	-	-	-	-	6.94
ESE	-	2.78	7.92	2.22	-	-	-	-	12.92
E	-	4.03	3.61	0.56	-	-	-	-	8.19
Calm	6.53	-	-	-	-	-	-	-	6.53
Total (%)	6.53	44.03	42.36	7.08	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Sep. 01, 2005

End Date: Sep. 30, 2005

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2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
September 2005**

PROJECT NO.
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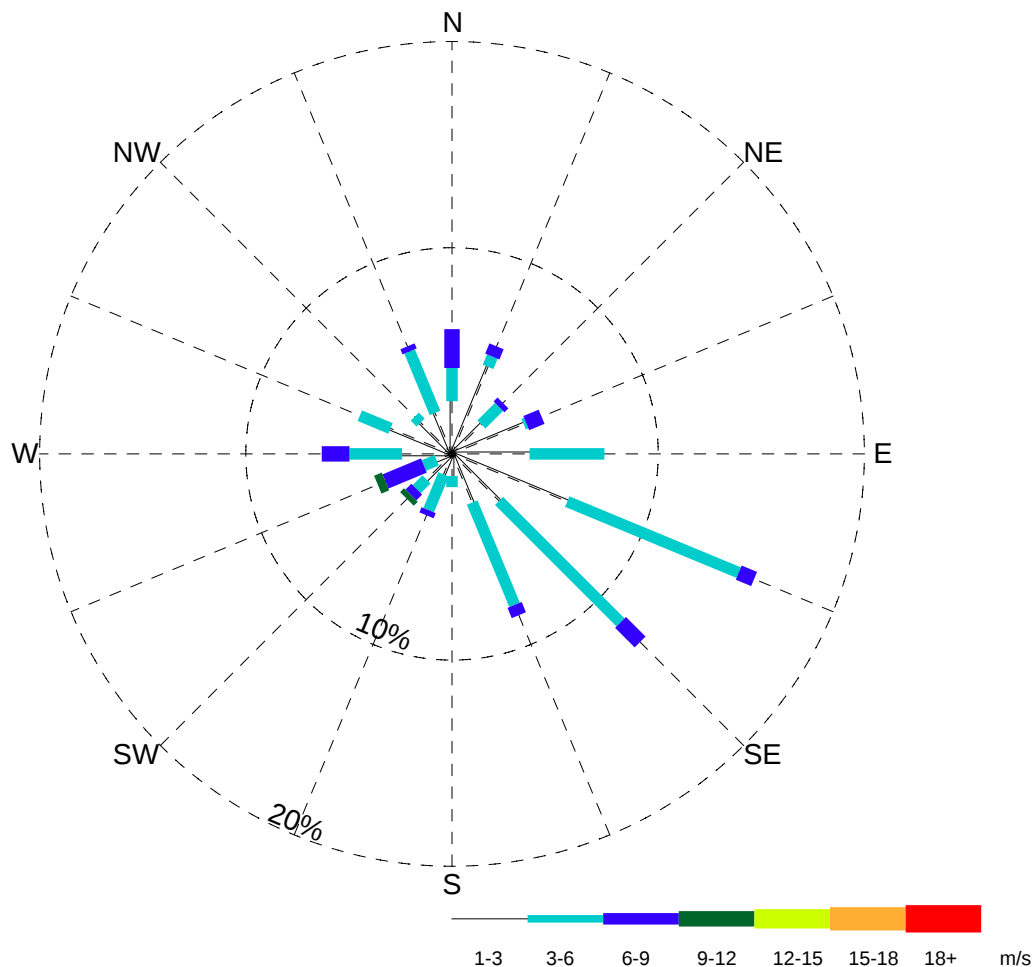
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Figure C-13



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.76	0.13	0.81	-	-	-	-	4.70
NE	-	2.02	1.21	0.27	-	-	-	-	3.49
NNE	-	4.57	0.54	0.54	-	-	-	-	5.64
N	-	2.55	1.61	1.88	-	-	-	-	6.05
NNW	-	2.15	3.23	0.27	-	-	-	-	5.64
NW	-	2.15	0.40	-	-	-	-	-	2.55
WNW	-	3.23	1.61	-	-	-	-	-	4.84
W	-	2.42	2.55	1.34	-	-	-	-	6.32
WSW	-	0.81	0.67	2.02	0.40	-	-	-	3.90
SW	-	1.75	0.67	0.40	0.27	-	-	-	3.09
SSW	-	1.08	1.88	0.27	-	-	-	-	3.23
S	-	1.08	0.54	-	-	-	-	-	1.61
SSE	-	2.55	5.38	0.54	-	-	-	-	8.47
SE	-	3.23	8.33	1.34	-	-	-	-	12.90
ESE	-	6.05	9.01	0.81	-	-	-	-	15.86
E	-	3.76	3.63	-	-	-	-	-	7.39
Calm	4.30	-	-	-	-	-	-	-	4.30
Total (%)	4.30	43.15	41.40	10.48	0.67	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Oct. 01, 2005

End Date: Oct. 31, 2005

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
October 2005**

PROJECT NO.
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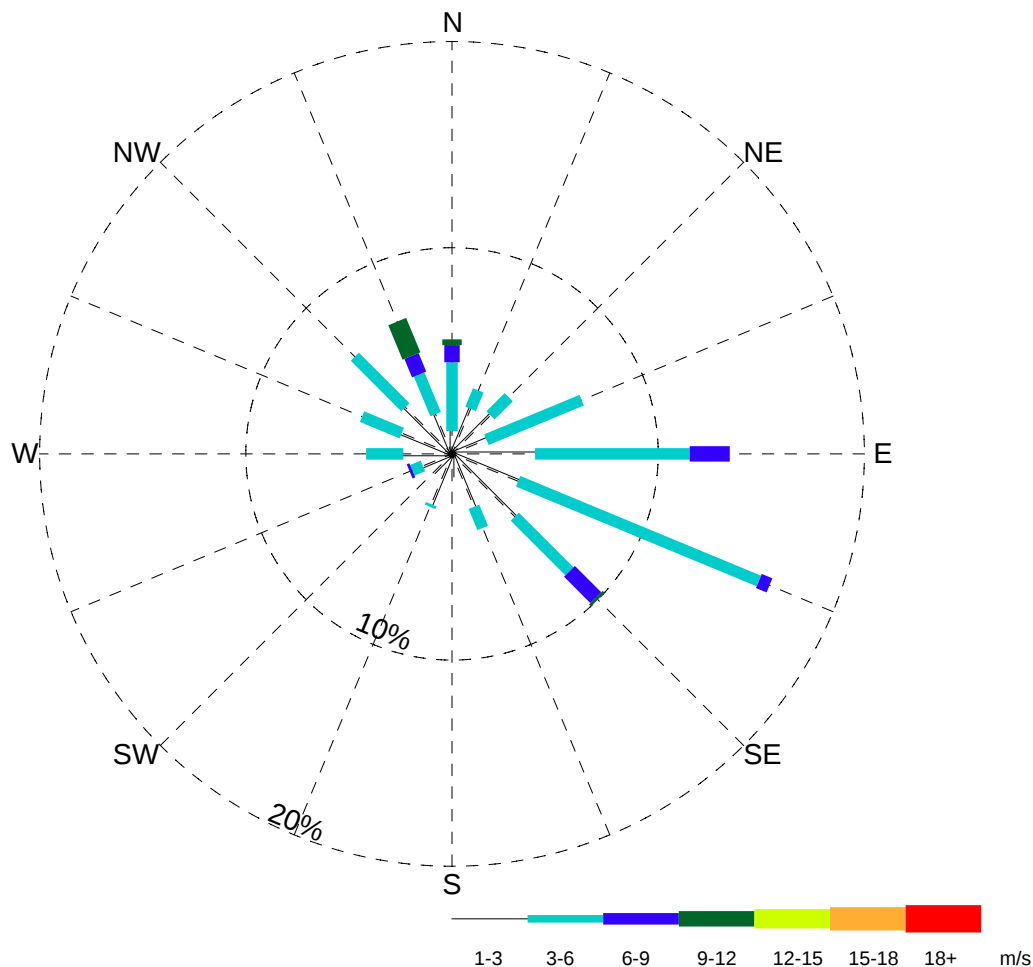
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Figure C-14



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	1.81	5.00	-	-	-	-	-	6.81
NE	-	2.64	1.25	-	-	-	-	-	3.89
NNE	-	2.36	0.97	-	-	-	-	-	3.33
N	-	1.11	3.33	0.83	0.28	-	-	-	5.56
NNW	-	2.08	2.08	0.97	1.81	-	-	-	6.94
NW	-	3.19	3.47	-	-	-	-	-	6.67
WNW	-	2.64	2.08	-	-	-	-	-	4.72
W	-	2.36	1.81	-	-	-	-	-	4.17
WSW	-	1.53	0.56	0.14	-	-	-	-	2.22
SW	-	1.25	-	-	-	-	-	-	1.25
SSW	-	2.64	0.14	-	-	-	-	-	2.78
S	-	1.11	-	-	-	-	-	-	1.11
SSE	-	2.78	1.11	-	-	-	-	-	3.89
SE	-	4.31	3.75	1.81	0.14	-	-	-	10.00
ESE	-	3.47	12.64	0.56	-	-	-	-	16.67
E	-	4.03	7.50	1.94	-	-	-	-	13.47
Calm	6.53	-	-	-	-	-	-	-	6.53
Total (%)	6.53	39.31	45.69	6.25	2.22	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Nov. 01, 2005

End Date: Nov. 30, 2005

NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
November 2005**

PROJECT NO.
Y22101057

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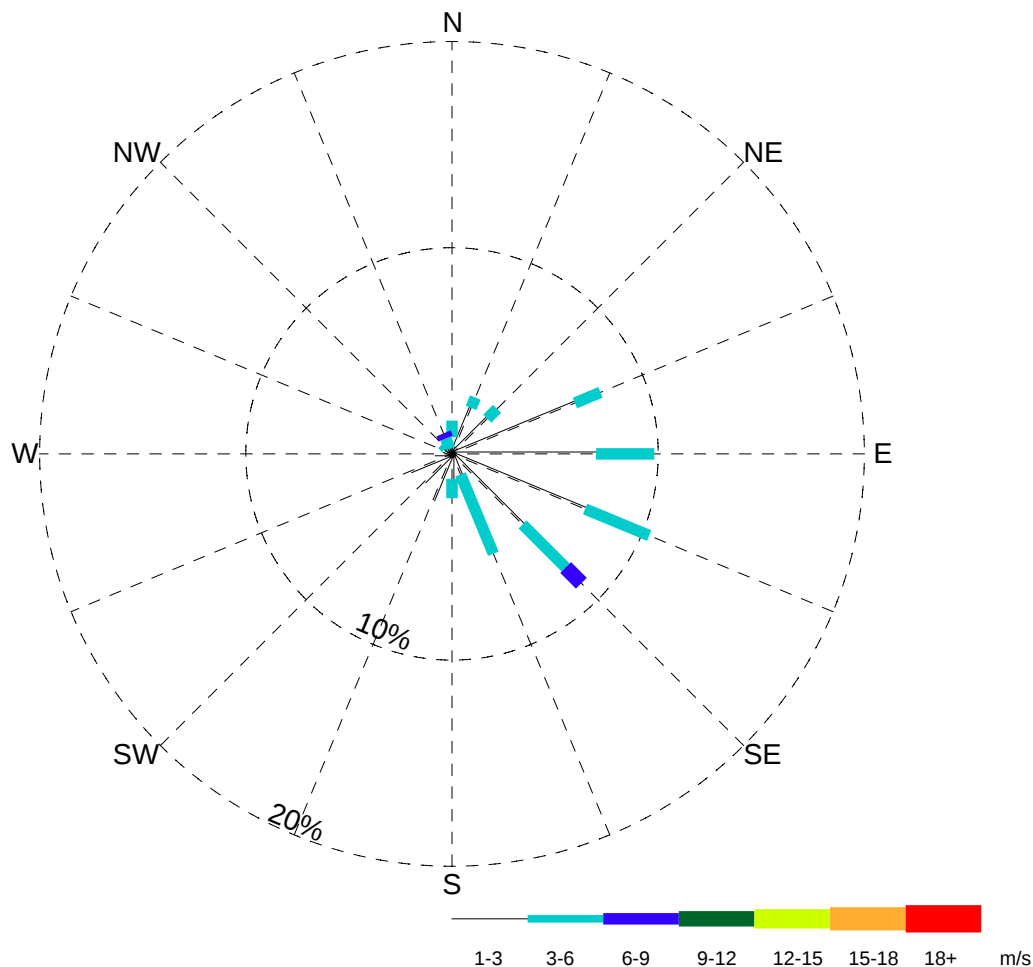
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Figure C-15



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.45	1.34	-	-	-	-	-	7.80
NE	-	2.42	0.67	-	-	-	-	-	3.09
NNE	-	2.42	0.54	-	-	-	-	-	2.96
N	-	0.81	0.81	-	-	-	-	-	1.61
NNW	-	0.27	0.54	0.27	-	-	-	-	1.08
NW	-	0.40	0.27	-	-	-	-	-	0.67
WNW	-	0.40	-	-	-	-	-	-	0.40
W	-	0.81	-	-	-	-	-	-	0.81
WSW	-	2.15	-	-	-	-	-	-	2.15
SW	-	1.88	-	-	-	-	-	-	1.88
SSW	-	2.42	-	-	-	-	-	-	2.42
S	-	1.21	0.94	-	-	-	-	-	2.15
SSE	-	1.08	4.17	-	-	-	-	-	5.24
SE	-	4.84	2.96	1.08	-	-	-	-	8.87
ESE	-	6.99	3.36	-	-	-	-	-	10.35
E	-	6.99	2.82	-	-	-	-	-	9.81
Calm	38.71	-	-	-	-	-	-	-	38.71
Total (%)	38.71	41.53	18.41	1.34	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Dec. 01, 2005

End Date: Dec. 31, 2005

NOTES

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EBA Engineering Consultants Ltd. 

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
December 2005**

PROJECT NO.
Y22101057

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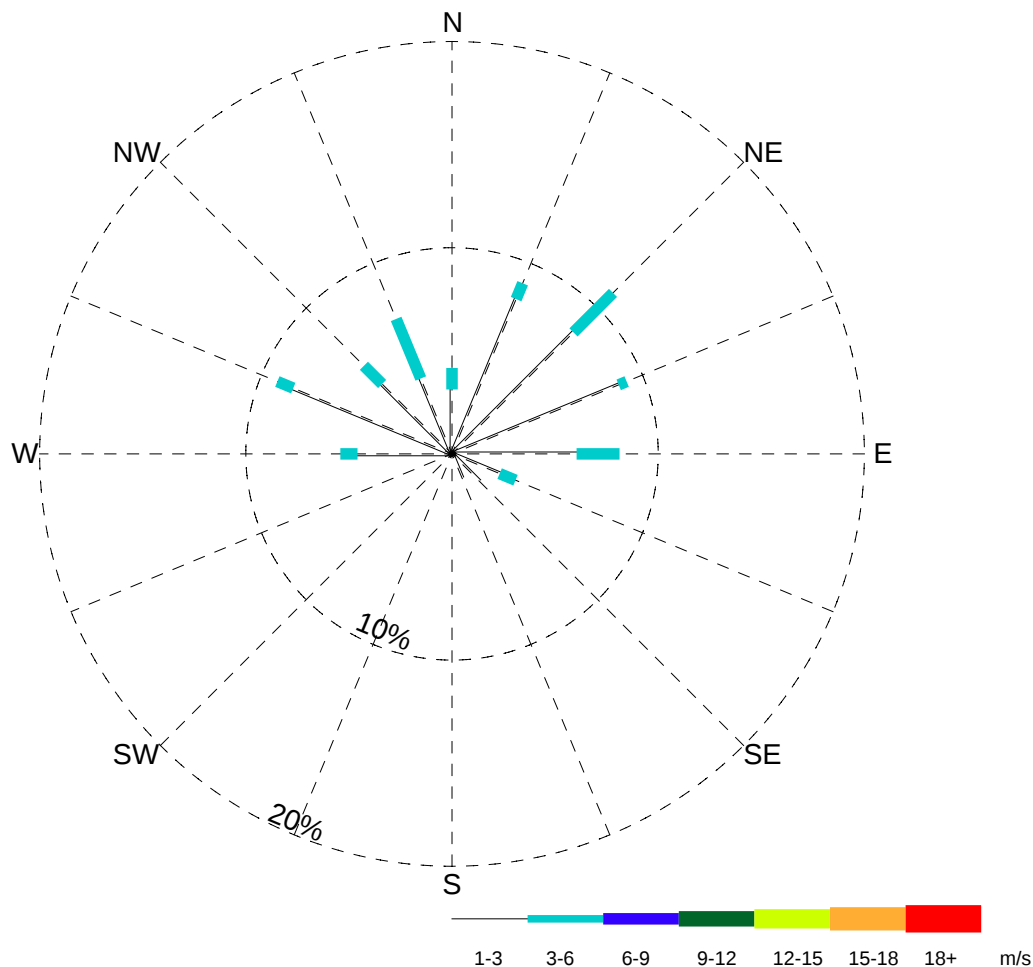
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Figure C-16



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	8.75	0.42	-	-	-	-	-	9.17
NE	-	8.33	2.71	-	-	-	-	-	11.04
NNE	-	8.12	0.83	-	-	-	-	-	8.96
N	-	3.12	1.04	-	-	-	-	-	4.17
NNW	-	3.96	3.12	-	-	-	-	-	7.08
NW	-	4.79	1.25	-	-	-	-	-	6.04
WNW	-	8.33	0.83	-	-	-	-	-	9.17
W	-	4.58	0.83	-	-	-	-	-	5.42
WSW	-	0.21	-	-	-	-	-	-	0.21
SW	-	-	-	-	-	-	-	-	-
SSW	-	-	-	-	-	-	-	-	-
S	-	-	-	-	-	-	-	-	-
SSE	-	1.25	-	-	-	-	-	-	1.25
SE	-	1.88	-	-	-	-	-	-	1.88
ESE	-	2.50	0.83	-	-	-	-	-	3.33
E	-	6.04	2.08	-	-	-	-	-	8.12
Calm	24.17	-	-	-	-	-	-	-	24.17
Total (%)	24.17	61.88	13.96	-	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 20 days

Start Date: Jan. 12, 2006

End Date: Jan. 31, 2006

NOTES

Suspected erroneous wind data between January 1st and 12th has been removed from the record.

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
January 2006**

PROJECT NO.
Y22101057

DWN
TM

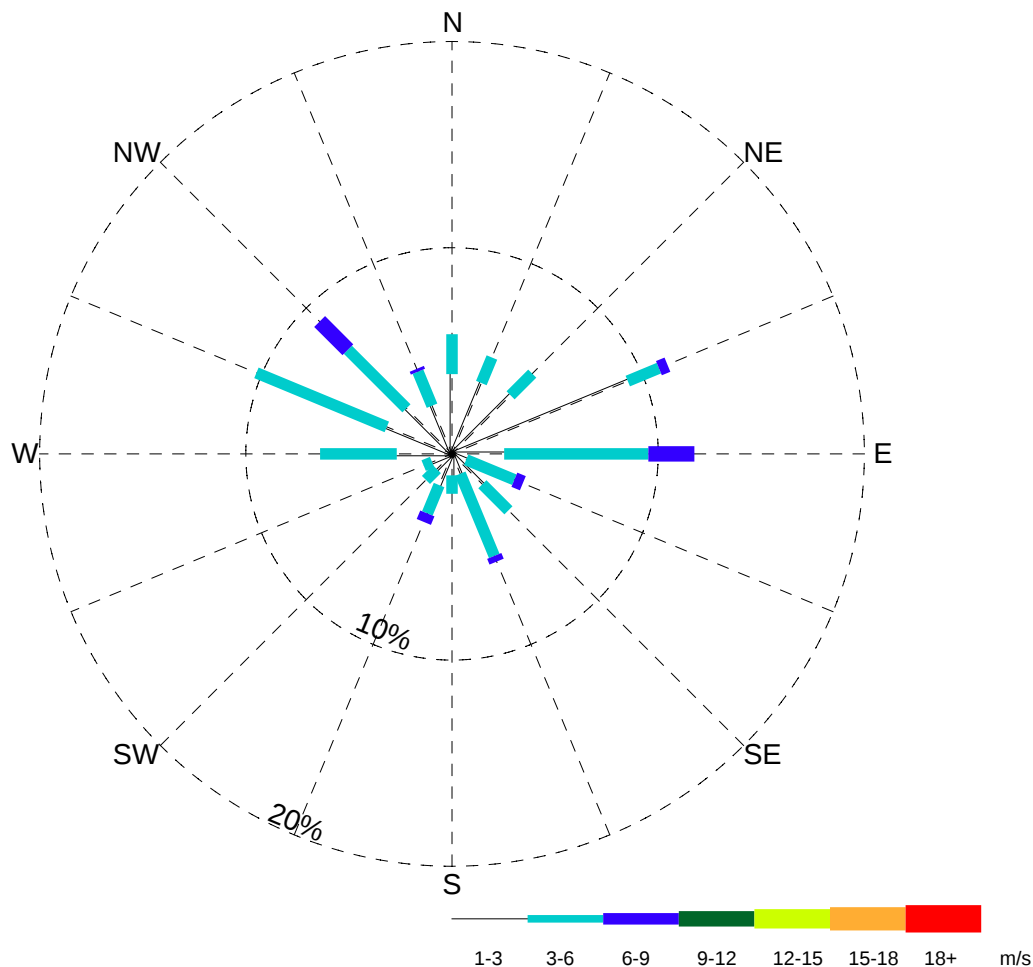
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Figure C-17



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	9.23	1.64	0.45	-	-	-	-	11.31
NE	-	4.02	1.49	-	-	-	-	-	5.51
NNE	-	3.72	1.34	-	-	-	-	-	5.06
N	-	3.87	1.93	-	-	-	-	-	5.80
NNW	-	2.53	1.79	0.15	-	-	-	-	4.46
NW	-	3.12	4.02	1.93	-	-	-	-	9.08
WNW	-	3.42	6.84	-	-	-	-	-	10.27
W	-	2.68	3.72	-	-	-	-	-	6.40
WSW	-	1.04	0.45	-	-	-	-	-	1.49
SW	-	1.04	0.74	-	-	-	-	-	1.79
SSW	-	1.64	1.49	0.45	-	-	-	-	3.57
S	-	1.04	0.89	-	-	-	-	-	1.93
SSE	-	1.04	4.32	0.30	-	-	-	-	5.66
SE	-	2.08	1.79	-	-	-	-	-	3.87
ESE	-	0.74	2.53	0.45	-	-	-	-	3.72
E	-	2.53	6.99	2.23	-	-	-	-	11.76
Calm	8.33	-	-	-	-	-	-	-	8.33
Total (%)	8.33	43.75	41.96	5.95	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 28 days

Start Date: Feb. 01, 2006

End Date: Feb. 28, 2006

NOTES

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EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
February 2006**

PROJECT NO.
Y22101057

DWN
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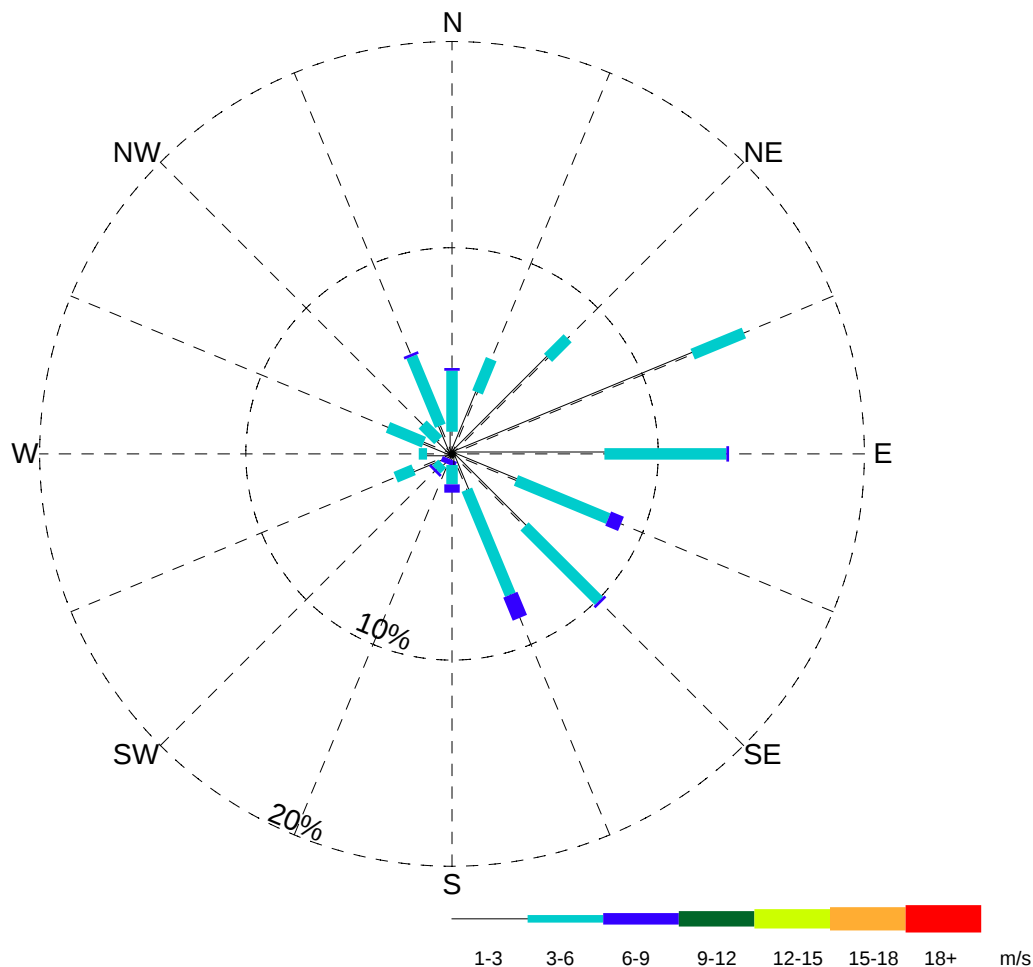
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May 2009

Figure C-18



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	12.63	2.69	-	-	-	-	-	15.32
NE	-	6.59	1.34	-	-	-	-	-	7.93
NNE	-	3.23	1.75	-	-	-	-	-	4.97
N	-	1.08	2.96	0.13	-	-	-	-	4.17
NNW	-	1.48	3.63	0.13	-	-	-	-	5.24
NW	-	0.94	1.08	-	-	-	-	-	2.02
WNW	-	1.48	1.88	-	-	-	-	-	3.36
W	-	1.21	0.40	-	-	-	-	-	1.61
WSW	-	2.02	0.94	-	-	-	-	-	2.96
SW	-	0.67	0.40	0.13	-	-	-	-	1.21
SSW	-	0.27	-	0.27	-	-	-	-	0.54
S	-	0.54	0.94	0.40	-	-	-	-	1.88
SSE	-	1.88	5.51	1.21	-	-	-	-	8.60
SE	-	4.97	5.11	0.13	-	-	-	-	10.22
ESE	-	3.36	4.84	0.67	-	-	-	-	8.87
E	-	7.39	5.91	0.13	-	-	-	-	13.44
Calm	7.66	-	-	-	-	-	-	-	7.66
Total (%)	7.66	49.73	39.38	3.23	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Mar. 01, 2006

End Date: Mar. 31, 2006

NOTES

CLIENT



**EBA Engineering
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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
March 2006**

PROJECT NO.
Y22101057

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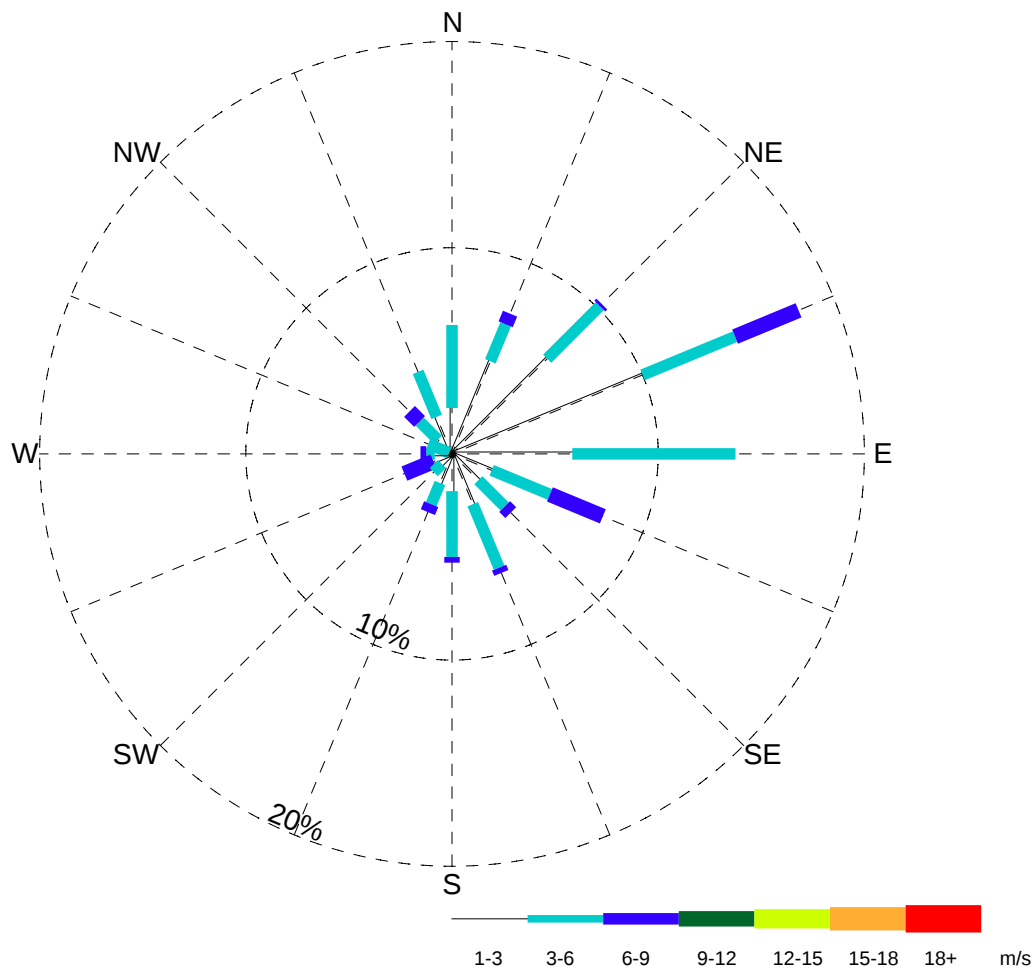
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Figure C-19



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.00	4.86	3.33	-	-	-	-	18.19
NE	-	6.53	3.61	0.14	-	-	-	-	10.28
NNE	-	4.86	1.94	0.56	-	-	-	-	7.36
N	-	2.22	4.03	-	-	-	-	-	6.25
NNW	-	1.94	2.36	-	-	-	-	-	4.31
NW	-	0.97	1.25	0.69	-	-	-	-	2.92
WNW	-	0.14	1.11	-	-	-	-	-	1.25
W	-	0.83	0.42	0.28	-	-	-	-	1.53
WSW	-	0.97	-	1.53	-	-	-	-	2.50
SW	-	0.69	0.56	-	-	-	-	-	1.25
SSW	-	1.53	1.11	0.42	-	-	-	-	3.06
S	-	1.81	3.19	0.28	-	-	-	-	5.28
SSE	-	2.64	3.33	0.28	-	-	-	-	6.25
SE	-	1.81	1.81	0.42	-	-	-	-	4.03
ESE	-	2.08	3.06	2.78	-	-	-	-	7.92
E	-	5.83	7.92	-	-	-	-	-	13.75
Calm	3.89	-	-	-	-	-	-	-	3.89
Total (%)	3.89	44.86	40.56	10.69	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Apr. 01, 2006

End Date: Apr. 30, 2006

NOTES

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**EBA Engineering
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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
April 2006**

PROJECT NO.
Y22101057

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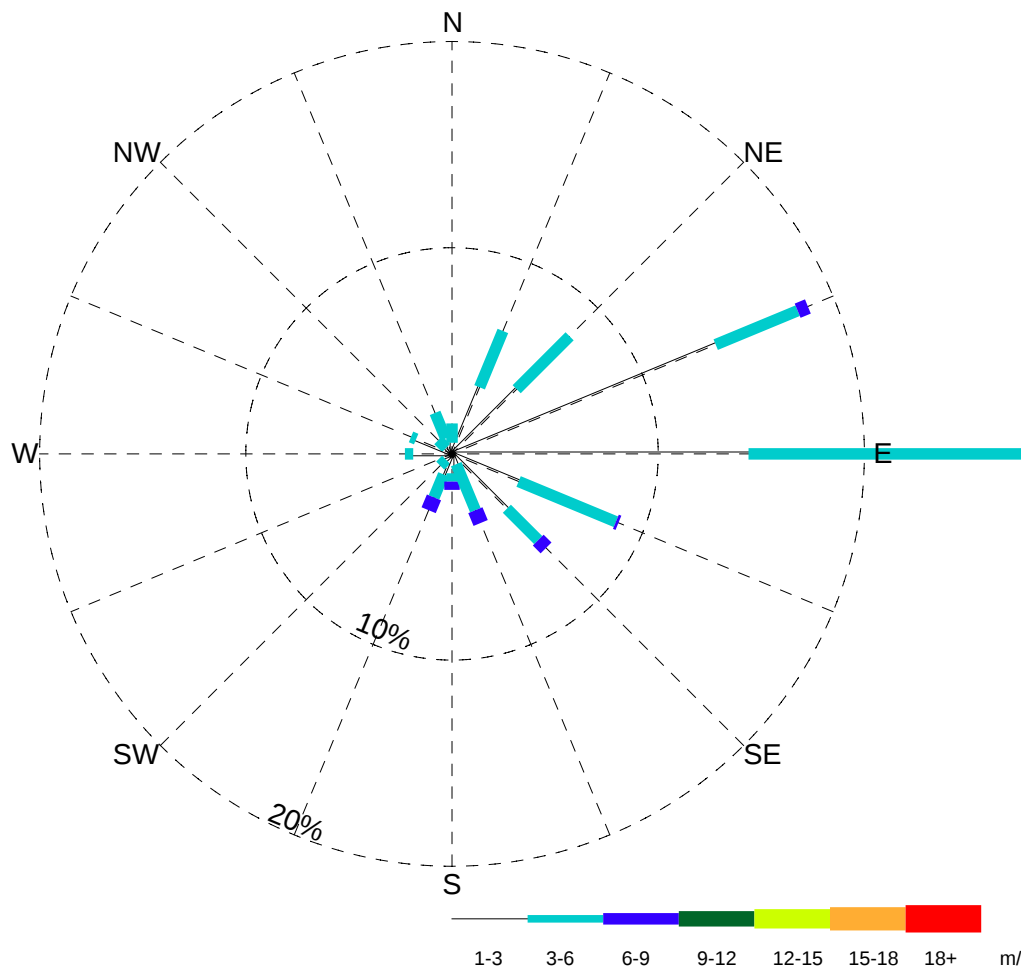
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Figure C-20



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	13.84	4.30	0.54	-	-	-	-	18.68
NE	-	4.43	3.63	-	-	-	-	-	8.06
NNE	-	3.49	2.96	-	-	-	-	-	6.45
N	-	0.54	0.94	-	-	-	-	-	1.48
NNW	-	0.81	1.34	-	-	-	-	-	2.15
NW	-	0.40	0.54	-	-	-	-	-	0.94
WNW	-	1.88	0.27	-	-	-	-	-	2.15
W	-	1.88	0.40	-	-	-	-	-	2.29
WSW	-	0.67	-	-	-	-	-	-	0.67
SW	-	0.40	0.40	-	-	-	-	-	0.81
SSW	-	1.08	1.21	0.67	-	-	-	-	2.96
S	-	0.94	0.40	0.40	-	-	-	-	1.75
SSE	-	0.54	2.42	0.67	-	-	-	-	3.63
SE	-	3.76	2.15	0.54	-	-	-	-	6.45
ESE	-	3.49	5.11	0.13	-	-	-	-	8.74
E	-	14.38	13.31	0.27	-	-	-	-	27.96
Calm	4.84	-	-	-	-	-	-	-	4.84
Total (%)	4.84	52.55	39.38	3.23	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: May. 01, 2006

End Date: May. 31, 2006

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

Tyhee Station
Wind Rose
May 2006

PROJECT NO.

Y22101057

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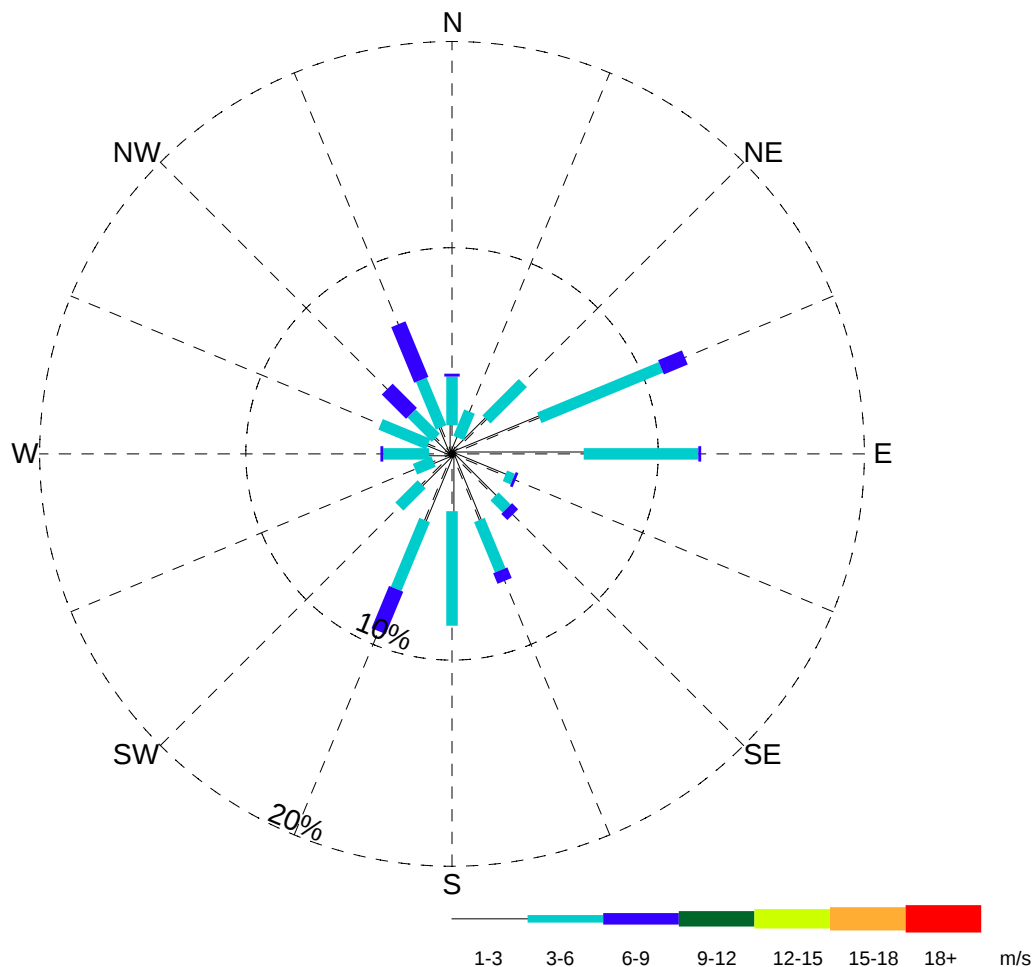
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Figure C-21



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	4.58	6.39	1.25	-	-	-	-	12.22
NE	-	2.36	2.50	-	-	-	-	-	4.86
NNE	-	0.83	1.39	-	-	-	-	-	2.22
N	-	1.39	2.36	0.14	-	-	-	-	3.89
NNW	-	1.39	2.50	2.92	-	-	-	-	6.81
NW	-	1.11	1.67	1.67	-	-	-	-	4.44
WNW	-	1.25	2.50	-	-	-	-	-	3.75
W	-	1.11	2.22	0.14	-	-	-	-	3.47
WSW	-	0.97	0.97	-	-	-	-	-	1.94
SW	-	2.08	1.53	-	-	-	-	-	3.61
SSW	-	3.47	3.61	2.22	-	-	-	-	9.31
S	-	2.78	5.56	-	-	-	-	-	8.33
SSE	-	3.47	2.64	0.56	-	-	-	-	6.67
SE	-	2.92	0.83	0.42	-	-	-	-	4.17
ESE	-	2.78	0.42	0.14	-	-	-	-	3.33
E	-	6.39	5.56	0.14	-	-	-	-	12.08
Calm	8.89	-	-	-	-	-	-	-	8.89
Total (%)	8.89	38.89	42.64	9.58	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: June 01, 2006

End Date: June 30, 2006

NOTES

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EBA Engineering Consultants Ltd. 

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
June 2006**

PROJECT NO.
Y22101057

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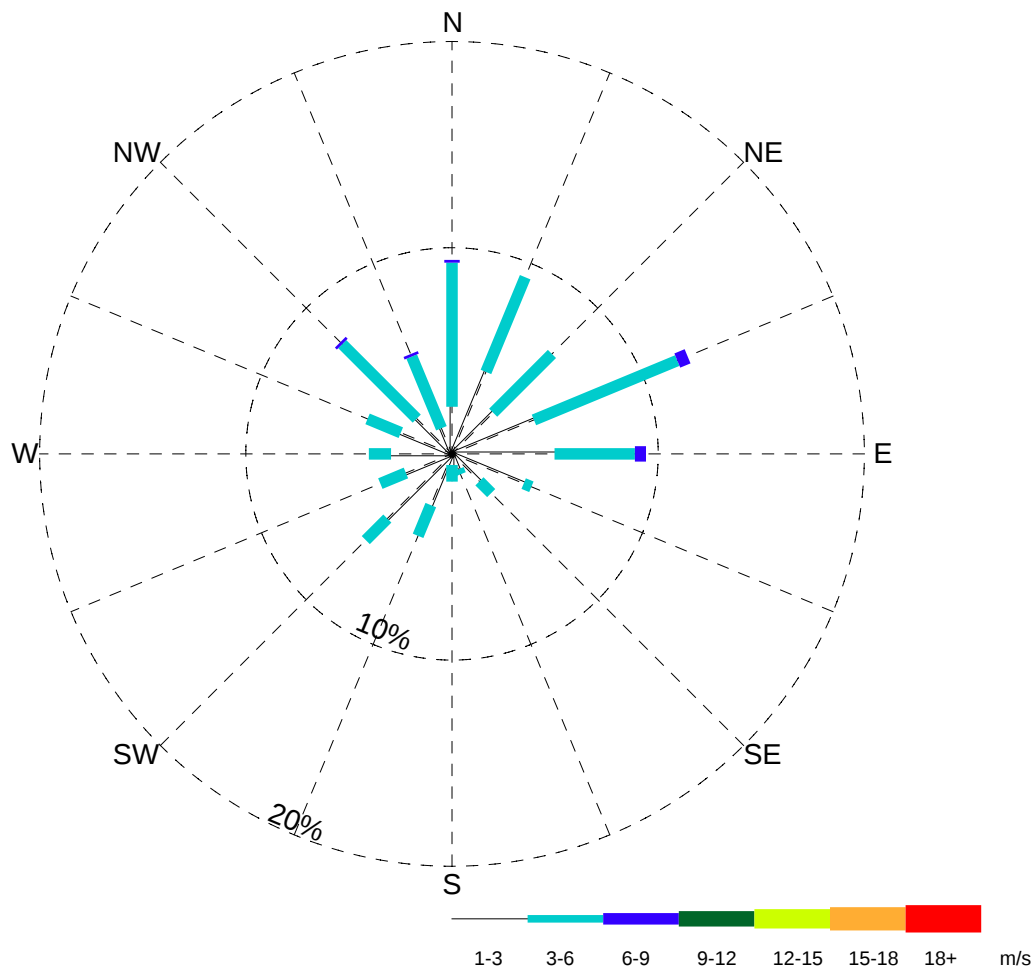
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May 2009

Figure C-22



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	4.30	7.53	0.54	-	-	-	-	12.37
NE	-	2.82	4.03	-	-	-	-	-	6.86
NNE	-	4.30	4.97	-	-	-	-	-	9.27
N	-	2.29	6.99	0.13	-	-	-	-	9.41
NNW	-	1.34	3.76	0.13	-	-	-	-	5.24
NW	-	2.42	5.11	0.13	-	-	-	-	7.66
WNW	-	2.69	1.75	-	-	-	-	-	4.43
W	-	2.96	1.08	-	-	-	-	-	4.03
WSW	-	2.42	1.34	-	-	-	-	-	3.76
SW	-	4.43	1.48	-	-	-	-	-	5.91
SSW	-	2.69	1.61	-	-	-	-	-	4.30
S	-	0.54	0.81	-	-	-	-	-	1.34
SSE	-	0.81	0.27	-	-	-	-	-	1.08
SE	-	1.88	0.81	-	-	-	-	-	2.69
ESE	-	3.76	0.40	-	-	-	-	-	4.17
E	-	4.97	3.90	0.54	-	-	-	-	9.41
Calm	8.06	-	-	-	-	-	-	-	8.06
Total (%)	8.06	44.62	45.83	1.48	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: July 01, 2006

End Date: July 31, 2006

NOTES

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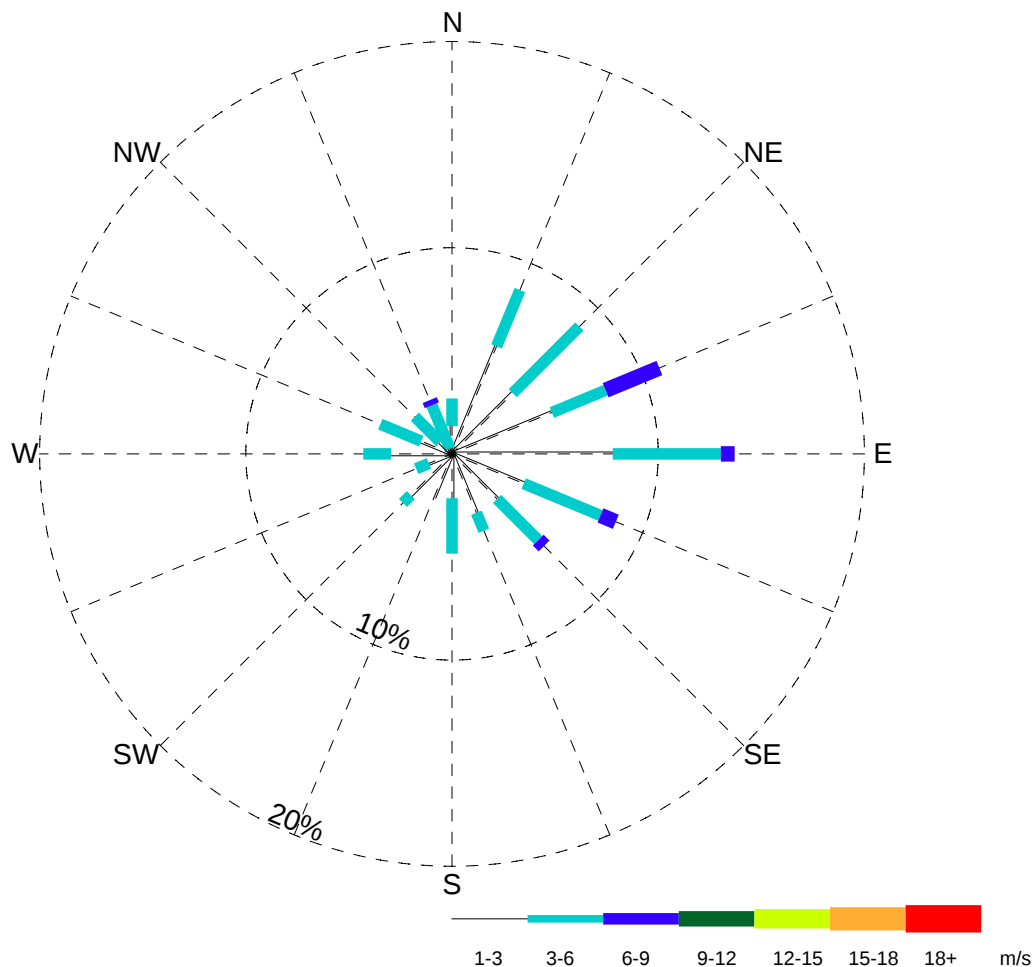
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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
July 2006**

PROJECT NO. Y22101057	DWN TM	CHK JAS	REV 0
OFFICE EBA-VANC	DATE May 2009		

Figure C-23



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.24	2.82	2.82	-	-	-	-	10.89
NE	-	4.17	4.57	-	-	-	-	-	8.74
NNE	-	5.64	2.96	-	-	-	-	-	8.60
N	-	1.34	1.34	-	-	-	-	-	2.69
NNW	-	0.27	2.29	0.27	-	-	-	-	2.82
NW	-	0.81	1.75	-	-	-	-	-	2.55
WNW	-	1.61	2.15	-	-	-	-	-	3.76
W	-	2.96	1.34	-	-	-	-	-	4.30
WSW	-	1.21	0.67	-	-	-	-	-	1.88
SW	-	2.82	0.54	-	-	-	-	-	3.36
SSW	-	2.29	-	-	-	-	-	-	2.29
S	-	2.15	2.69	-	-	-	-	-	4.84
SSE	-	3.09	0.94	-	-	-	-	-	4.03
SE	-	3.09	2.82	0.40	-	-	-	-	6.32
ESE	-	3.76	4.03	0.81	-	-	-	-	8.60
E	-	7.80	5.24	0.67	-	-	-	-	13.71
Calm	10.62	-	-	-	-	-	-	-	10.62
Total (%)	10.62	48.25	36.16	4.97	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Aug. 01, 2006

End Date: Aug. 31, 2006

NOTES

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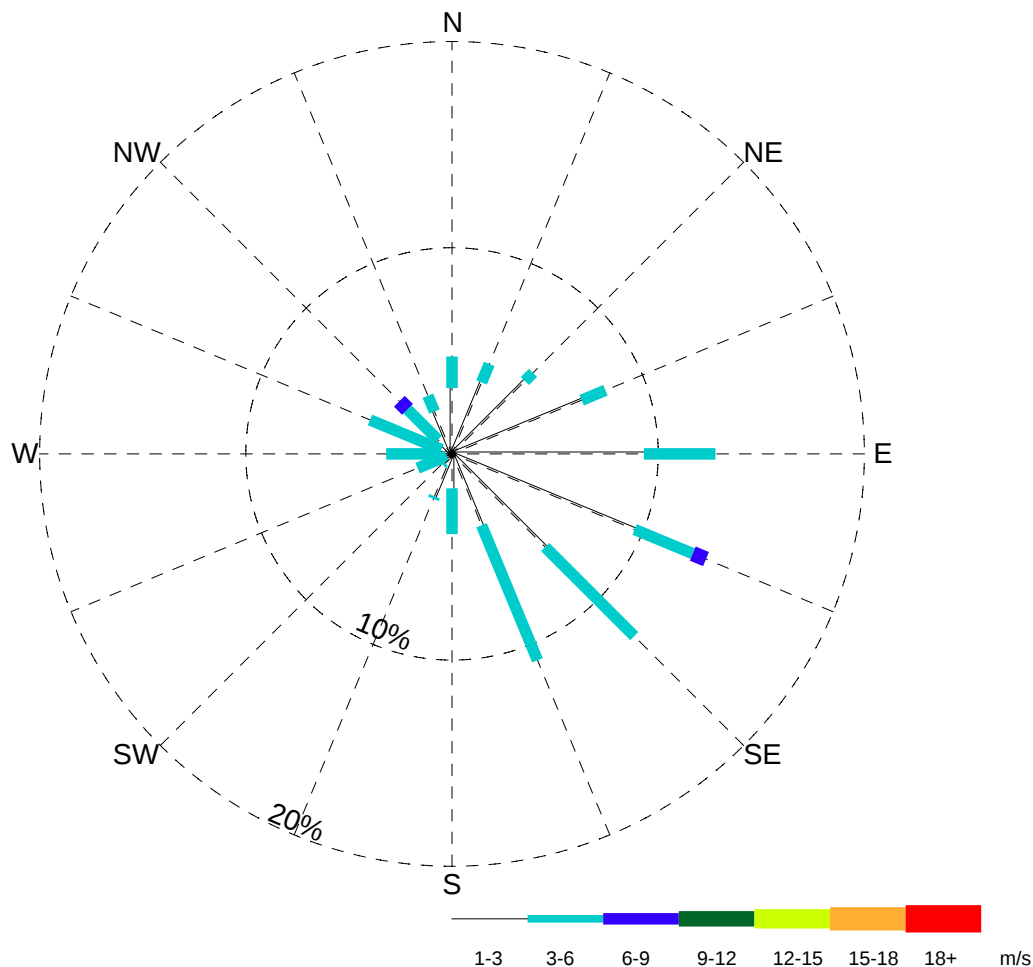
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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
August 2006**

PROJECT NO. Y22101057	DWN TM	CHK JAS	REV 0
OFFICE EBA-VANC	DATE May 2009		

Figure C-24



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.81	1.25	-	-	-	-	-	8.06
NE	-	5.00	0.56	-	-	-	-	-	5.56
NNE	-	3.75	0.97	-	-	-	-	-	4.72
N	-	3.19	1.53	-	-	-	-	-	4.72
NNW	-	2.22	0.83	-	-	-	-	-	3.06
NW	-	0.97	2.08	0.56	-	-	-	-	3.61
WNW	-	0.56	3.75	-	-	-	-	-	4.31
W	-	0.69	2.50	-	-	-	-	-	3.19
WSW	-	0.28	1.53	-	-	-	-	-	1.81
SW	-	0.56	0.14	-	-	-	-	-	0.69
SSW	-	2.22	0.14	-	-	-	-	-	2.36
S	-	1.67	2.22	-	-	-	-	-	3.89
SSE	-	3.75	7.08	-	-	-	-	-	10.83
SE	-	6.39	6.11	-	-	-	-	-	12.50
ESE	-	9.58	3.06	0.69	-	-	-	-	13.33
E	-	9.31	3.47	-	-	-	-	-	12.78
Calm	4.58	-	-	-	-	-	-	-	4.58
Total (%)	4.58	56.94	37.22	1.25	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Sep. 01, 2006

End Date: Sep. 30, 2006

NOTES

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**EBA Engineering
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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
September 2006**

PROJECT NO.
Y22101057

DWN
TM

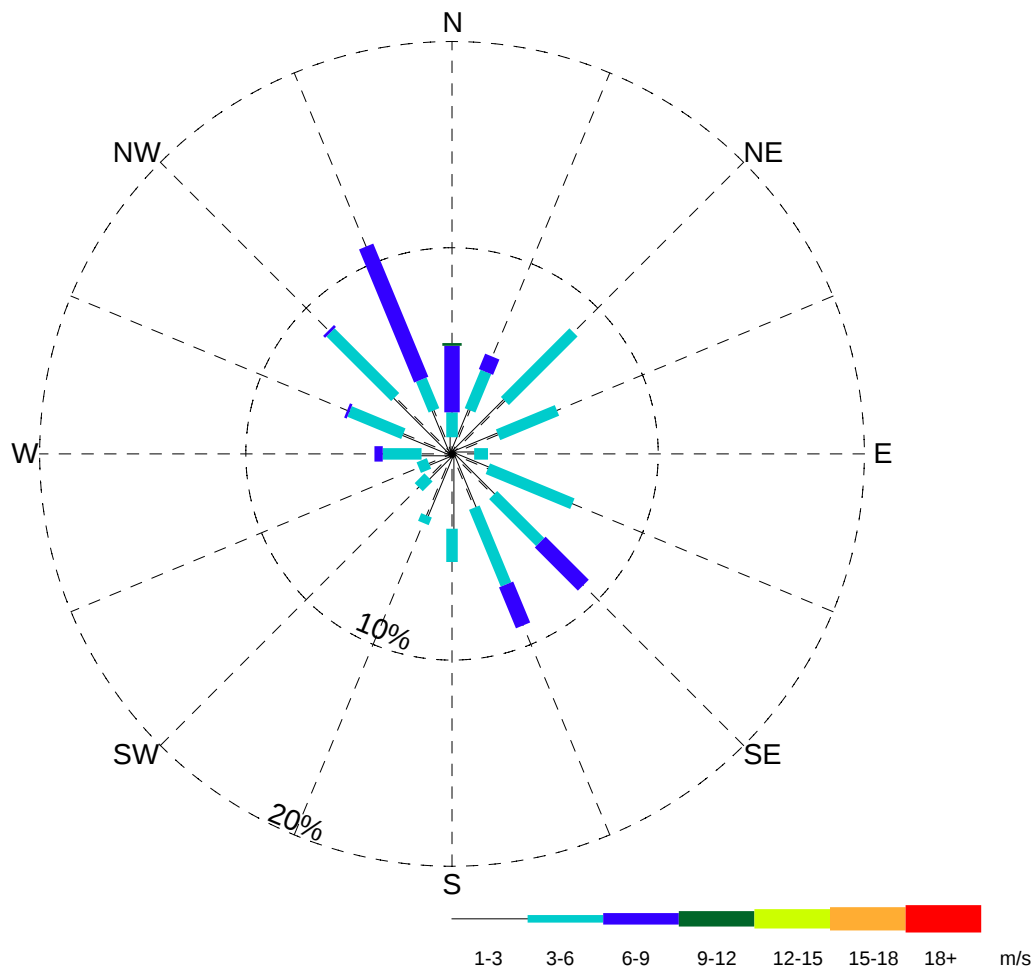
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Figure C-25



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.42	3.09	-	-	-	-	-	5.51
NE	-	3.63	4.70	-	-	-	-	-	8.33
NNE	-	2.29	2.02	0.81	-	-	-	-	5.11
N	-	0.81	1.21	3.23	0.13	-	-	-	5.38
NNW	-	2.29	1.61	6.99	-	-	-	-	10.89
NW	-	3.90	4.43	0.13	-	-	-	-	8.47
WNW	-	2.55	2.82	0.13	-	-	-	-	5.51
W	-	1.48	1.88	0.40	-	-	-	-	3.76
WSW	-	1.21	0.54	-	-	-	-	-	1.75
SW	-	1.61	0.67	-	-	-	-	-	2.29
SSW	-	3.23	0.40	-	-	-	-	-	3.63
S	-	3.63	1.61	-	-	-	-	-	5.24
SSE	-	2.82	4.03	2.15	-	-	-	-	9.01
SE	-	2.82	3.23	2.96	-	-	-	-	9.01
ESE	-	1.88	4.43	-	-	-	-	-	6.32
E	-	1.08	0.67	-	-	-	-	-	1.75
Calm	8.06	-	-	-	-	-	-	-	8.06
Total (%)	8.06	37.63	37.37	16.80	0.13	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Oct. 01, 2006

End Date: Oct. 31, 2006

NOTES

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**EBA Engineering
Consultants Ltd.**



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
October 2006**

PROJECT NO.
Y22101057

DWN
TM

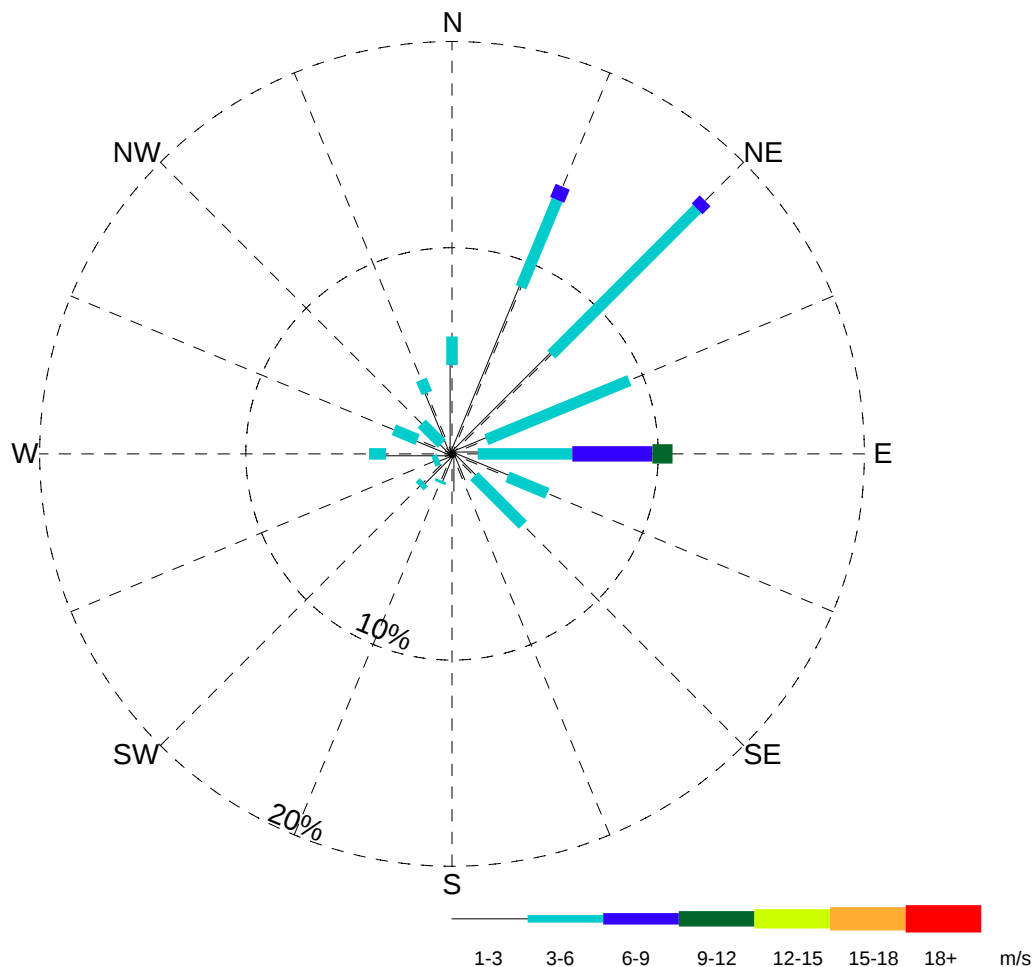
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Figure C-26



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	1.81	7.50	-	-	-	-	-	9.31
NE	-	6.81	10.00	0.56	-	-	-	-	17.36
NNE	-	8.75	4.58	0.69	-	-	-	-	14.03
N	-	4.31	1.39	-	-	-	-	-	5.69
NNW	-	3.19	0.69	-	-	-	-	-	3.89
NW	-	0.69	1.39	-	-	-	-	-	2.08
WNW	-	1.81	1.25	-	-	-	-	-	3.06
W	-	3.19	0.83	-	-	-	-	-	4.03
WSW	-	0.69	0.28	-	-	-	-	-	0.97
SW	-	1.94	0.28	-	-	-	-	-	2.22
SSW	-	1.39	0.14	-	-	-	-	-	1.53
S	-	1.81	-	-	-	-	-	-	1.81
SSE	-	1.39	-	-	-	-	-	-	1.39
SE	-	1.53	3.33	-	-	-	-	-	4.86
ESE	-	2.92	2.08	-	-	-	-	-	5.00
E	-	1.25	4.58	3.89	0.97	-	-	-	10.69
Calm	12.08	-	-	-	-	-	-	-	12.08
Total (%)	12.08	43.47	38.33	5.14	0.97	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Nov. 01, 2006

End Date: Nov. 30, 2006

NOTES

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**EBA Engineering
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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
November 2006**

PROJECT NO.
Y22101057

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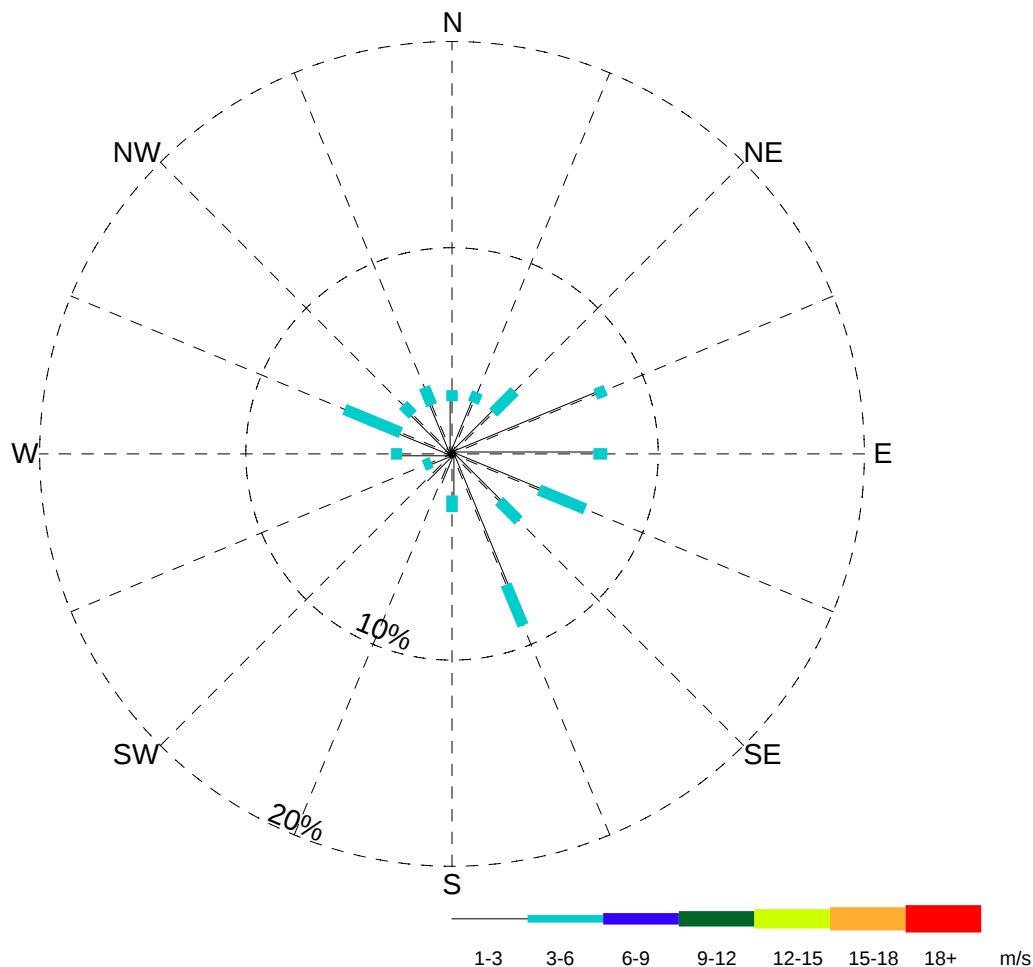
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Figure C-27



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.53	0.54	-	-	-	-	-	8.06
NE	-	2.82	1.48	-	-	-	-	-	4.30
NNE	-	2.69	0.54	-	-	-	-	-	3.23
N	-	2.55	0.54	-	-	-	-	-	3.09
NNW	-	2.55	0.94	-	-	-	-	-	3.49
NW	-	2.69	0.67	-	-	-	-	-	3.36
WNW	-	2.69	2.96	-	-	-	-	-	5.64
W	-	2.42	0.54	-	-	-	-	-	2.96
WSW	-	1.08	0.40	-	-	-	-	-	1.48
SW	-	1.75	-	-	-	-	-	-	1.75
SSW	-	1.48	-	-	-	-	-	-	1.48
S	-	2.02	0.81	-	-	-	-	-	2.82
SSE	-	6.86	2.15	-	-	-	-	-	9.01
SE	-	3.23	1.34	-	-	-	-	-	4.57
ESE	-	4.57	2.42	-	-	-	-	-	6.99
E	-	6.86	0.67	-	-	-	-	-	7.53
Calm	30.24	-	-	-	-	-	-	-	30.24
Total (%)	30.24	53.76	15.99	-	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Dec. 01, 2006

End Date: Dec. 31, 2006

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**EBA Engineering
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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
December 2006**

PROJECT NO.
Y22101057

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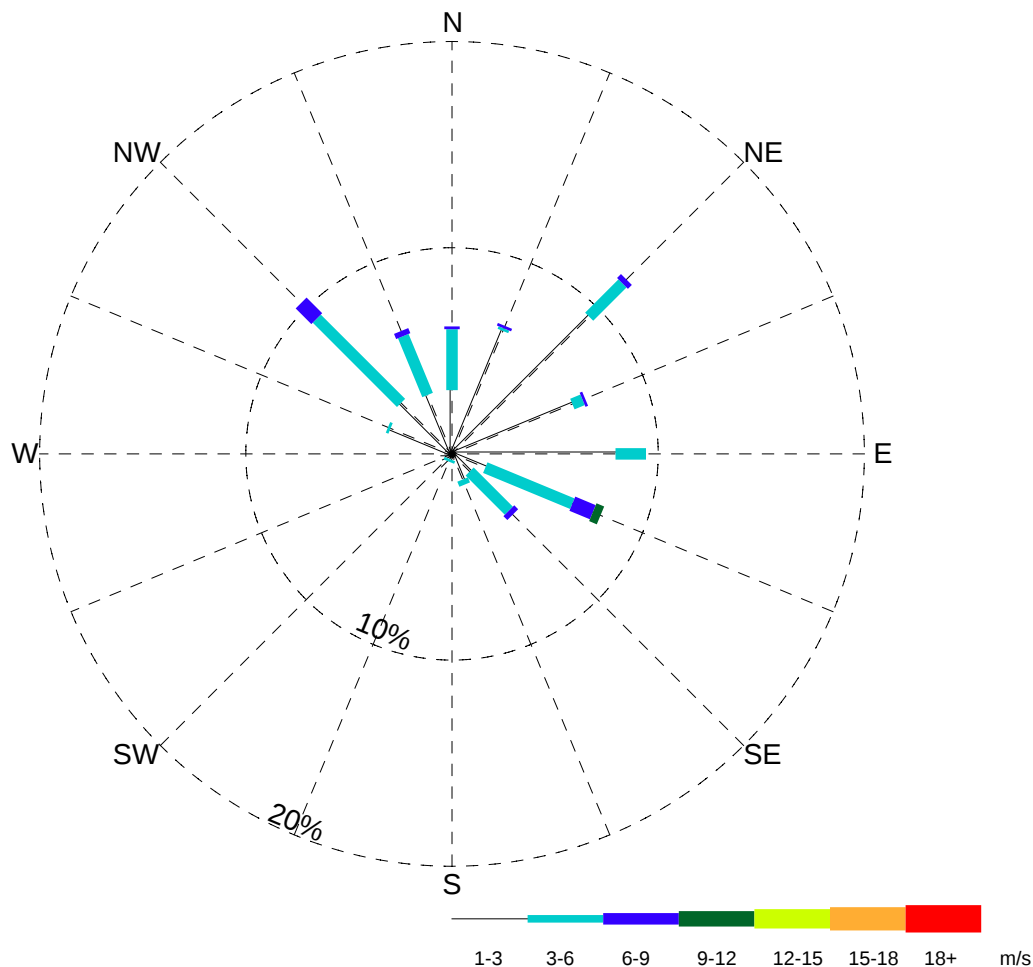
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Figure C-28



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.32	0.54	0.13	-	-	-	-	6.99
NE	-	9.41	2.29	0.27	-	-	-	-	11.96
NNE	-	6.45	0.13	0.13	-	-	-	-	6.72
N	-	3.09	2.96	0.13	-	-	-	-	6.18
NNW	-	3.09	3.09	0.27	-	-	-	-	6.45
NW	-	3.49	5.78	1.08	-	-	-	-	10.35
WNW	-	3.23	0.13	-	-	-	-	-	3.36
W	-	0.54	-	-	-	-	-	-	0.54
WSW	-	0.54	-	-	-	-	-	-	0.54
SW	-	0.81	-	-	-	-	-	-	0.81
SSW	-	0.27	0.13	-	-	-	-	-	0.40
S	-	0.27	-	-	-	-	-	-	0.27
SSE	-	1.34	0.27	-	-	-	-	-	1.61
SE	-	1.21	2.69	0.27	-	-	-	-	4.17
ESE	-	1.75	4.57	1.08	0.40	-	-	-	7.80
E	-	7.93	1.48	-	-	-	-	-	9.41
Calm	22.45	-	-	-	-	-	-	-	22.45
Total (%)	22.45	49.73	24.06	3.36	0.40	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Jan. 01, 2007

End Date: Jan. 31, 2007

NOTES

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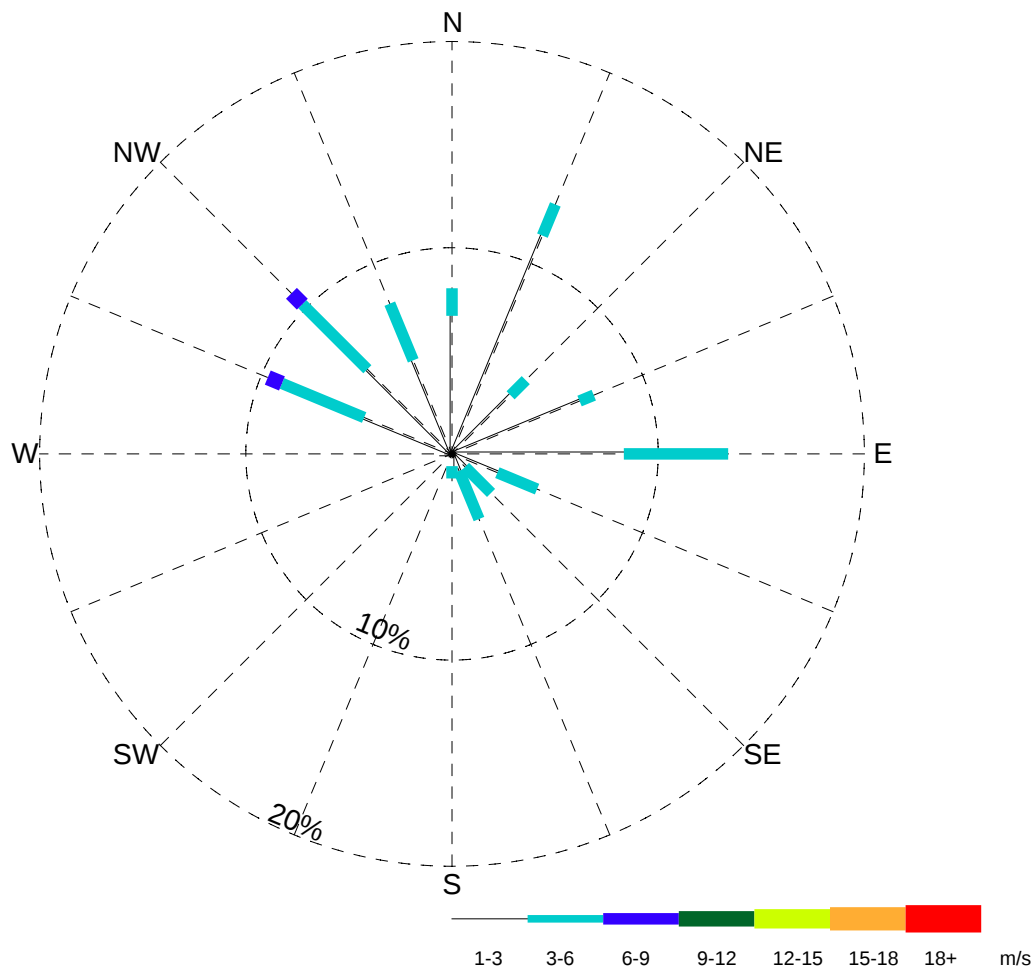
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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
January 2007**

PROJECT NO. Y22101057	DWN TM	CHK JAS	REV 0
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Figure C-29



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.70	0.74	-	-	-	-	-	7.44
NE	-	4.02	1.04	-	-	-	-	-	5.06
NNE	-	11.46	1.64	-	-	-	-	-	13.10
N	-	6.70	1.34	-	-	-	-	-	8.04
NNW	-	4.91	2.98	-	-	-	-	-	7.89
NW	-	5.80	4.46	0.74	-	-	-	-	11.01
WNW	-	4.61	4.32	0.74	-	-	-	-	9.67
W	-	0.60	-	-	-	-	-	-	0.60
WSW	-	0.15	-	-	-	-	-	-	0.15
SW	-	-	-	-	-	-	-	-	-
SSW	-	0.15	-	-	-	-	-	-	0.15
S	-	0.60	0.60	-	-	-	-	-	1.19
SSE	-	0.89	2.53	-	-	-	-	-	3.42
SE	-	0.89	1.79	-	-	-	-	-	2.68
ESE	-	2.38	2.08	-	-	-	-	-	4.46
E	-	8.33	5.06	-	-	-	-	-	13.39
Calm	11.76	-	-	-	-	-	-	-	11.76
Total (%)	11.76	58.19	28.57	1.49	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 28 days

Start Date: Feb. 01, 2007

End Date: Feb. 28, 2007

NOTES

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**EBA Engineering
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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
February 2007**

PROJECT NO.
Y22101057

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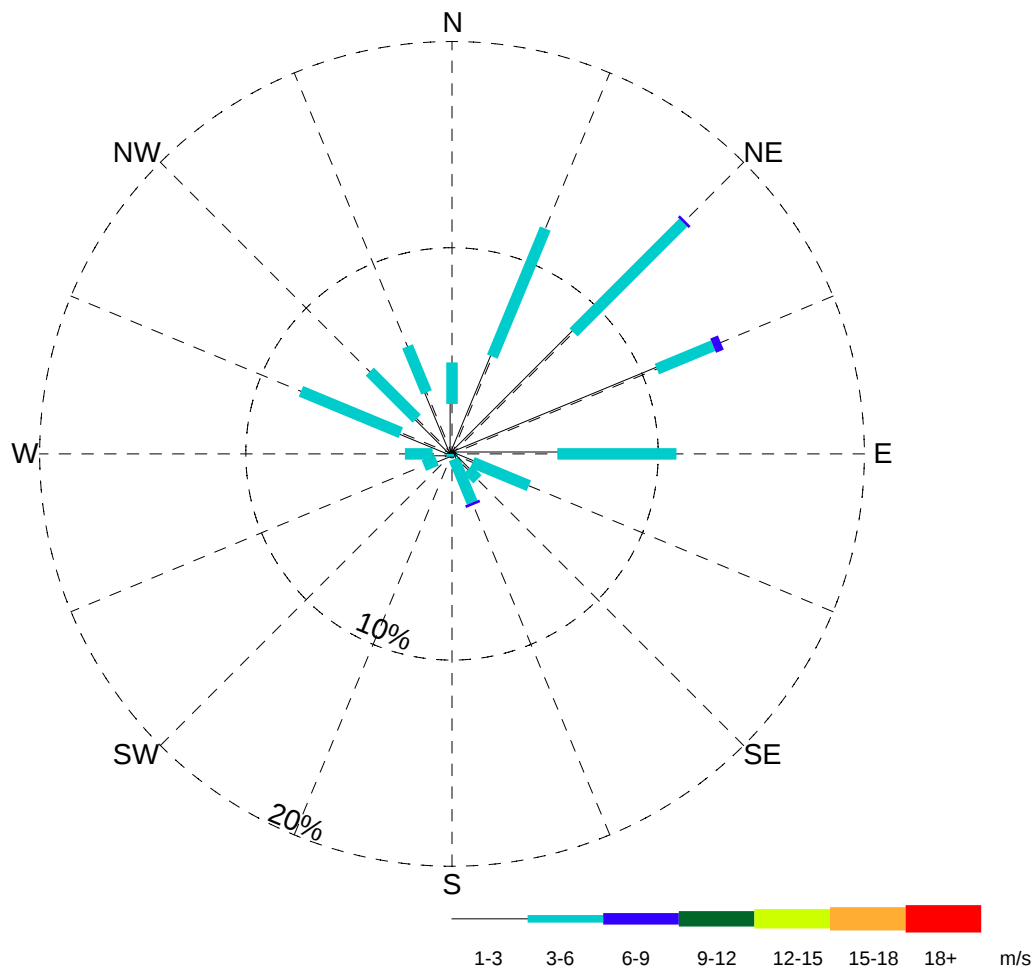
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Figure C-30



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.75	2.96	0.40	-	-	-	-	14.11
NE	-	8.33	7.53	0.13	-	-	-	-	15.99
NNE	-	5.11	6.72	-	-	-	-	-	11.83
N	-	2.42	2.02	-	-	-	-	-	4.43
NNW	-	3.23	2.42	-	-	-	-	-	5.64
NW	-	2.42	3.23	-	-	-	-	-	5.64
WNW	-	2.69	5.24	-	-	-	-	-	7.93
W	-	0.94	1.34	-	-	-	-	-	2.29
WSW	-	0.81	0.67	-	-	-	-	-	1.48
SW	-	0.13	-	-	-	-	-	-	0.13
SSW	-	0.13	-	-	-	-	-	-	0.13
S	-	-	0.13	-	-	-	-	-	0.13
SSE	-	0.27	2.29	0.13	-	-	-	-	2.69
SE	-	1.08	0.67	-	-	-	-	-	1.75
ESE	-	1.08	2.96	-	-	-	-	-	4.03
E	-	5.11	5.78	-	-	-	-	-	10.89
Calm	10.89	-	-	-	-	-	-	-	10.89
Total (%)	10.89	44.49	43.95	0.67	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Mar. 01, 2007

End Date: Mar. 31, 2007

NOTES

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EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
March 2007**

PROJECT NO.
Y22101057

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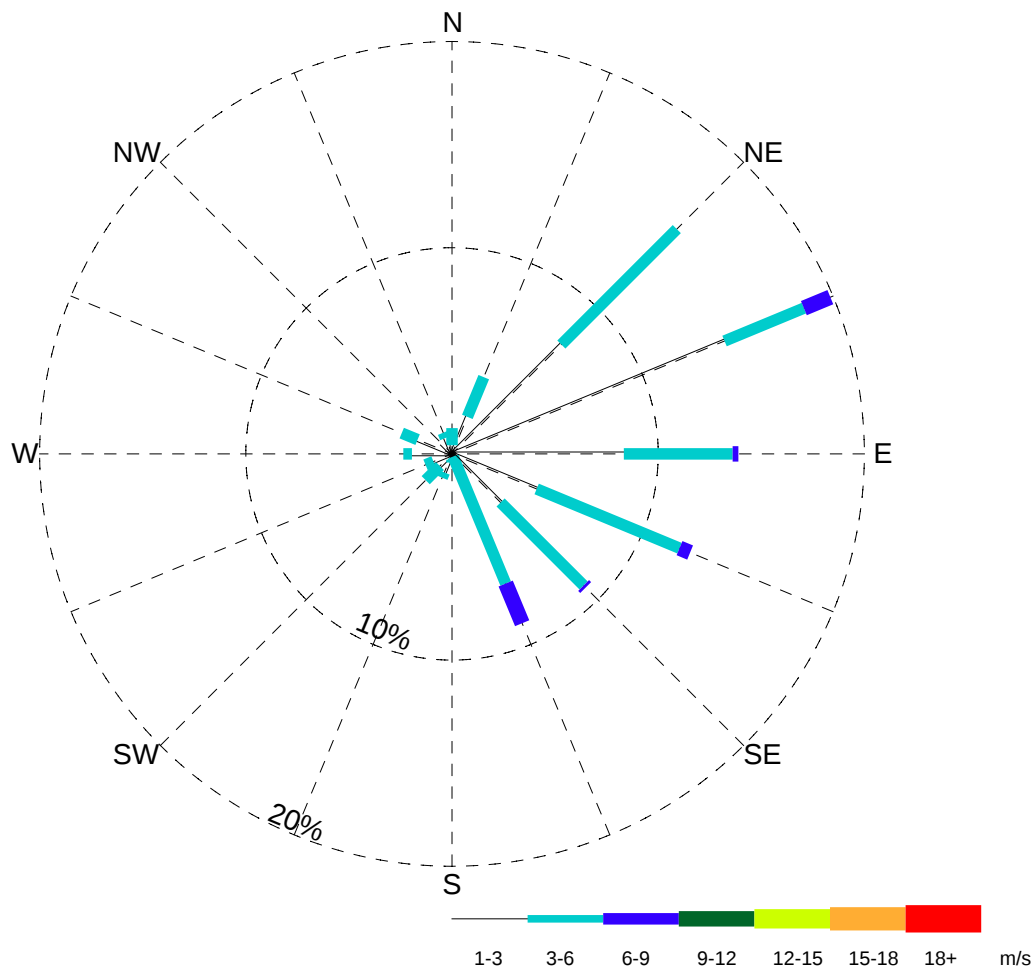
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Figure C-31



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	14.31	4.17	1.39	-	-	-	-	19.86
NE	-	7.50	7.92	-	-	-	-	-	15.42
NNE	-	1.94	2.08	-	-	-	-	-	4.03
N	-	0.42	0.83	-	-	-	-	-	1.25
NNW	-	0.83	0.28	-	-	-	-	-	1.11
NW	-	0.69	-	-	-	-	-	-	0.69
WNW	-	1.81	0.83	-	-	-	-	-	2.64
W	-	1.94	0.42	-	-	-	-	-	2.36
WSW	-	0.97	0.42	-	-	-	-	-	1.39
SW	-	0.83	0.97	-	-	-	-	-	1.81
SSW	-	0.97	0.28	-	-	-	-	-	1.25
S	-	0.28	0.14	-	-	-	-	-	0.42
SSE	-	0.14	6.67	2.08	-	-	-	-	8.89
SE	-	3.33	5.69	0.14	-	-	-	-	9.17
ESE	-	4.44	7.50	0.56	-	-	-	-	12.50
E	-	8.33	5.28	0.28	-	-	-	-	13.89
Calm	3.33	-	-	-	-	-	-	-	3.33
Total (%)	3.33	48.75	43.47	4.44	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Apr. 01, 2007

End Date: Apr. 30, 2007

NOTES

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**Tyhee Station
Wind Rose
April 2007**

PROJECT NO.
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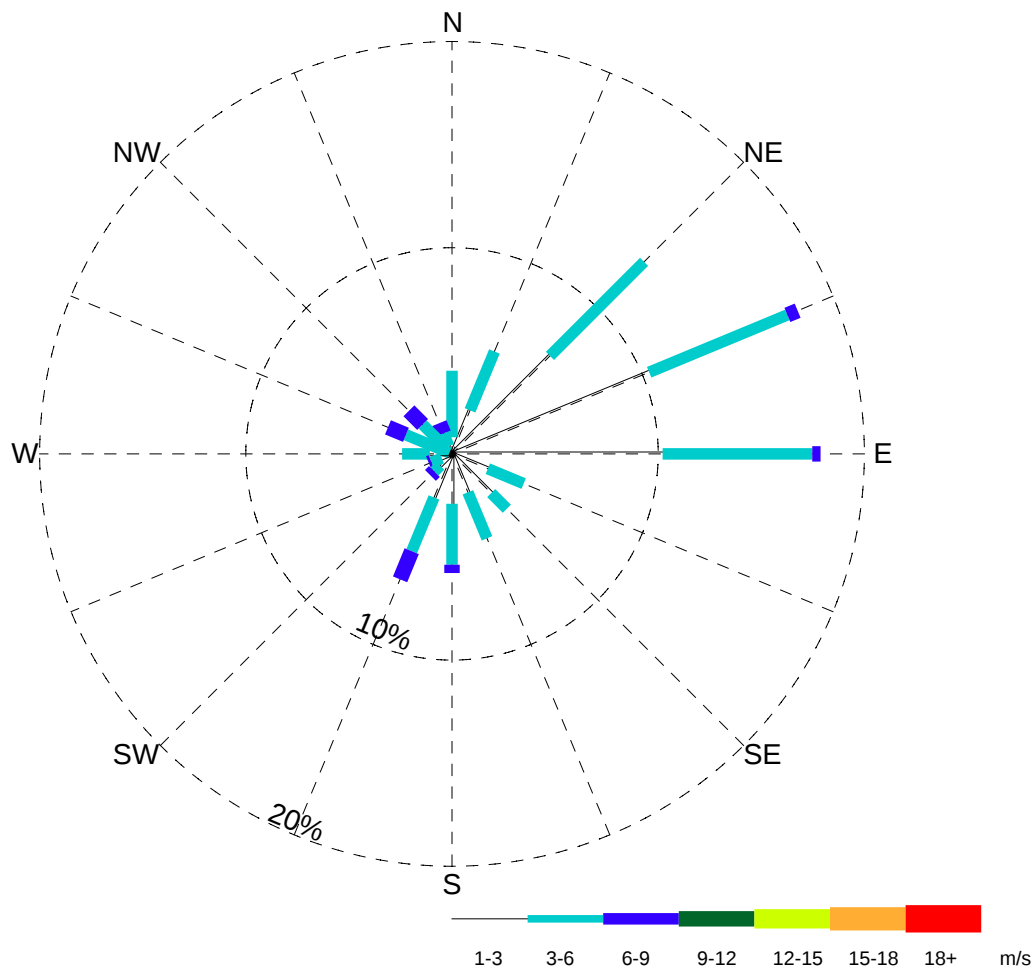
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Figure C-32



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.35	7.26	0.54	-	-	-	-	18.15
NE	-	6.72	6.45	-	-	-	-	-	13.17
NNE	-	2.29	3.09	-	-	-	-	-	5.38
N	-	0.81	3.23	-	-	-	-	-	4.03
NNW	-	0.40	0.67	0.54	-	-	-	-	1.61
NW	-	0.40	1.61	0.94	-	-	-	-	2.96
WNW	-	0.13	2.29	0.94	-	-	-	-	3.36
W	-	1.08	1.34	-	-	-	-	-	2.42
WSW	-	0.54	0.54	0.13	-	-	-	-	1.21
SW	-	0.81	0.40	0.27	-	-	-	-	1.48
SSW	-	2.29	2.82	1.48	-	-	-	-	6.59
S	-	2.42	2.96	0.40	-	-	-	-	5.78
SSE	-	2.02	2.42	-	-	-	-	-	4.43
SE	-	2.69	1.08	-	-	-	-	-	3.76
ESE	-	1.88	1.88	-	-	-	-	-	3.76
E	-	10.22	7.26	0.40	-	-	-	-	17.88
Calm	4.03	-	-	-	-	-	-	-	4.03
Total (%)	4.03	45.03	45.30	5.64	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: May. 01, 2007

End Date: May. 31, 2007

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
May 2007**

PROJECT NO.
Y22101057

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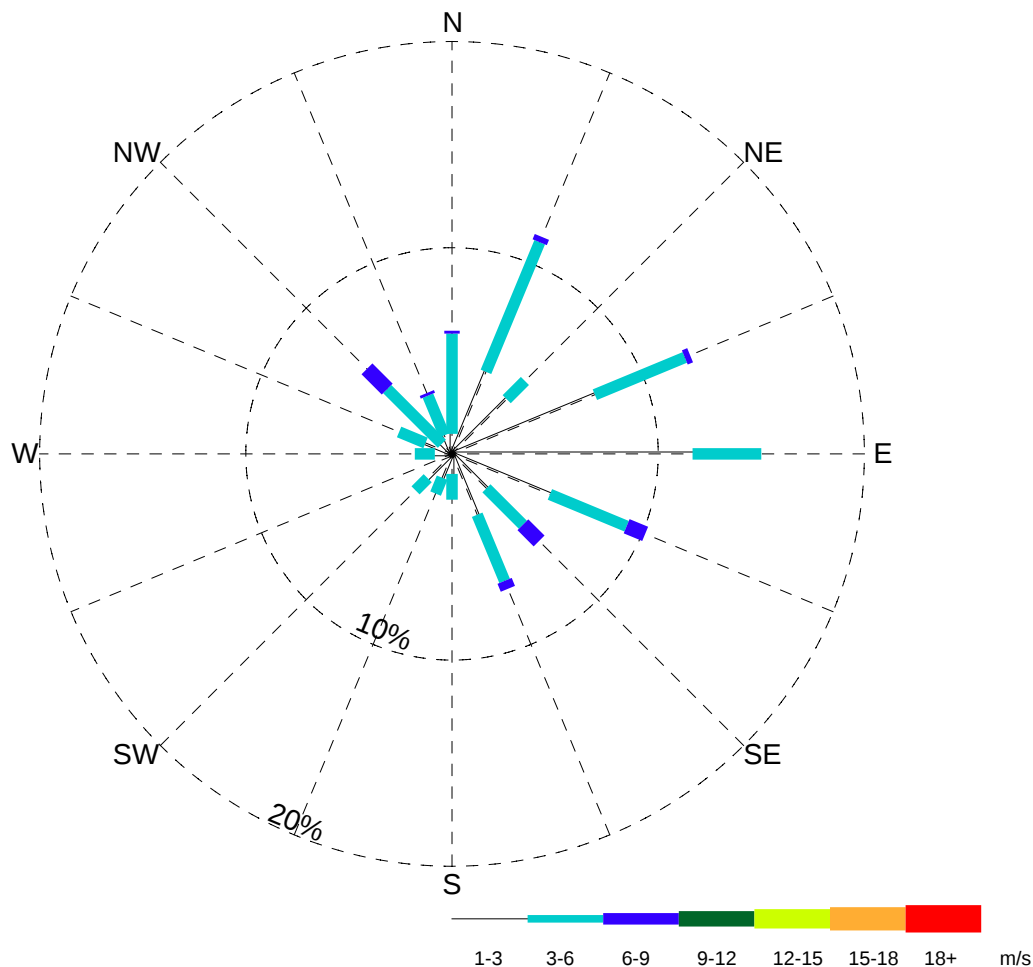
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May 2009

Figure C-33



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.50	4.72	0.28	-	-	-	-	12.50
NE	-	3.75	1.25	-	-	-	-	-	5.00
NNE	-	4.31	6.81	0.28	-	-	-	-	11.39
N	-	0.97	4.86	0.14	-	-	-	-	5.97
NNW	-	0.97	2.08	0.14	-	-	-	-	3.19
NW	-	0.69	3.75	1.39	-	-	-	-	5.83
WNW	-	1.39	1.39	-	-	-	-	-	2.78
W	-	0.83	0.97	-	-	-	-	-	1.81
WSW	-	0.56	-	-	-	-	-	-	0.56
SW	-	1.67	0.83	-	-	-	-	-	2.50
SSW	-	1.25	0.83	-	-	-	-	-	2.08
S	-	0.97	1.25	-	-	-	-	-	2.22
SSE	-	3.19	3.47	0.42	-	-	-	-	7.08
SE	-	2.36	2.50	1.11	-	-	-	-	5.97
ESE	-	5.14	4.03	0.97	-	-	-	-	10.14
E	-	11.67	3.33	-	-	-	-	-	15.00
Calm	5.97	-	-	-	-	-	-	-	5.97
Total (%)	5.97	47.22	42.08	4.72	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: June 01, 2007

End Date: June 30, 2007

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
June 2007**

PROJECT NO.
Y22101057

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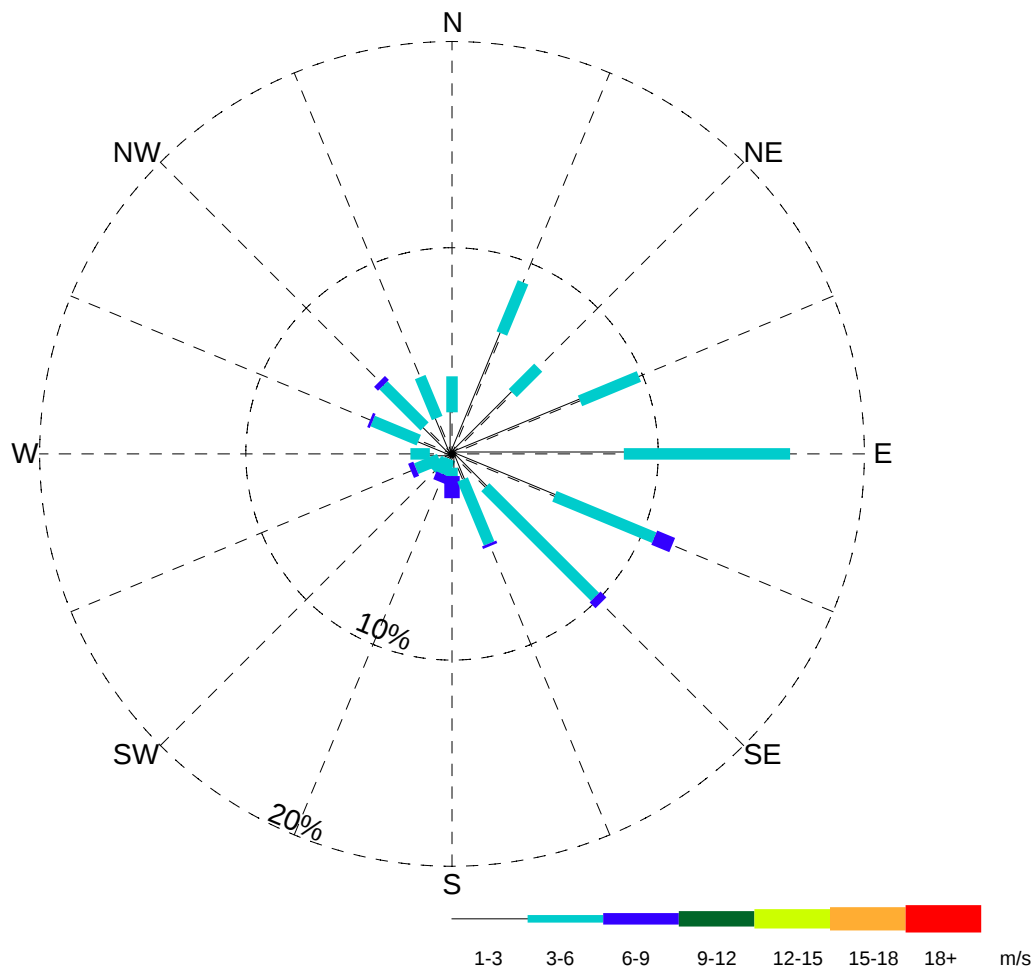
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Figure C-34



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.72	3.09	-	-	-	-	-	9.81
NE	-	4.17	1.75	-	-	-	-	-	5.91
NNE	-	6.32	2.69	-	-	-	-	-	9.01
N	-	2.02	1.75	-	-	-	-	-	3.76
NNW	-	1.88	2.15	-	-	-	-	-	4.03
NW	-	1.88	2.82	0.27	-	-	-	-	4.97
WNW	-	1.75	2.42	0.13	-	-	-	-	4.30
W	-	1.08	0.94	-	-	-	-	-	2.02
WSW	-	0.67	1.21	0.27	-	-	-	-	2.15
SW	-	0.40	0.81	-	-	-	-	-	1.21
SSW	-	0.27	0.81	0.40	-	-	-	-	1.48
S	-	0.67	0.40	1.08	-	-	-	-	2.15
SSE	-	1.34	3.36	0.13	-	-	-	-	4.84
SE	-	2.29	7.53	0.40	-	-	-	-	10.22
ESE	-	5.38	5.24	0.94	-	-	-	-	11.56
E	-	8.33	8.06	-	-	-	-	-	16.40
Calm	6.18	-	-	-	-	-	-	-	6.18
Total (%)	6.18	45.16	45.03	3.63	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: July 01, 2007

End Date: July 31, 2007

NOTES

CLIENT



EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
July 2007**

PROJECT NO.
Y22101057

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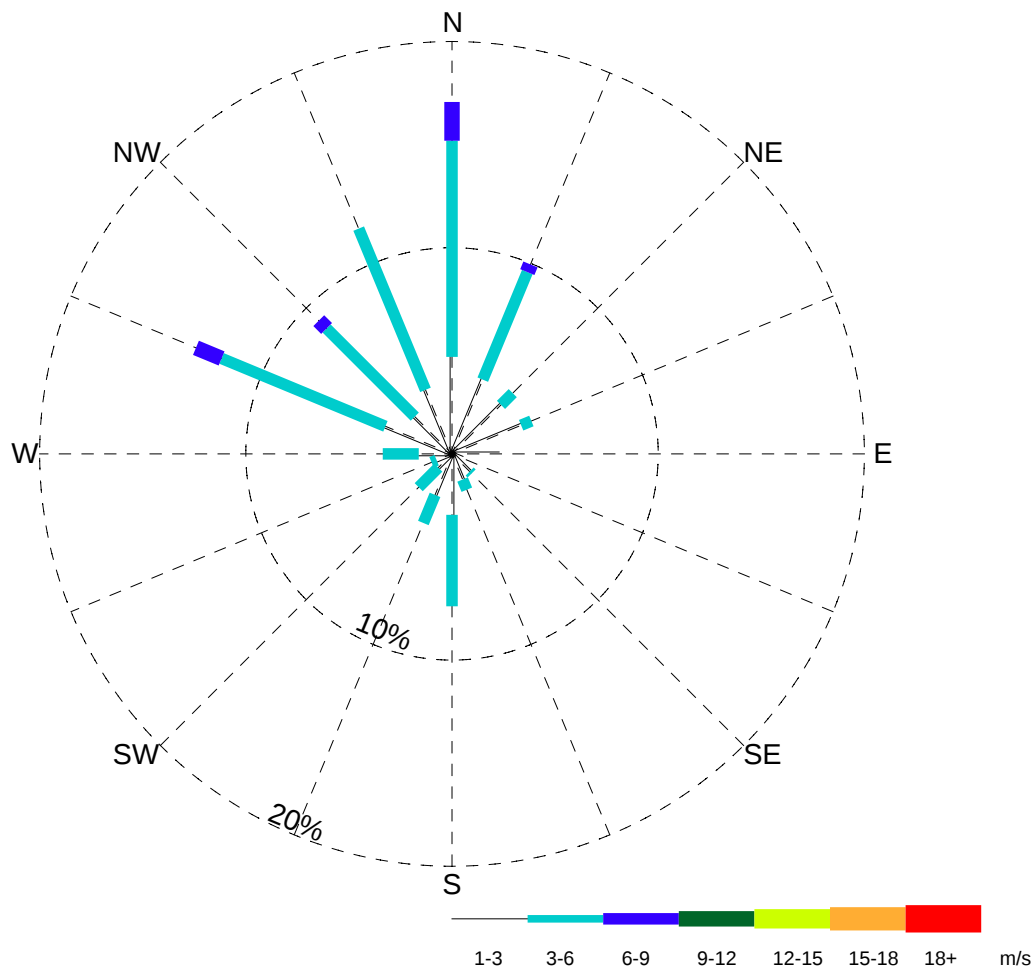
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Figure C-35



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.63	0.54	-	-	-	-	-	4.17
NE	-	3.36	0.81	-	-	-	-	-	4.17
NNE	-	3.90	5.64	0.40	-	-	-	-	9.95
N	-	4.70	10.48	1.88	-	-	-	-	17.07
NNW	-	3.36	8.47	-	-	-	-	-	11.83
NW	-	2.55	6.05	0.54	-	-	-	-	9.14
WNW	-	3.49	8.60	1.34	-	-	-	-	13.44
W	-	1.61	1.75	-	-	-	-	-	3.36
WSW	-	0.81	0.27	-	-	-	-	-	1.08
SW	-	0.94	1.34	-	-	-	-	-	2.29
SSW	-	2.15	1.48	-	-	-	-	-	3.63
S	-	2.96	4.43	-	-	-	-	-	7.39
SSE	-	1.34	0.54	-	-	-	-	-	1.88
SE	-	1.21	0.13	-	-	-	-	-	1.34
ESE	-	0.54	-	-	-	-	-	-	0.54
E	-	2.29	-	-	-	-	-	-	2.29
Calm	6.45	-	-	-	-	-	-	-	6.45
Total (%)	6.45	38.84	50.54	4.17	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Aug. 01, 2007

End Date: Aug. 31, 2007

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
August 2007**

PROJECT NO.
Y22101057

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TM

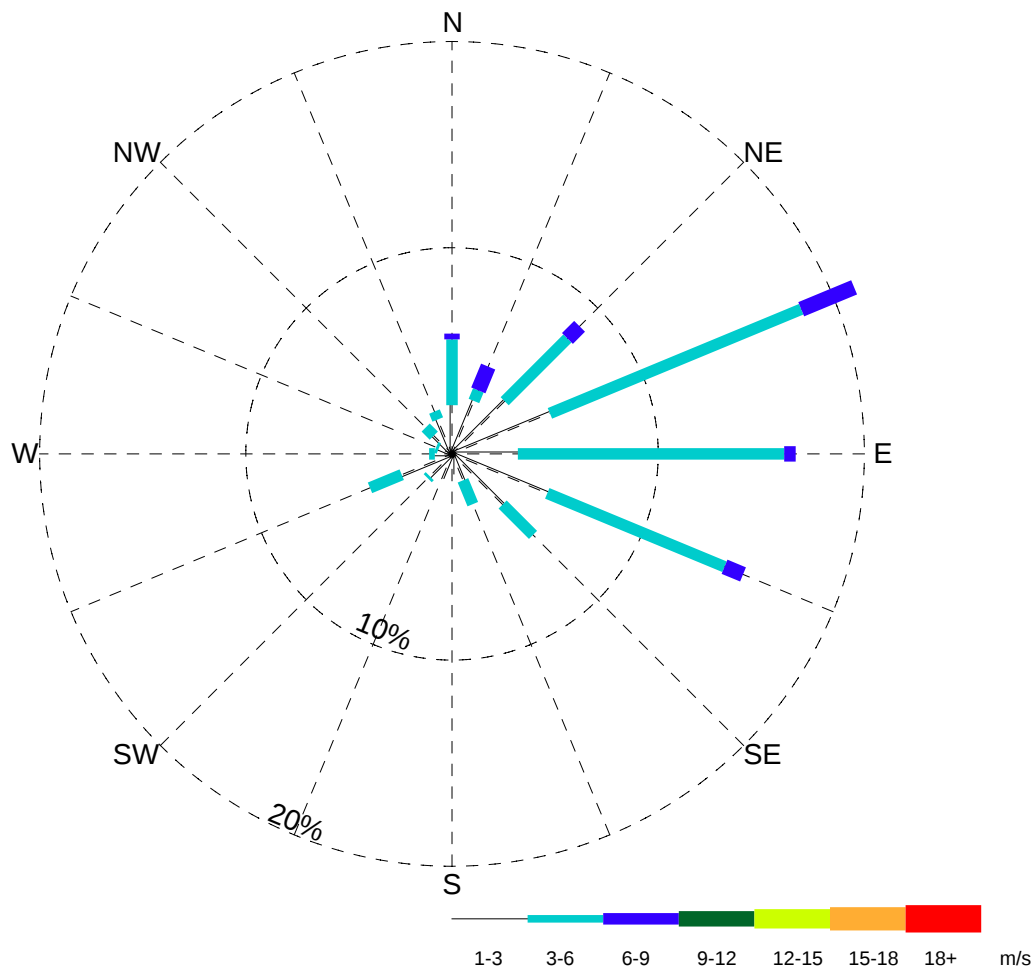
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Figure C-36



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.14	13.19	2.78	-	-	-	-	21.11
NE	-	3.61	4.31	0.83	-	-	-	-	8.75
NNE	-	2.78	0.56	1.25	-	-	-	-	4.58
N	-	2.36	3.19	0.28	-	-	-	-	5.83
NNW	-	1.81	0.42	-	-	-	-	-	2.22
NW	-	1.25	0.56	-	-	-	-	-	1.81
WNW	-	0.69	0.14	-	-	-	-	-	0.83
W	-	0.83	0.28	-	-	-	-	-	1.11
WSW	-	2.64	1.67	-	-	-	-	-	4.31
SW	-	1.53	0.14	-	-	-	-	-	1.67
SSW	-	1.25	-	-	-	-	-	-	1.25
S	-	0.97	-	-	-	-	-	-	0.97
SSE	-	1.39	1.25	-	-	-	-	-	2.64
SE	-	3.47	2.08	-	-	-	-	-	5.56
ESE	-	5.00	9.31	0.97	-	-	-	-	15.28
E	-	3.19	12.92	0.56	-	-	-	-	16.67
Calm	5.42	-	-	-	-	-	-	-	5.42
Total (%)	5.42	37.92	50.00	6.67	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Sep. 01, 2007

End Date: Sep. 30, 2007

NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
September 2007**

PROJECT NO.
Y22101057

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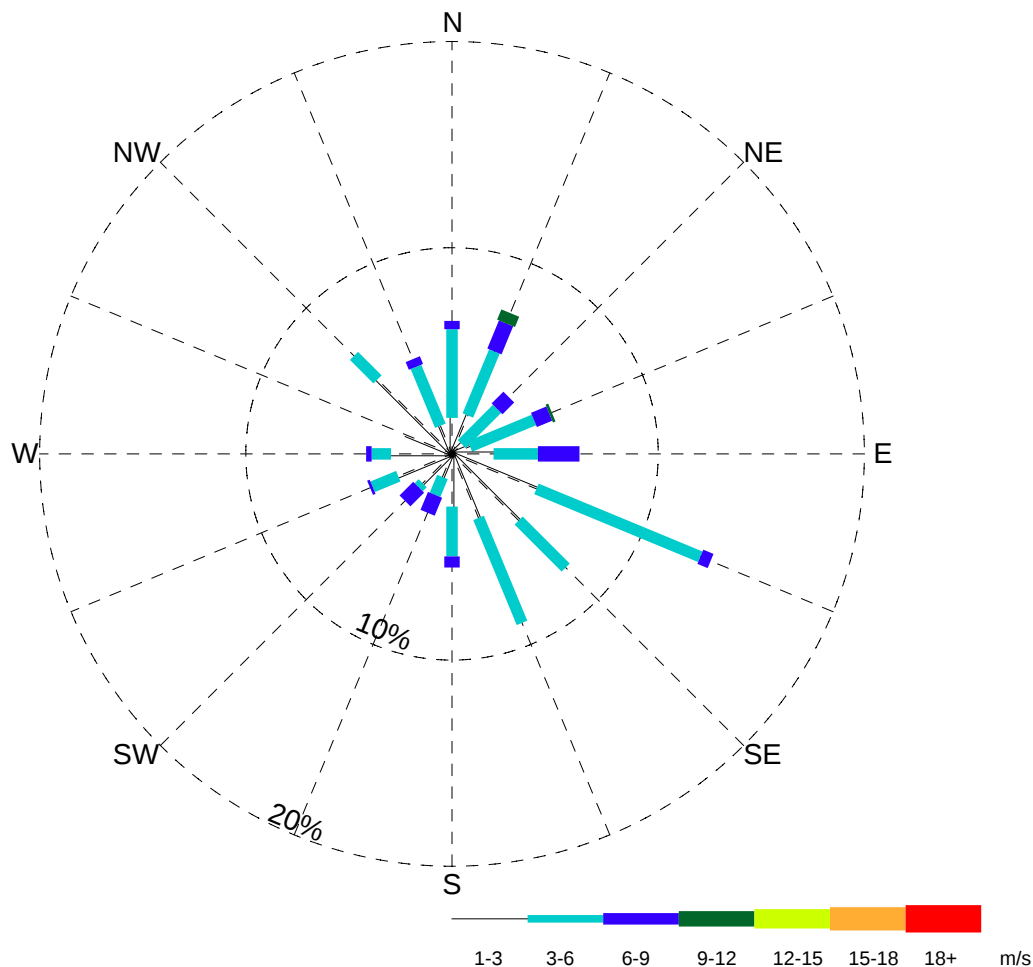
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Figure C-37



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	0.94	3.36	0.81	0.13	-	-	-	5.24
NE	-	0.67	2.42	0.81	-	-	-	-	3.90
NNE	-	2.02	3.36	1.48	0.54	-	-	-	7.39
N	-	1.75	4.30	0.40	-	-	-	-	6.45
NNW	-	1.48	3.09	0.40	-	-	-	-	4.97
NW	-	5.11	1.61	-	-	-	-	-	6.72
WNW	-	2.42	-	-	-	-	-	-	2.42
W	-	2.96	0.94	0.27	-	-	-	-	4.17
WSW	-	2.82	1.34	0.13	-	-	-	-	4.30
SW	-	2.02	0.27	0.94	-	-	-	-	3.23
SSW	-	1.21	0.94	0.94	-	-	-	-	3.09
S	-	2.55	2.42	0.54	-	-	-	-	5.51
SSE	-	3.36	5.51	-	-	-	-	-	8.87
SE	-	4.57	3.23	-	-	-	-	-	7.80
ESE	-	4.43	8.60	0.54	-	-	-	-	13.57
E	-	2.02	2.15	2.02	-	-	-	-	6.18
Calm	6.18	-	-	-	-	-	-	-	6.18
Total (%)	6.18	40.32	43.55	9.27	0.67	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Oct. 01, 2007

End Date: Oct. 31, 2007

NOTES

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EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
October 2007**

PROJECT NO.
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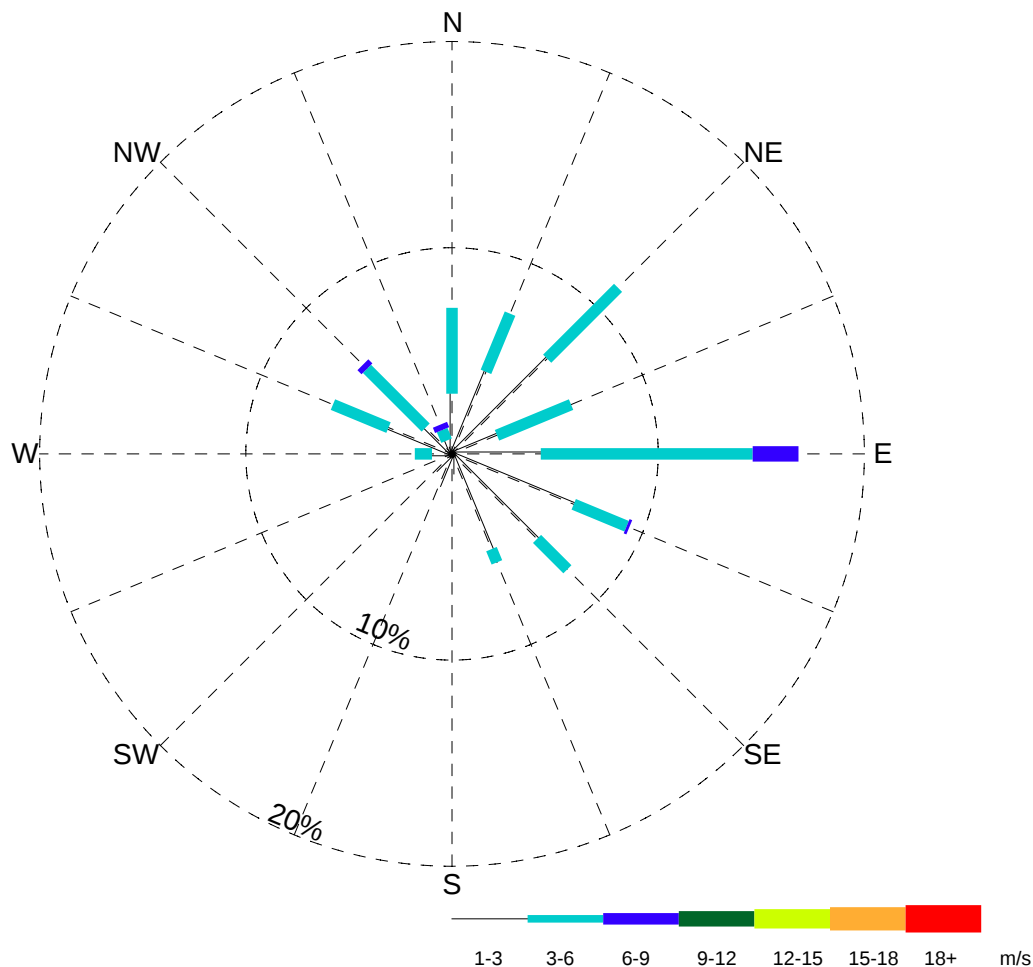
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Figure C-38



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.36	3.89	-	-	-	-	-	6.25
NE	-	6.53	4.86	-	-	-	-	-	11.39
NNE	-	4.31	3.06	-	-	-	-	-	7.36
N	-	2.92	4.17	-	-	-	-	-	7.08
NNW	-	0.69	0.56	0.28	-	-	-	-	1.53
NW	-	1.81	4.03	0.28	-	-	-	-	6.11
WNW	-	3.33	2.92	-	-	-	-	-	6.25
W	-	0.97	0.83	-	-	-	-	-	1.81
WSW	-	0.28	-	-	-	-	-	-	0.28
SW	-	1.11	-	-	-	-	-	-	1.11
SSW	-	1.67	-	-	-	-	-	-	1.67
S	-	0.97	-	-	-	-	-	-	0.97
SSE	-	5.00	0.69	-	-	-	-	-	5.69
SE	-	5.83	2.08	-	-	-	-	-	7.92
ESE	-	6.39	2.78	0.14	-	-	-	-	9.31
E	-	4.31	10.28	2.22	-	-	-	-	16.81
Calm	8.47	-	-	-	-	-	-	-	8.47
Total (%)	8.47	48.47	40.14	2.92	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Nov. 01, 2007

End Date: Nov. 30, 2007

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
November 2007**

PROJECT NO.
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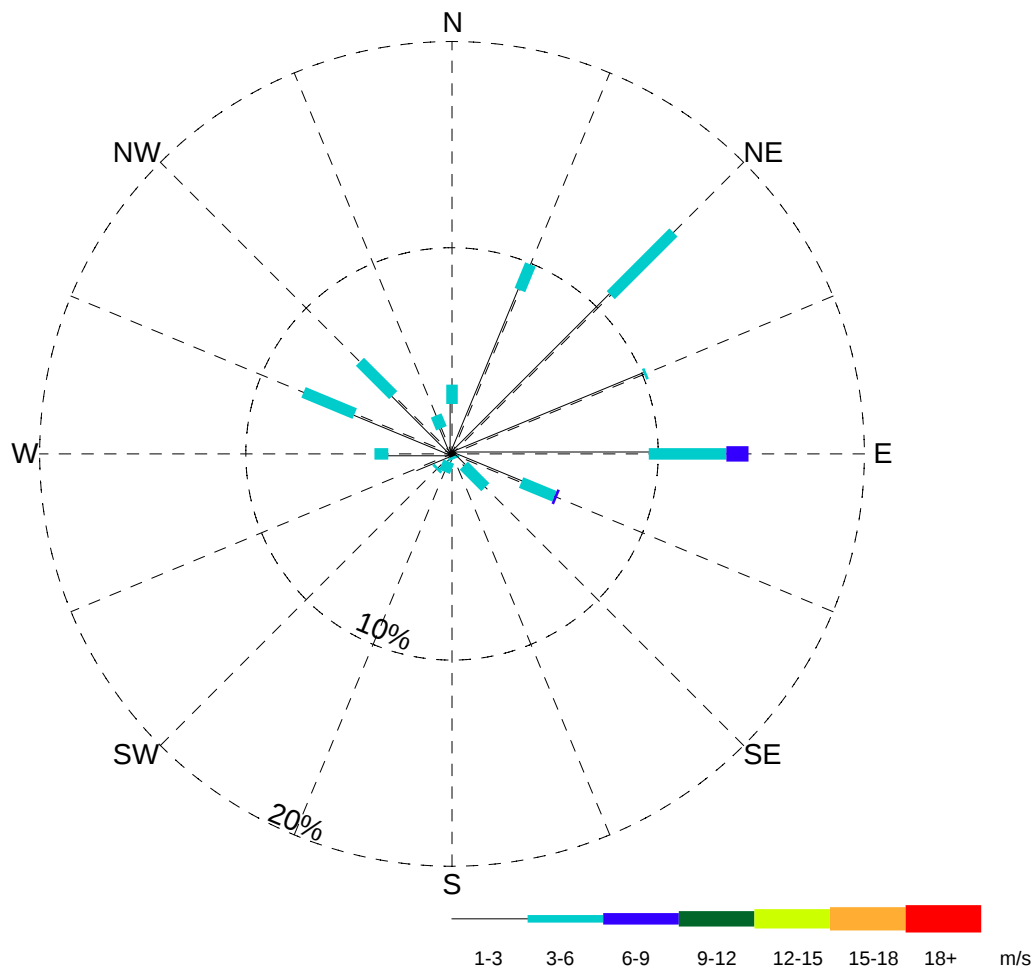
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Figure C-39



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.08	0.13	-	-	-	-	-	10.22
NE	-	10.89	4.30	-	-	-	-	-	15.19
NNE	-	8.60	1.34	-	-	-	-	-	9.95
N	-	2.42	0.94	-	-	-	-	-	3.36
NNW	-	1.34	0.67	-	-	-	-	-	2.02
NW	-	4.03	2.29	-	-	-	-	-	6.32
WNW	-	5.11	2.69	-	-	-	-	-	7.80
W	-	3.09	0.67	-	-	-	-	-	3.76
WSW	-	1.88	-	-	-	-	-	-	1.88
SW	-	0.94	0.13	-	-	-	-	-	1.08
SSW	-	0.40	0.54	-	-	-	-	-	0.94
S	-	0.13	-	-	-	-	-	-	0.13
SSE	-	0.13	0.13	-	-	-	-	-	0.27
SE	-	0.81	1.48	-	-	-	-	-	2.29
ESE	-	3.63	1.75	0.13	-	-	-	-	5.51
E	-	9.54	3.76	1.08	-	-	-	-	14.38
Calm	14.92	-	-	-	-	-	-	-	14.92
Total (%)	14.92	63.04	20.83	1.21	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Dec. 01, 2007

End Date: Dec. 31, 2007

NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
December 2007**

PROJECT NO.
Y22101057

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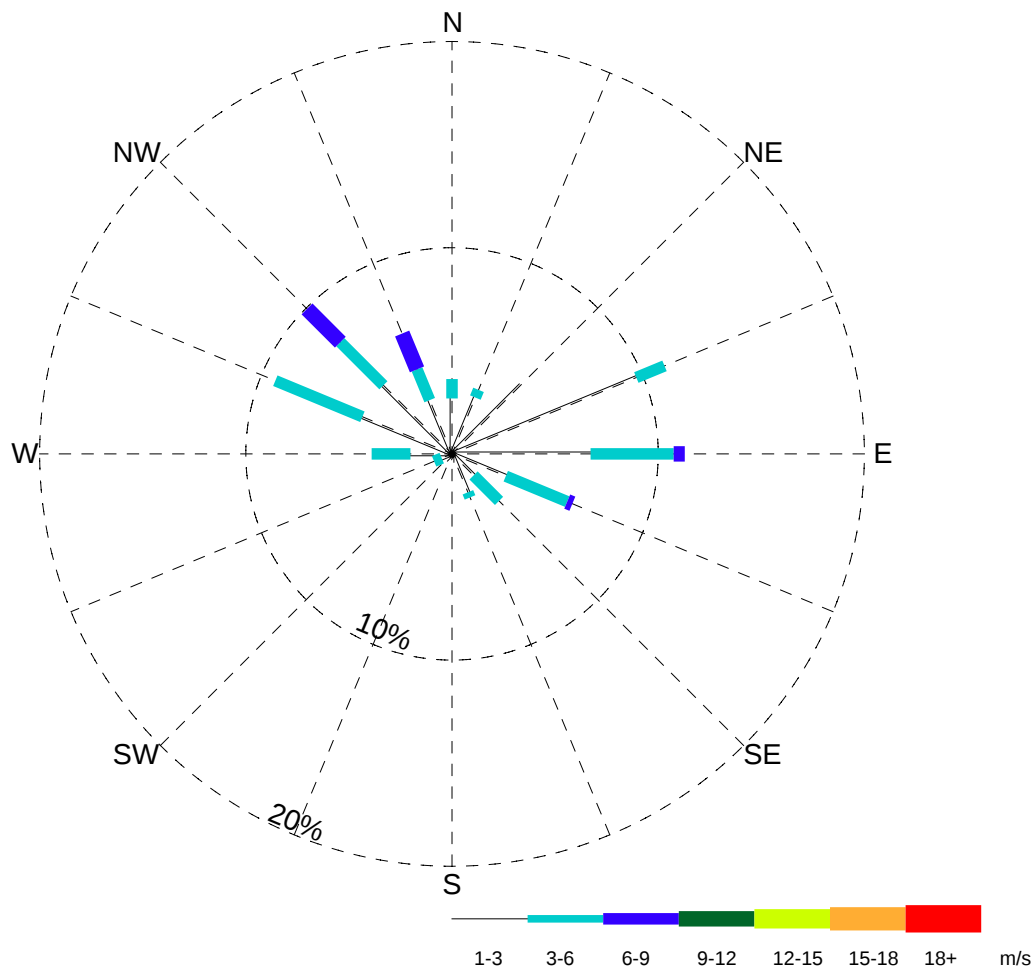
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Figure C-40



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	9.68	1.48	-	-	-	-	-	11.16
NE	-	4.70	-	-	-	-	-	-	4.70
NNE	-	2.96	0.40	-	-	-	-	-	3.36
N	-	2.69	0.94	-	-	-	-	-	3.63
NNW	-	2.82	1.61	1.88	-	-	-	-	6.32
NW	-	4.70	2.96	2.29	-	-	-	-	9.95
WNW	-	4.70	4.57	-	-	-	-	-	9.27
W	-	2.02	1.88	-	-	-	-	-	3.90
WSW	-	0.54	0.40	-	-	-	-	-	0.94
SW	-	0.40	-	-	-	-	-	-	0.40
SSW	-	0.27	-	-	-	-	-	-	0.27
S	-	0.40	-	-	-	-	-	-	0.40
SSE	-	2.02	0.27	-	-	-	-	-	2.29
SE	-	1.48	1.75	-	-	-	-	-	3.23
ESE	-	2.82	3.23	0.27	-	-	-	-	6.32
E	-	6.72	4.03	0.54	-	-	-	-	11.29
Calm	22.58	-	-	-	-	-	-	-	22.58
Total (%)	22.58	48.92	23.52	4.97	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Jan. 01, 2008

End Date: Jan. 31, 2008

NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
January 2008**

PROJECT NO.

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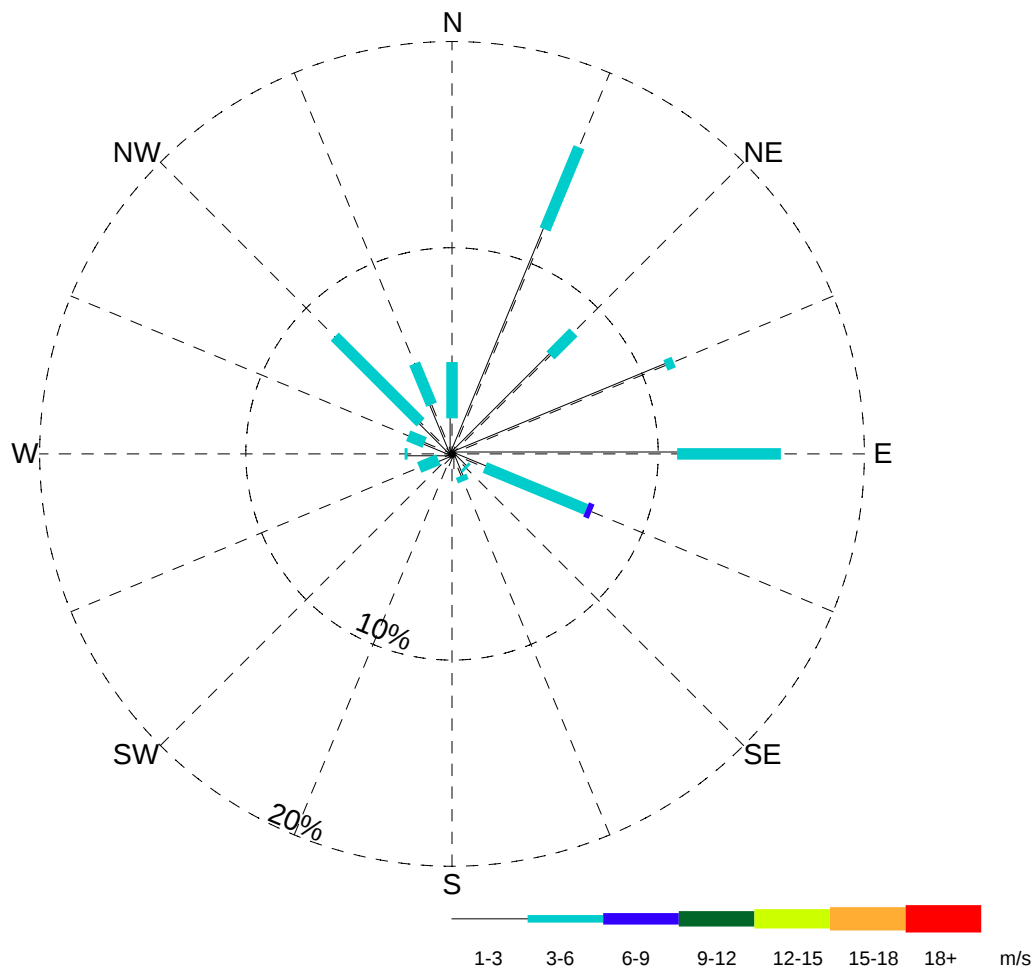
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Figure C-41



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	11.21	0.43	-	-	-	-	-	11.64
NE	-	6.75	1.58	-	-	-	-	-	8.33
NNE	-	11.78	4.31	-	-	-	-	-	16.09
N	-	1.72	2.73	-	-	-	-	-	4.45
NNW	-	2.59	2.15	-	-	-	-	-	4.74
NW	-	2.15	5.89	-	-	-	-	-	8.05
WNW	-	1.44	0.86	-	-	-	-	-	2.30
W	-	2.15	0.14	-	-	-	-	-	2.30
WSW	-	0.72	1.01	-	-	-	-	-	1.72
SW	-	0.57	-	-	-	-	-	-	0.57
SSW	-	0.57	-	-	-	-	-	-	0.57
S	-	0.72	-	-	-	-	-	-	0.72
SSE	-	1.15	0.29	-	-	-	-	-	1.44
SE	-	0.86	0.14	-	-	-	-	-	1.01
ESE	-	1.72	5.32	0.29	-	-	-	-	7.33
E	-	10.92	5.03	-	-	-	-	-	15.95
Calm	12.79	-	-	-	-	-	-	-	12.79
Total (%)	12.79	57.04	29.89	0.29	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 29 days

Start Date: Feb. 01, 2008

End Date: Feb. 29, 2008

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2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
February 2008**

PROJECT NO.
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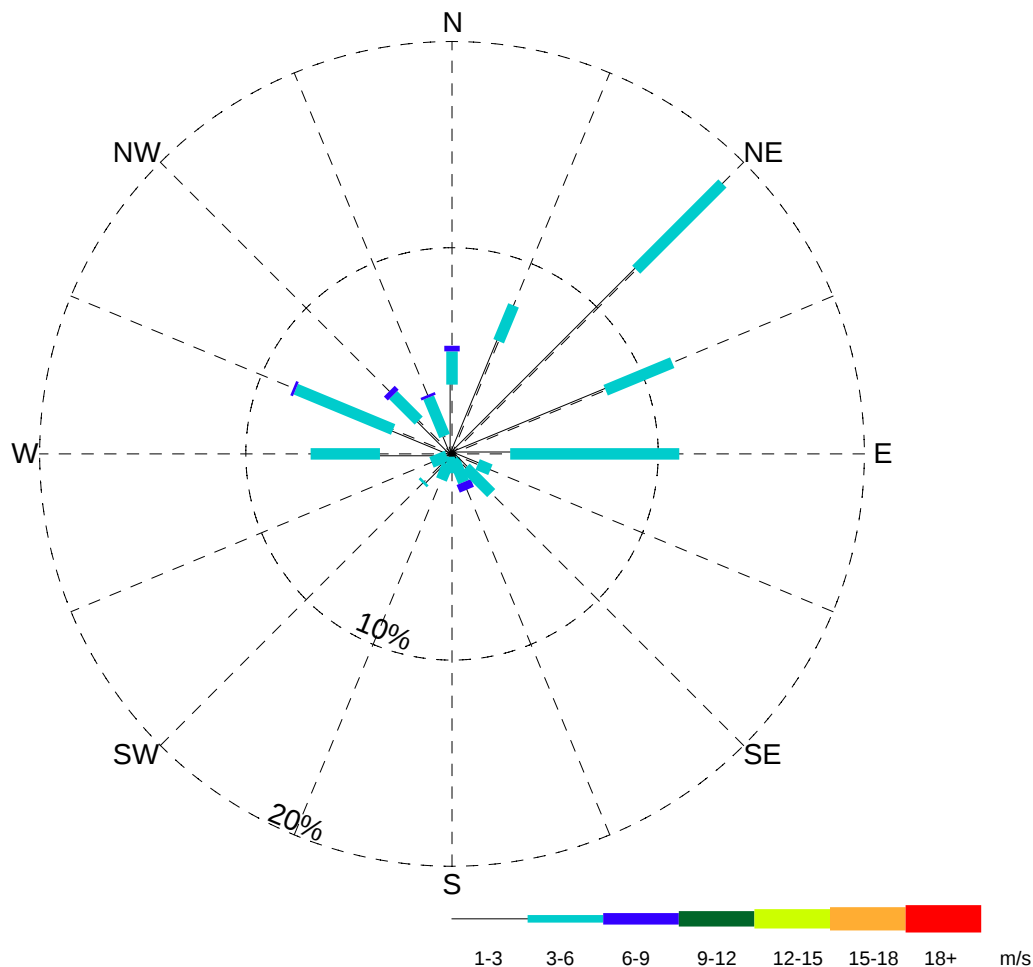
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Figure C-42



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	8.06	3.49	-	-	-	-	-	11.56
NE	-	12.63	5.91	-	-	-	-	-	18.55
NNE	-	5.91	1.88	-	-	-	-	-	7.80
N	-	3.36	1.61	0.27	-	-	-	-	5.24
NNW	-	0.94	2.02	0.13	-	-	-	-	3.09
NW	-	2.29	1.75	0.27	-	-	-	-	4.30
WNW	-	3.09	5.11	0.13	-	-	-	-	8.33
W	-	3.49	3.36	-	-	-	-	-	6.86
WSW	-	0.27	0.81	-	-	-	-	-	1.08
SW	-	1.88	0.13	-	-	-	-	-	2.02
SSW	-	0.54	0.81	-	-	-	-	-	1.34
S	-	0.13	0.81	-	-	-	-	-	0.94
SSE	-	0.27	1.21	0.40	-	-	-	-	1.88
SE	-	0.94	1.75	-	-	-	-	-	2.69
ESE	-	1.34	0.67	-	-	-	-	-	2.02
E	-	2.82	8.20	-	-	-	-	-	11.02
Calm	11.29	-	-	-	-	-	-	-	11.29
Total (%)	11.29	47.98	39.52	1.21	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Mar. 01, 2008

End Date: Mar. 31, 2008

NOTES

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2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
March 2008**

PROJECT NO.
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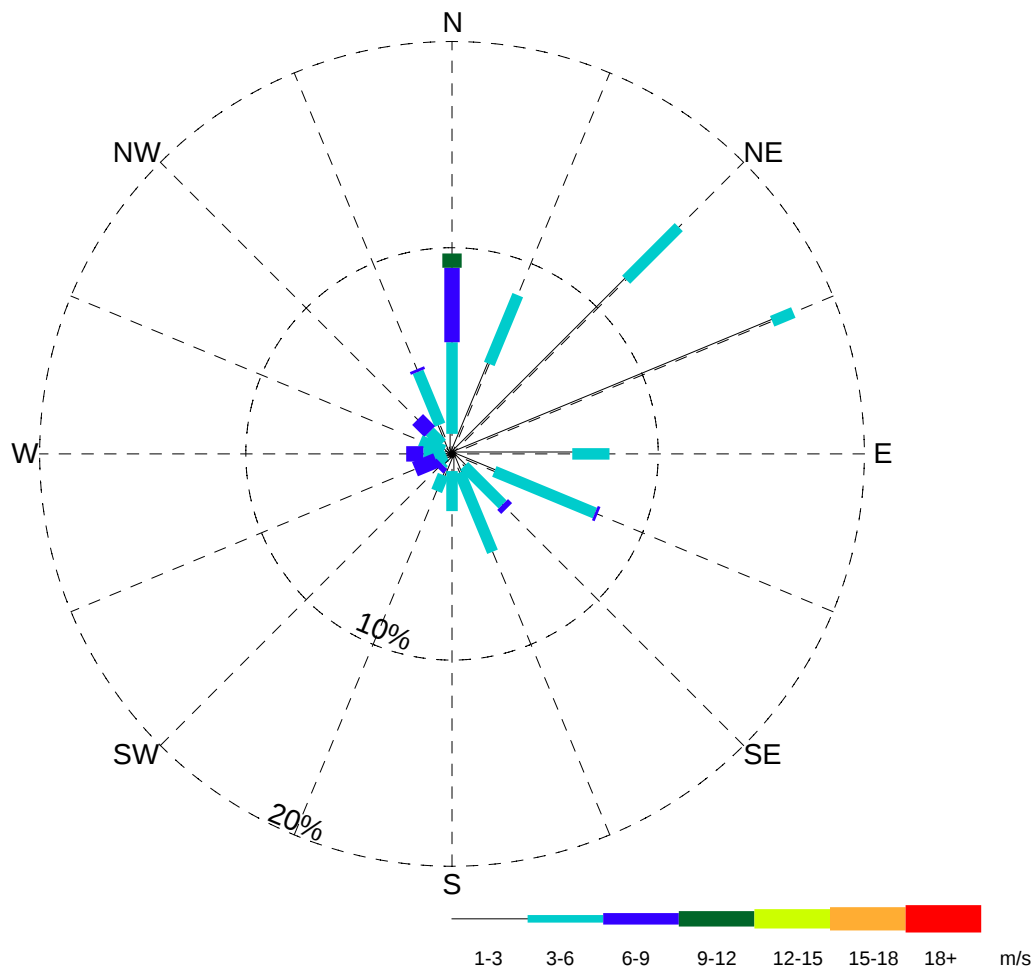
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Figure C-43



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	16.81	1.11	-	-	-	-	-	17.92
NE	-	11.94	3.61	-	-	-	-	-	15.56
NNE	-	4.72	3.61	-	-	-	-	-	8.33
N	-	0.97	4.44	3.61	0.69	-	-	-	9.72
NNW	-	1.53	2.78	0.14	-	-	-	-	4.44
NW	-	0.69	0.83	0.83	-	-	-	-	2.36
WNW	-	0.42	1.25	-	-	-	-	-	1.67
W	-	0.56	0.83	0.83	-	-	-	-	2.22
WSW	-	0.28	0.56	1.11	-	-	-	-	1.94
SW	-	0.56	0.14	0.28	-	-	-	-	0.97
SSW	-	1.11	0.83	-	-	-	-	-	1.94
S	-	0.83	1.94	-	-	-	-	-	2.78
SSE	-	0.97	4.17	-	-	-	-	-	5.14
SE	-	0.83	2.64	0.28	-	-	-	-	3.75
ESE	-	2.22	5.28	0.14	-	-	-	-	7.64
E	-	5.83	1.81	-	-	-	-	-	7.64
Calm	5.97	-	-	-	-	-	-	-	5.97
Total (%)	5.97	50.28	35.83	7.22	0.69	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Apr. 01, 2008

End Date: Apr. 30, 2008

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
April 2008**

PROJECT NO.
Y22101057

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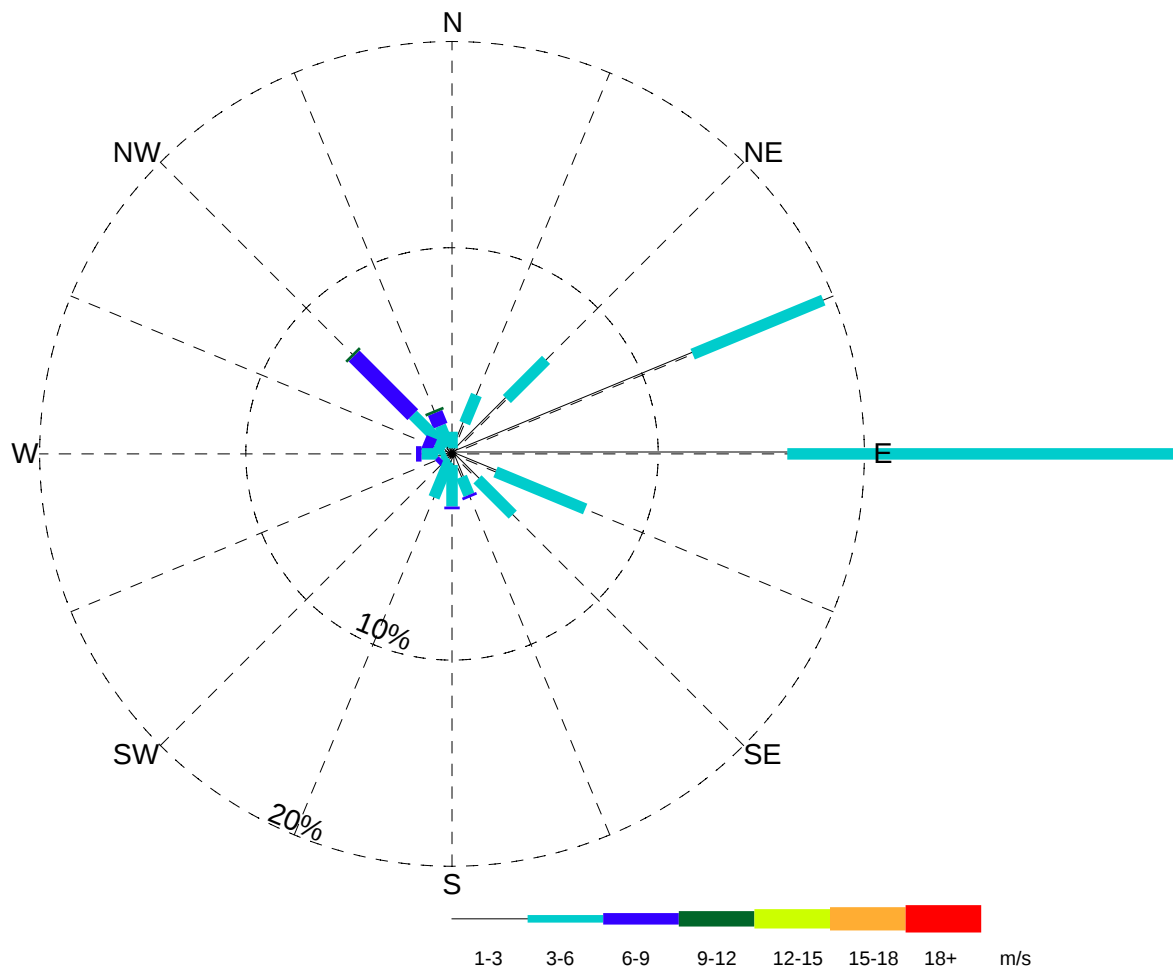
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July 2009

Figure C-44



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	12.63	6.86	-	-	-	-	-	19.49
NE	-	3.76	2.69	-	-	-	-	-	6.45
NNE	-	1.61	1.48	-	-	-	-	-	3.09
N	-	0.27	0.81	-	-	-	-	-	1.08
NNW	-	0.40	1.08	0.67	0.13	-	-	-	2.29
NW	-	0.67	2.02	4.03	0.13	-	-	-	6.86
WNW	-	0.40	0.54	0.54	-	-	-	-	1.48
W	-	0.67	0.81	0.27	-	-	-	-	1.75
WSW	-	0.27	0.27	-	-	-	-	-	0.54
SW	-	0.27	0.27	0.27	-	-	-	-	0.81
SSW	-	0.40	1.88	-	-	-	-	-	2.29
S	-	0.54	2.02	0.13	-	-	-	-	2.69
SSE	-	1.21	0.94	0.13	-	-	-	-	2.29
SE	-	1.75	2.42	-	-	-	-	-	4.17
ESE	-	2.29	4.70	-	-	-	-	-	6.99
E	-	16.26	19.09	-	-	-	-	-	35.35
Calm	2.42	-	-	-	-	-	-	-	2.42
Total (%)	2.42	43.41	47.85	6.05	0.27	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: May. 01, 2008

End Date: May. 31, 2008

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
May 2008**

PROJECT NO.
Y22101057

DWN
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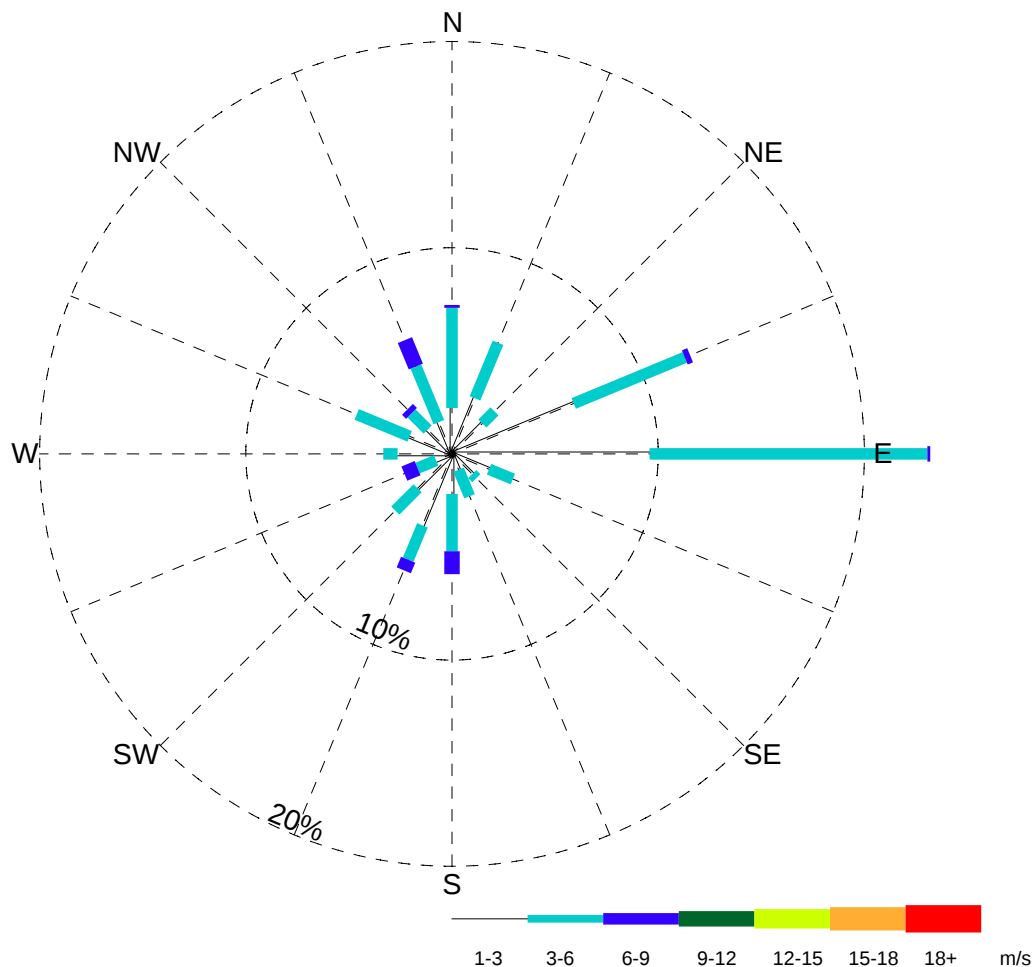
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Figure C-45



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.39	5.83	0.28	-	-	-	-	12.50
NE	-	2.08	0.83	-	-	-	-	-	2.92
NNE	-	2.92	2.92	-	-	-	-	-	5.83
N	-	2.22	4.86	0.14	-	-	-	-	7.22
NNW	-	1.67	2.92	1.39	-	-	-	-	5.97
NW	-	1.67	1.11	0.28	-	-	-	-	3.06
WNW	-	2.22	2.78	-	-	-	-	-	5.00
W	-	2.64	0.69	-	-	-	-	-	3.33
WSW	-	0.83	0.97	0.69	-	-	-	-	2.50
SW	-	2.36	1.53	-	-	-	-	-	3.89
SSW	-	3.75	1.81	0.56	-	-	-	-	6.11
S	-	1.94	2.78	1.11	-	-	-	-	5.83
SSE	-	0.83	1.39	-	-	-	-	-	2.22
SE	-	1.39	0.28	-	-	-	-	-	1.67
ESE	-	1.94	1.25	-	-	-	-	-	3.19
E	-	9.58	13.47	0.14	-	-	-	-	23.19
Calm	5.56	-	-	-	-	-	-	-	5.56
Total (%)	5.56	44.44	45.42	4.58	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: June 01, 2008

End Date: June 30, 2008

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
June 2008**

PROJECT NO.
Y22101057

DWN
TM

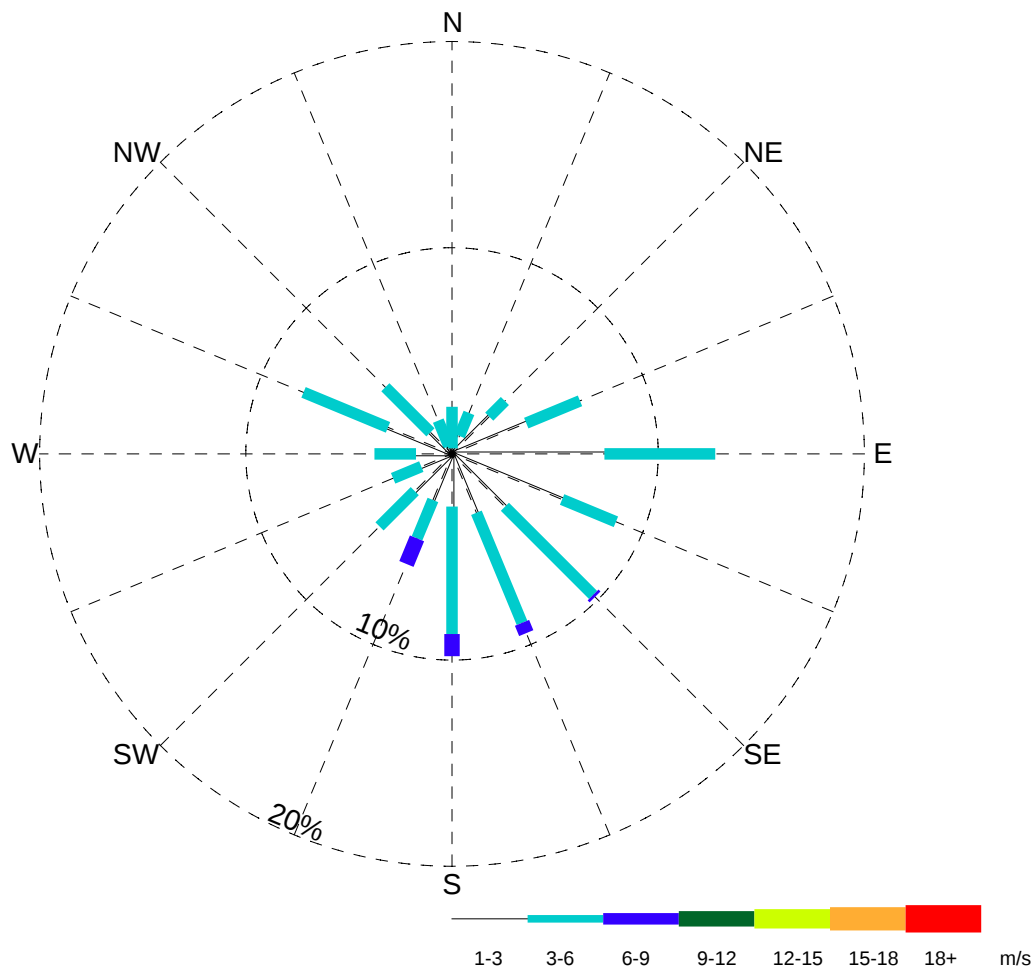
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Figure C-46



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.90	2.82	-	-	-	-	-	6.72
NE	-	2.55	1.08	-	-	-	-	-	3.63
NNE	-	0.94	1.21	-	-	-	-	-	2.15
N	-	0.27	2.02	-	-	-	-	-	2.29
NNW	-	0.40	1.34	-	-	-	-	-	1.75
NW	-	1.48	3.09	-	-	-	-	-	4.57
WNW	-	3.36	4.43	-	-	-	-	-	7.80
W	-	1.75	2.02	-	-	-	-	-	3.76
WSW	-	1.61	1.48	-	-	-	-	-	3.09
SW	-	2.55	2.42	-	-	-	-	-	4.97
SSW	-	2.42	2.02	1.34	-	-	-	-	5.78
S	-	2.55	6.18	1.08	-	-	-	-	9.81
SSE	-	3.09	5.78	0.54	-	-	-	-	9.41
SE	-	3.63	6.05	0.13	-	-	-	-	9.81
ESE	-	5.78	2.82	-	-	-	-	-	8.60
E	-	7.39	5.38	-	-	-	-	-	12.77
Calm	3.09	-	-	-	-	-	-	-	3.09
Total (%)	3.09	43.68	50.13	3.09	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: July 01, 2008

End Date: July 31, 2008

NOTES

CLIENT



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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
July 2008**

PROJECT NO.
Y22101057

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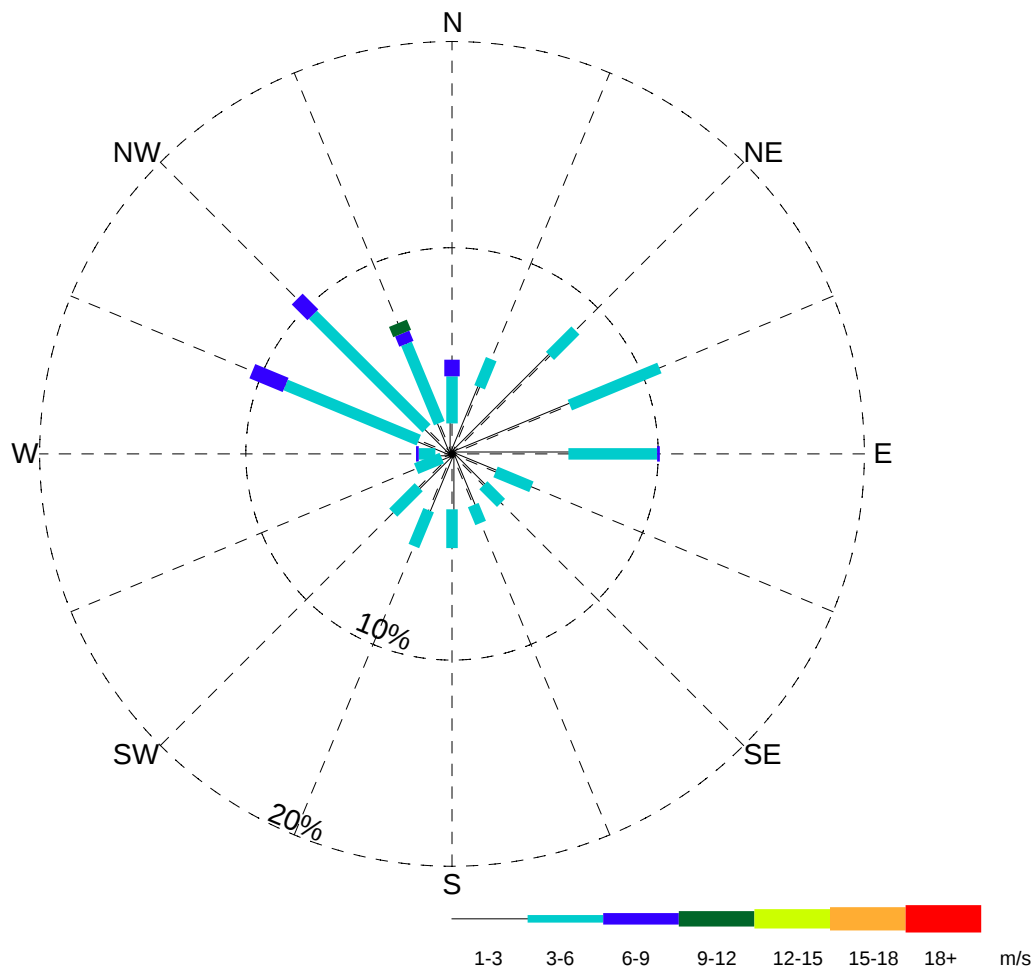
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July 2009

Figure C-47



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	6.18	4.70	-	-	-	-	-	10.89
NE	-	6.72	1.75	-	-	-	-	-	8.47
NNE	-	3.49	1.48	-	-	-	-	-	4.97
N	-	1.48	2.29	0.81	-	-	-	-	4.57
NNW	-	1.61	4.17	0.54	0.54	-	-	-	6.86
NW	-	1.75	7.80	1.08	-	-	-	-	10.62
WNW	-	1.75	6.99	1.75	-	-	-	-	10.48
W	-	0.81	0.81	0.13	-	-	-	-	1.75
WSW	-	0.54	1.34	-	-	-	-	-	1.88
SW	-	2.29	1.75	-	-	-	-	-	4.03
SSW	-	2.96	1.88	-	-	-	-	-	4.84
S	-	2.69	1.88	-	-	-	-	-	4.57
SSE	-	2.69	0.94	-	-	-	-	-	3.63
SE	-	2.15	1.21	-	-	-	-	-	3.36
ESE	-	2.29	1.88	-	-	-	-	-	4.17
E	-	5.64	4.30	0.13	-	-	-	-	10.08
Calm	4.84	-	-	-	-	-	-	-	4.84
Total (%)	4.84	45.03	45.16	4.43	0.54	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Aug. 01, 2008

End Date: Aug. 31, 2008

NOTES

CLIENT



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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
August 2008**

PROJECT NO.
Y22101057

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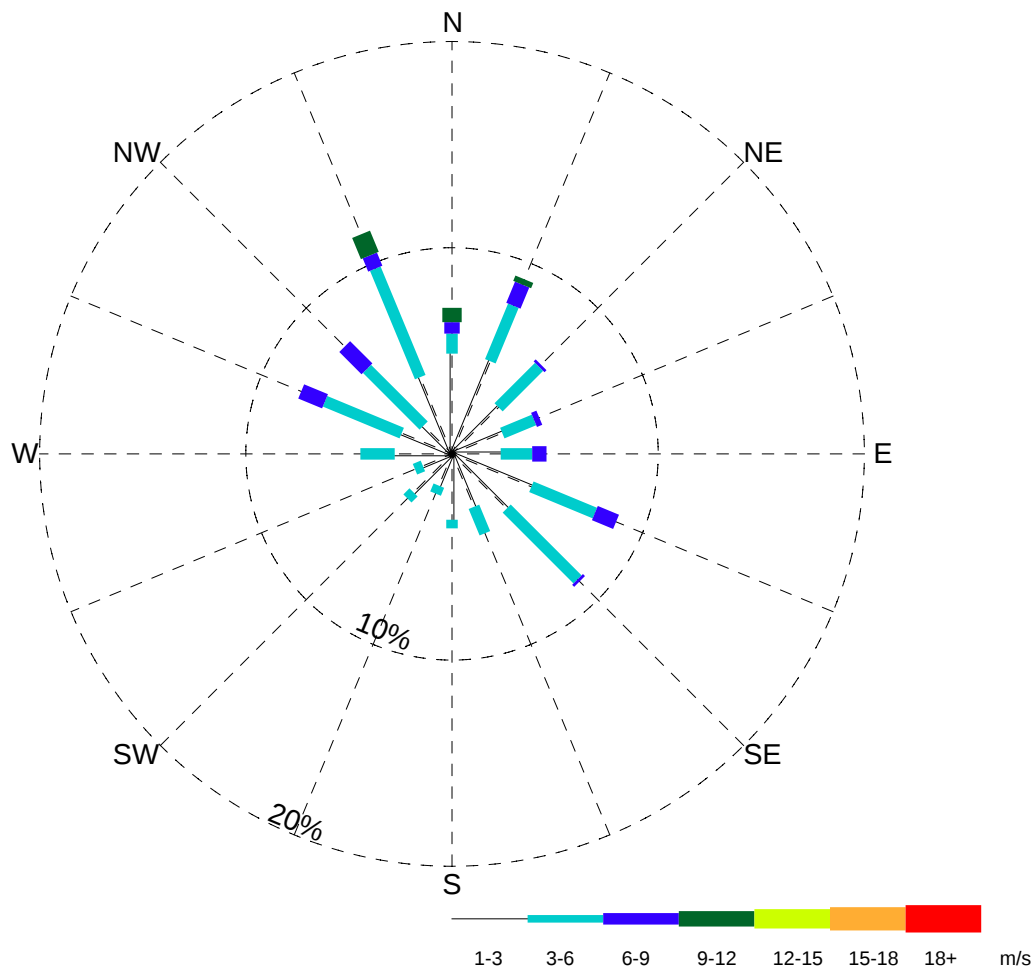
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Figure C-48



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.64	1.67	0.28	-	-	-	-	4.58
NE	-	3.19	2.78	0.14	-	-	-	-	6.11
NNE	-	4.86	2.92	1.11	0.28	-	-	-	9.17
N	-	4.86	0.97	0.56	0.69	-	-	-	7.08
NNW	-	4.03	5.69	0.69	1.11	-	-	-	11.53
NW	-	1.94	3.89	1.53	-	-	-	-	7.36
WNW	-	2.64	4.03	1.25	-	-	-	-	7.92
W	-	2.78	1.67	-	-	-	-	-	4.44
WSW	-	1.53	0.42	-	-	-	-	-	1.94
SW	-	2.64	0.42	-	-	-	-	-	3.06
SSW	-	1.67	0.42	-	-	-	-	-	2.08
S	-	3.19	0.42	-	-	-	-	-	3.61
SSE	-	2.78	1.39	-	-	-	-	-	4.17
SE	-	3.75	4.86	0.14	-	-	-	-	8.75
ESE	-	4.17	3.33	1.11	-	-	-	-	8.61
E	-	2.36	1.53	0.69	-	-	-	-	4.58
Calm	5.00	-	-	-	-	-	-	-	5.00
Total (%)	5.00	49.03	36.39	7.50	2.08	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Sep. 01, 2008

End Date: Sep. 30, 2008

NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
September 2008**

PROJECT NO.
Y22101057

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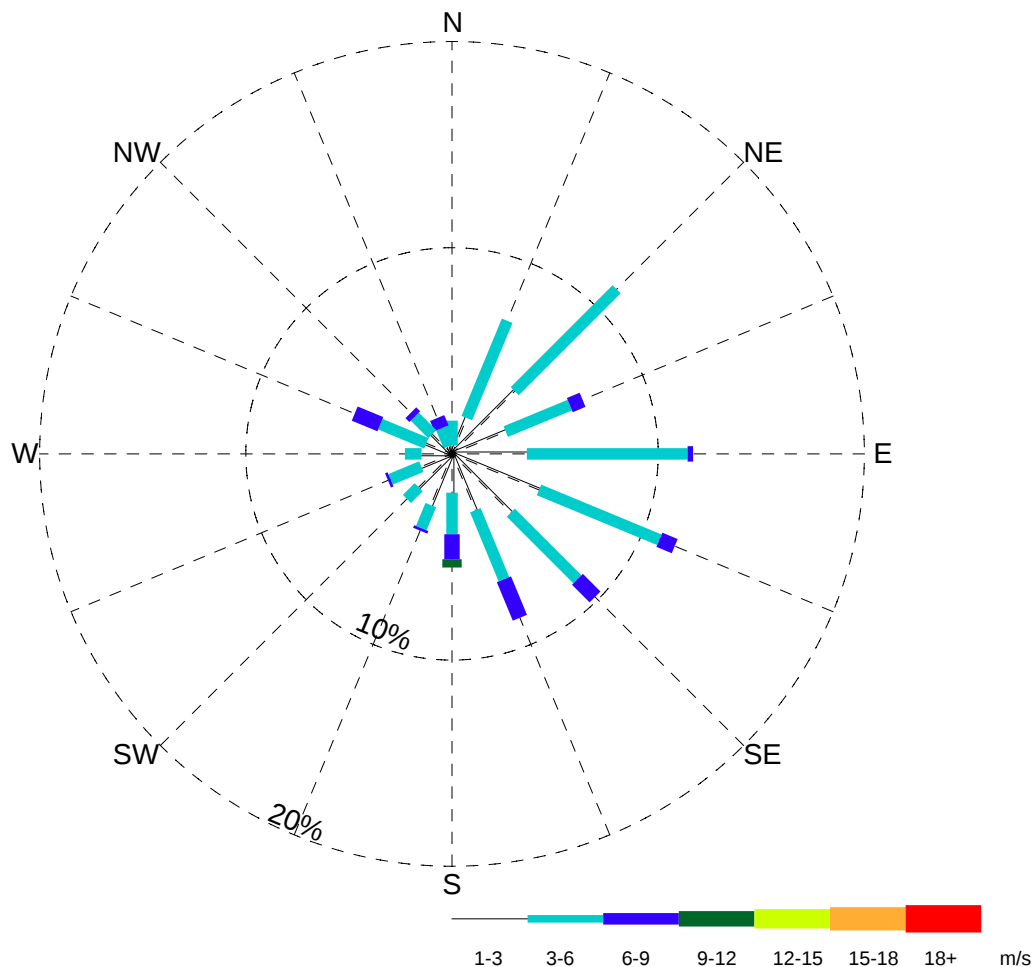
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Figure C-49



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.82	3.36	0.67	-	-	-	-	6.86
NE	-	4.30	6.99	-	-	-	-	-	11.29
NNE	-	1.88	5.11	-	-	-	-	-	6.99
N	-	0.40	1.21	-	-	-	-	-	1.61
NNW	-	0.40	0.94	0.54	-	-	-	-	1.88
NW	-	1.34	1.21	0.27	-	-	-	-	2.82
WNW	-	1.34	2.42	1.34	-	-	-	-	5.11
W	-	1.48	0.81	-	-	-	-	-	2.29
WSW	-	1.61	1.61	0.13	-	-	-	-	3.36
SW	-	2.29	0.81	-	-	-	-	-	3.09
SSW	-	2.69	1.21	0.13	-	-	-	-	4.03
S	-	1.88	2.02	1.21	0.40	-	-	-	5.51
SSE	-	2.96	3.63	2.02	-	-	-	-	8.60
SE	-	4.03	4.57	1.21	-	-	-	-	9.81
ESE	-	4.57	6.32	0.81	-	-	-	-	11.69
E	-	3.63	7.80	0.27	-	-	-	-	11.69
Calm	3.36	-	-	-	-	-	-	-	3.36
Total (%)	3.36	37.63	50.00	8.60	0.40	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Oct. 01, 2008

End Date: Oct. 31, 2008

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
October 2008**

PROJECT NO.
Y22101057

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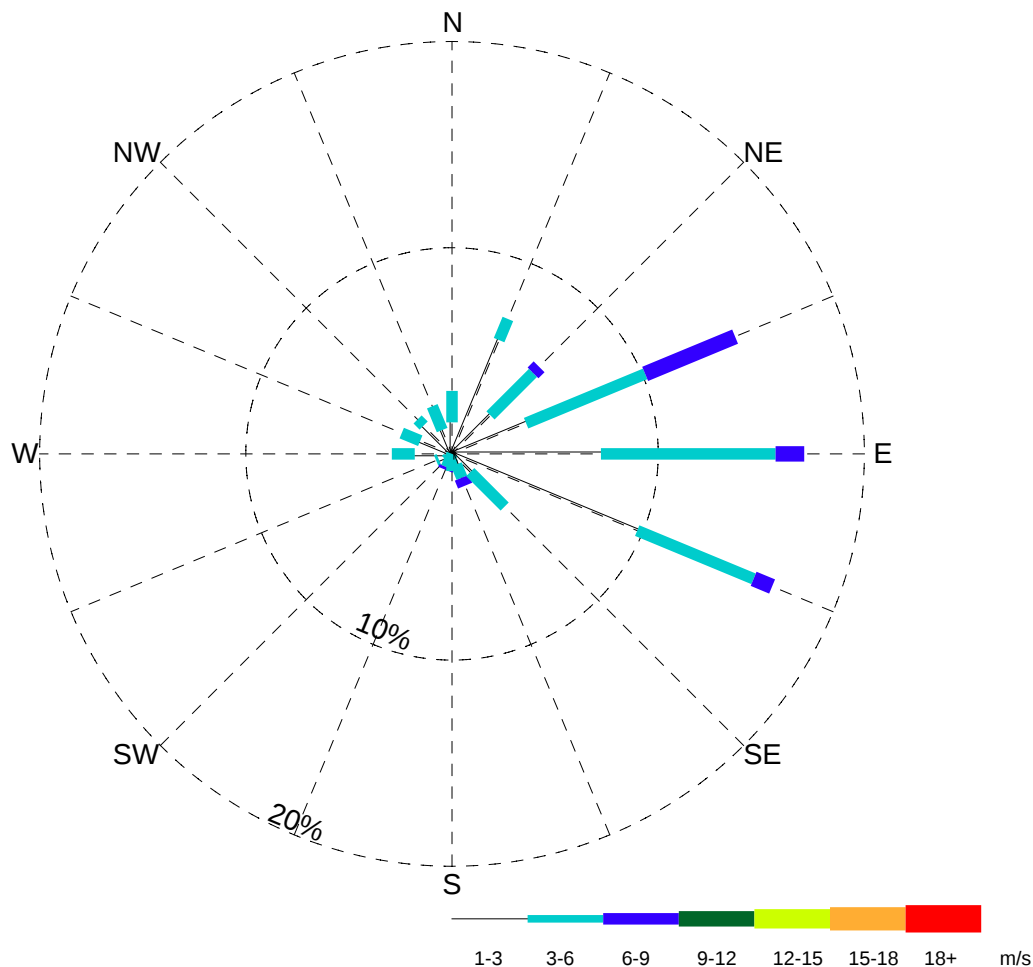
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DATE
July 2009

Figure C-50



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	3.89	6.25	4.72	-	-	-	-	14.86
NE	-	2.64	2.92	0.42	-	-	-	-	5.97
NNE	-	5.97	1.11	-	-	-	-	-	7.08
N	-	1.53	1.53	-	-	-	-	-	3.06
NNW	-	1.25	1.25	-	-	-	-	-	2.50
NW	-	1.94	0.42	-	-	-	-	-	2.36
WNW	-	1.67	0.97	-	-	-	-	-	2.64
W	-	1.81	1.11	-	-	-	-	-	2.92
WSW	-	0.69	0.14	-	-	-	-	-	0.83
SW	-	0.28	0.14	-	-	-	-	-	0.42
SSW	-	-	0.69	0.14	-	-	-	-	0.83
S	-	0.28	0.56	-	-	-	-	-	0.83
SSE	-	0.56	0.69	0.42	-	-	-	-	1.67
SE	-	1.25	2.36	-	-	-	-	-	3.61
ESE	-	9.72	6.11	0.97	-	-	-	-	16.81
E	-	7.22	8.47	1.39	-	-	-	-	17.08
Calm	16.53	-	-	-	-	-	-	-	16.53
Total (%)	16.53	40.69	34.72	8.06	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Nov. 01, 2008

End Date: Nov. 30, 2008

NOTES

CLIENT



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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
November 2008**

PROJECT NO.
Y22101057

DWN
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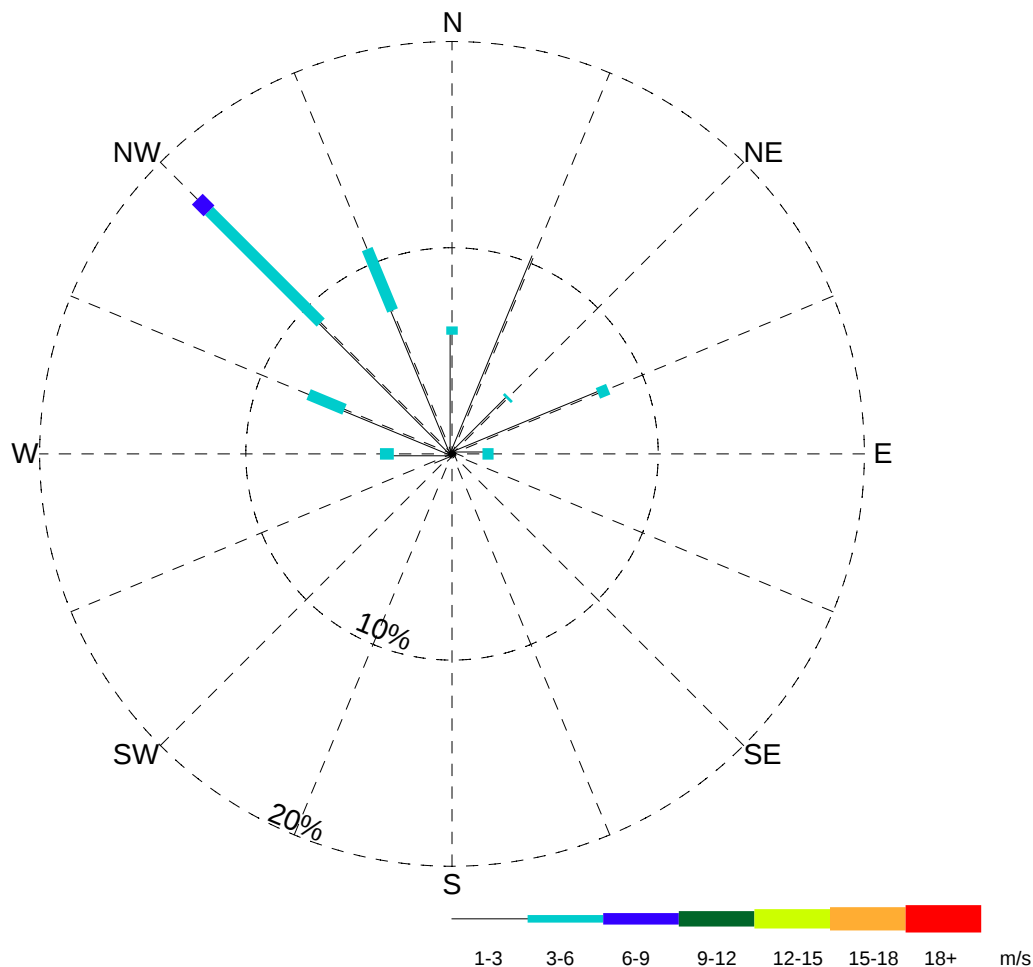
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July 2009

Figure C-51



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.66	0.54	-	-	-	-	-	8.20
NE	-	3.76	0.13	-	-	-	-	-	3.90
NNE	-	10.35	-	-	-	-	-	-	10.35
N	-	5.78	0.40	-	-	-	-	-	6.18
NNW	-	7.53	3.23	-	-	-	-	-	10.75
NW	-	9.01	7.66	0.81	-	-	-	-	17.47
WNW	-	5.64	1.88	-	-	-	-	-	7.53
W	-	2.82	0.67	-	-	-	-	-	3.49
WSW	-	0.94	-	-	-	-	-	-	0.94
SW	-	0.40	-	-	-	-	-	-	0.40
SSW	-	-	-	-	-	-	-	-	-
S	-	-	-	-	-	-	-	-	-
SSE	-	0.40	-	-	-	-	-	-	0.40
SE	-	0.13	-	-	-	-	-	-	0.13
ESE	-	0.54	-	-	-	-	-	-	0.54
E	-	1.48	0.54	-	-	-	-	-	2.02
Calm	27.69	-	-	-	-	-	-	-	27.69
Total (%)	27.69	56.45	15.05	0.81	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Dec. 01, 2008

End Date: Dec. 31, 2008

NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
December 2008**

PROJECT NO.
Y22101057

DWN
TM

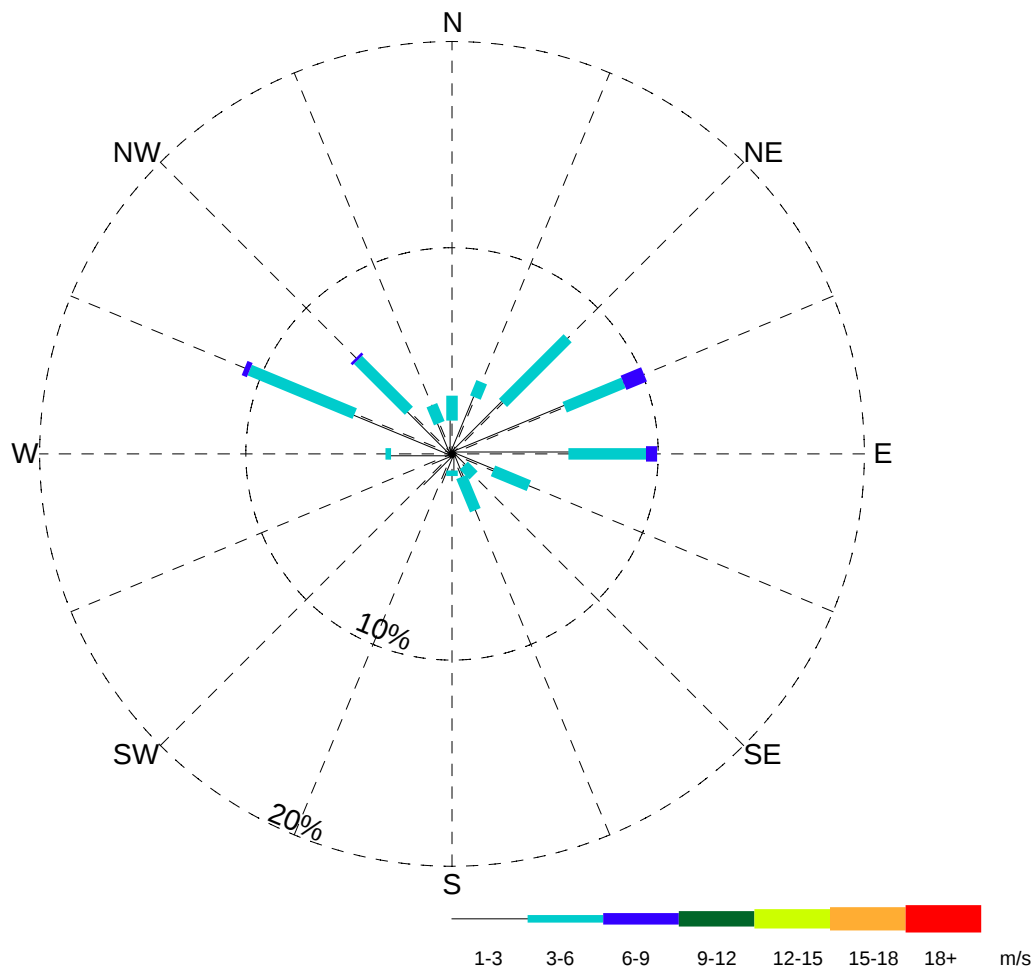
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DATE
July 2009

Figure C-52



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.91	3.09	1.08	-	-	-	-	10.08
NE	-	3.49	4.43	-	-	-	-	-	7.93
NNE	-	2.96	0.81	-	-	-	-	-	3.76
N	-	1.61	1.21	-	-	-	-	-	2.82
NNW	-	1.61	0.94	-	-	-	-	-	2.55
NW	-	2.96	3.49	0.13	-	-	-	-	6.59
WNW	-	5.11	5.51	0.27	-	-	-	-	10.89
W	-	2.96	0.27	-	-	-	-	-	3.23
WSW	-	1.08	-	-	-	-	-	-	1.08
SW	-	2.02	-	-	-	-	-	-	2.02
SSW	-	1.48	-	-	-	-	-	-	1.48
S	-	0.81	0.27	-	-	-	-	-	1.08
SSE	-	1.21	1.75	-	-	-	-	-	2.96
SE	-	0.81	0.67	-	-	-	-	-	1.48
ESE	-	2.15	1.88	-	-	-	-	-	4.03
E	-	5.64	3.76	0.54	-	-	-	-	9.95
Calm	28.09	-	-	-	-	-	-	-	28.09
Total (%)	28.09	41.80	28.09	2.02	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Jan. 01, 2009

End Date: Jan. 31, 2009

NOTES

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**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
January 2009**

PROJECT NO.
Y22101103

DWN
RED

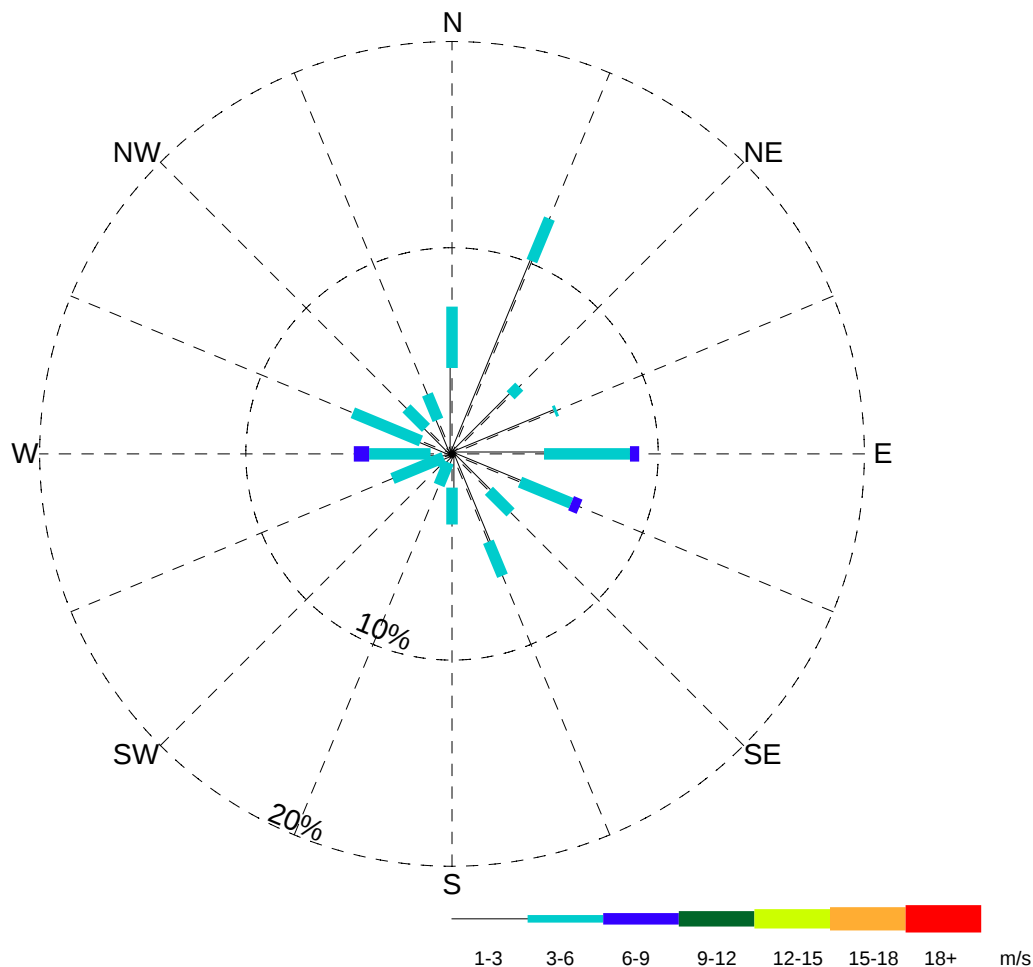
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February 2010

Figure C-53



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.36	0.15	-	-	-	-	-	5.51
NE	-	4.02	0.60	-	-	-	-	-	4.61
NNE	-	10.12	2.23	-	-	-	-	-	12.35
N	-	4.17	2.98	-	-	-	-	-	7.14
NNW	-	1.79	1.34	-	-	-	-	-	3.12
NW	-	1.79	1.34	-	-	-	-	-	3.12
WNW	-	1.64	3.57	-	-	-	-	-	5.21
W	-	1.04	2.98	0.74	-	-	-	-	4.76
WSW	-	0.45	2.68	-	-	-	-	-	3.12
SW	-	0.60	0.30	-	-	-	-	-	0.89
SSW	-	0.45	1.19	-	-	-	-	-	1.64
S	-	1.64	1.79	-	-	-	-	-	3.42
SSE	-	4.61	1.79	-	-	-	-	-	6.40
SE	-	2.53	1.49	-	-	-	-	-	4.02
ESE	-	3.57	2.68	0.45	-	-	-	-	6.70
E	-	4.46	4.17	0.45	-	-	-	-	9.08
Calm	18.90	-	-	-	-	-	-	-	18.90
Total (%)	18.90	48.21	31.25	1.64	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 28 days

Start Date: Feb. 01, 2009

End Date: Feb. 28, 2009

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
February 2009**

PROJECT NO.
Y22101103

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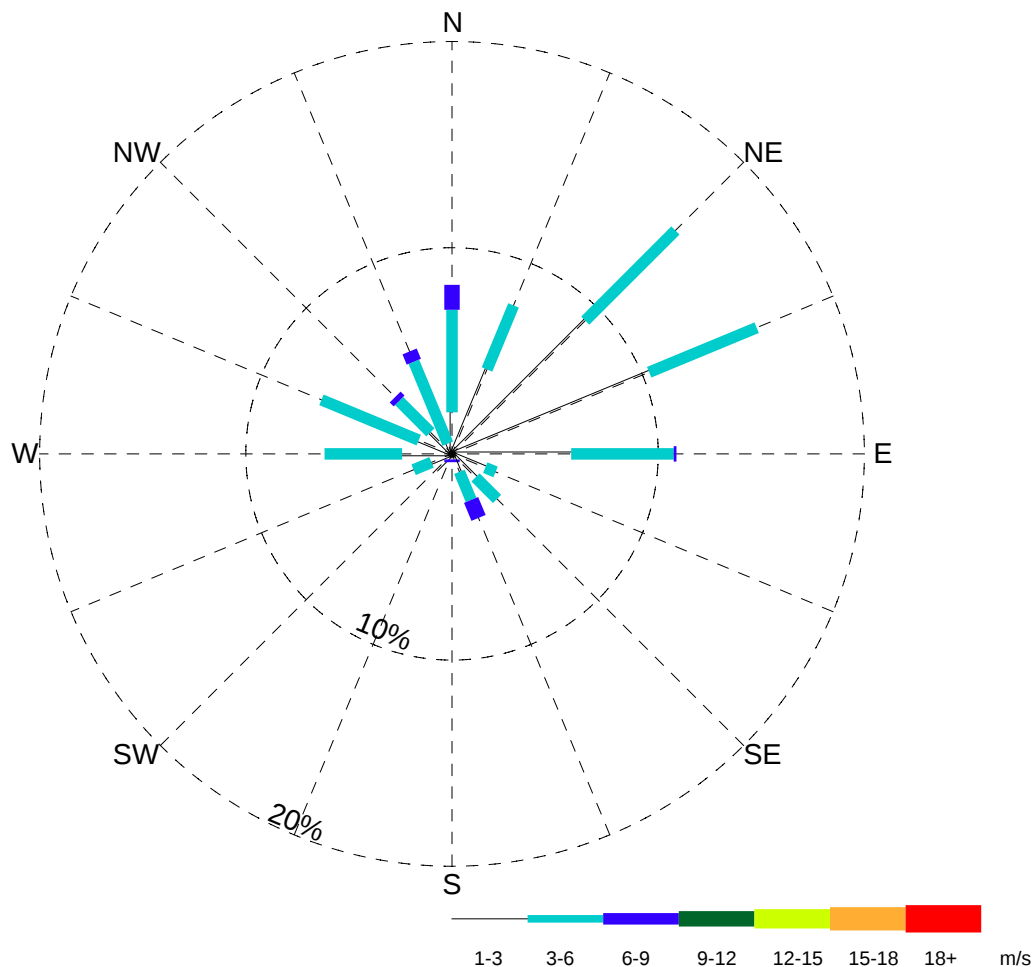
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February 2010

Figure C-54



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.35	5.64	-	-	-	-	-	15.99
NE	-	9.14	6.18	-	-	-	-	-	15.32
NNE	-	4.43	3.36	-	-	-	-	-	7.80
N	-	2.02	4.97	1.21	-	-	-	-	8.20
NNW	-	0.54	4.30	0.54	-	-	-	-	5.38
NW	-	1.48	2.15	0.27	-	-	-	-	3.90
WNW	-	1.75	5.11	-	-	-	-	-	6.86
W	-	2.42	3.76	-	-	-	-	-	6.18
WSW	-	1.08	0.94	-	-	-	-	-	2.02
SW	-	1.08	-	-	-	-	-	-	1.08
SSW	-	0.13	-	-	-	-	-	-	0.13
S	-	0.27	-	0.13	-	-	-	-	0.40
SSE	-	0.94	1.48	0.94	-	-	-	-	3.36
SE	-	1.61	1.48	-	-	-	-	-	3.09
ESE	-	1.75	0.54	-	-	-	-	-	2.29
E	-	5.78	4.97	0.13	-	-	-	-	10.89
Calm	7.12	-	-	-	-	-	-	-	7.12
Total (%)	7.12	44.76	44.89	3.23	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Mar. 01, 2009

End Date: Mar. 31, 2009

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
March 2009**

PROJECT NO.
Y22101103

DWN
RED

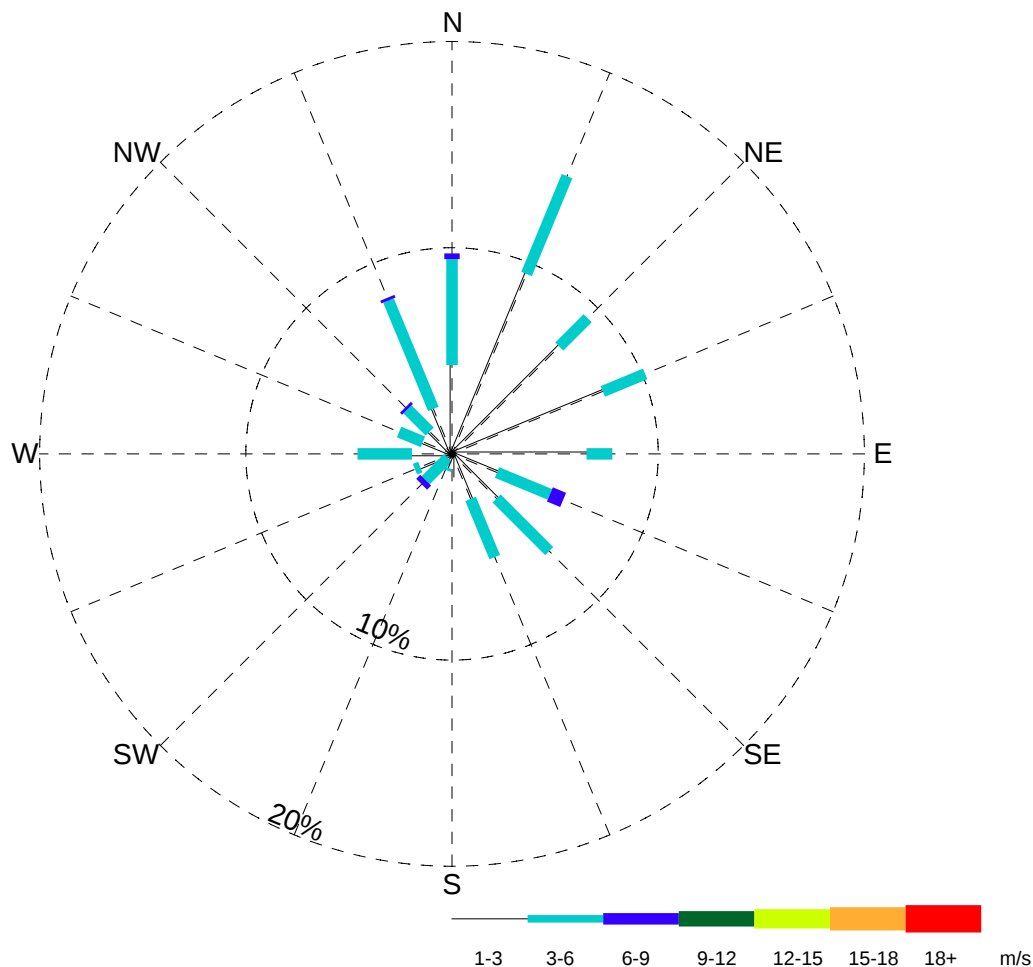
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DATE
February 2010

Figure C-55



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.92	2.22	-	-	-	-	-	10.14
NE	-	7.36	1.94	-	-	-	-	-	9.31
NNE	-	9.44	5.14	-	-	-	-	-	14.58
N	-	4.31	5.14	0.28	-	-	-	-	9.72
NNW	-	2.36	5.69	0.14	-	-	-	-	8.19
NW	-	1.53	1.53	0.14	-	-	-	-	3.19
WNW	-	1.53	1.25	-	-	-	-	-	2.78
W	-	1.94	2.64	-	-	-	-	-	4.58
WSW	-	1.67	0.28	-	-	-	-	-	1.94
SW	-	0.28	1.53	0.28	-	-	-	-	2.08
SSW	-	0.69	0.14	-	-	-	-	-	0.83
S	-	1.11	-	-	-	-	-	-	1.11
SSE	-	2.36	3.06	-	-	-	-	-	5.42
SE	-	3.06	3.61	-	-	-	-	-	6.67
ESE	-	2.36	2.78	0.69	-	-	-	-	5.83
E	-	6.53	1.25	-	-	-	-	-	7.78
Calm	5.83	-	-	-	-	-	-	-	5.83
Total (%)	5.83	54.44	38.19	1.53	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Apr. 01, 2009

End Date: Apr. 30, 2009

NOTES

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**EBA Engineering
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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
April 2009**

PROJECT NO.
Y22101103

DWN
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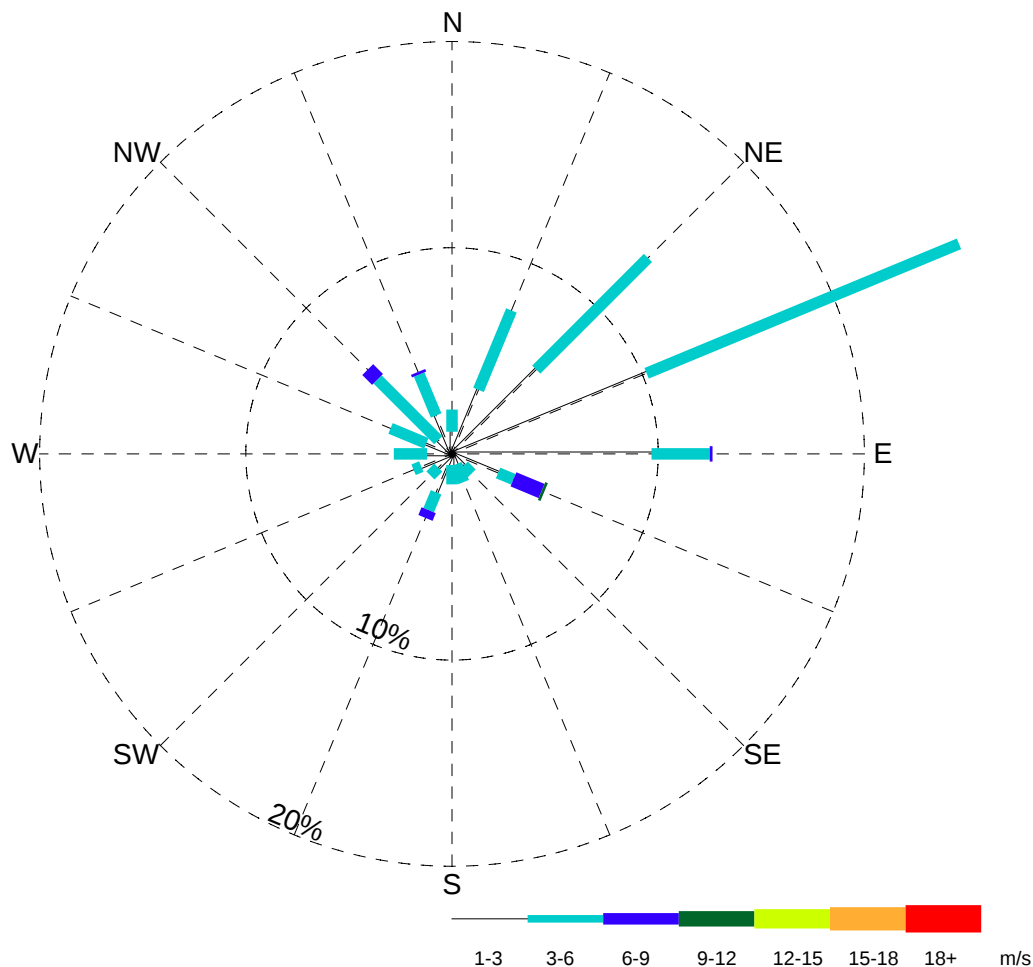
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Figure C-56



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	10.22	16.40	-	-	-	-	-	26.61
NE	-	5.78	7.66	-	-	-	-	-	13.44
NNE	-	3.36	4.17	-	-	-	-	-	7.53
N	-	1.08	1.08	-	-	-	-	-	2.15
NNW	-	2.02	2.15	0.13	-	-	-	-	4.30
NW	-	0.94	4.17	0.67	-	-	-	-	5.78
WNW	-	1.34	1.88	-	-	-	-	-	3.23
W	-	1.21	1.61	-	-	-	-	-	2.82
WSW	-	1.61	0.40	-	-	-	-	-	2.02
SW	-	0.94	0.54	-	-	-	-	-	1.48
SSW	-	2.02	0.94	0.40	-	-	-	-	3.36
S	-	0.54	0.94	-	-	-	-	-	1.48
SSE	-	0.54	0.94	-	-	-	-	-	1.48
SE	-	0.81	0.54	-	-	-	-	-	1.34
ESE	-	2.42	0.81	1.48	0.13	-	-	-	4.84
E	-	9.68	2.82	0.13	-	-	-	-	12.63
Calm	5.51	-	-	-	-	-	-	-	5.51
Total (%)	5.51	44.49	47.04	2.82	0.13	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: May. 01, 2009

End Date: May. 31, 2009

NOTES

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EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
May 2009**

PROJECT NO.
Y22101103

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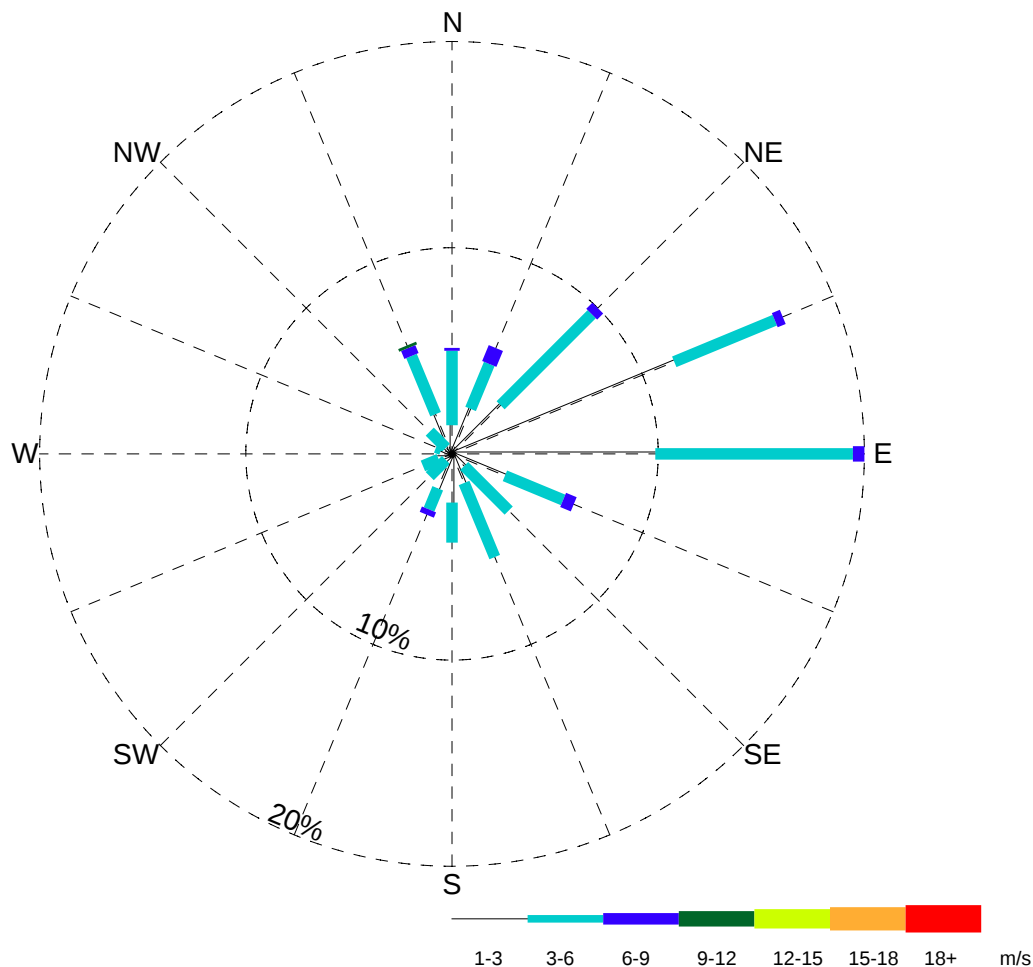
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February 2010

Figure C-57



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	11.67	5.28	0.42	-	-	-	-	17.36
NE	-	3.33	6.25	0.42	-	-	-	-	10.00
NNE	-	2.36	2.36	0.83	-	-	-	-	5.56
N	-	1.39	3.61	0.14	-	-	-	-	5.14
NNW	-	2.08	3.06	0.42	0.14	-	-	-	5.69
NW	-	0.42	1.11	-	-	-	-	-	1.53
WNW	-	0.56	0.28	-	-	-	-	-	0.83
W	-	0.69	-	-	-	-	-	-	0.69
WSW	-	0.69	0.83	-	-	-	-	-	1.53
SW	-	0.42	1.11	-	-	-	-	-	1.53
SSW	-	1.81	1.11	0.28	-	-	-	-	3.19
S	-	2.36	1.94	-	-	-	-	-	4.31
SSE	-	1.53	3.89	-	-	-	-	-	5.42
SE	-	0.83	3.06	-	-	-	-	-	3.89
ESE	-	2.78	3.06	0.56	-	-	-	-	6.39
E	-	9.86	9.58	0.56	-	-	-	-	20.00
Calm	6.94	-	-	-	-	-	-	-	6.94
Total (%)	6.94	42.78	46.53	3.61	0.14	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: June 01, 2009

End Date: June 30, 2009

NOTES

CLIENT



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**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
June 2009**

PROJECT NO.
Y22101103

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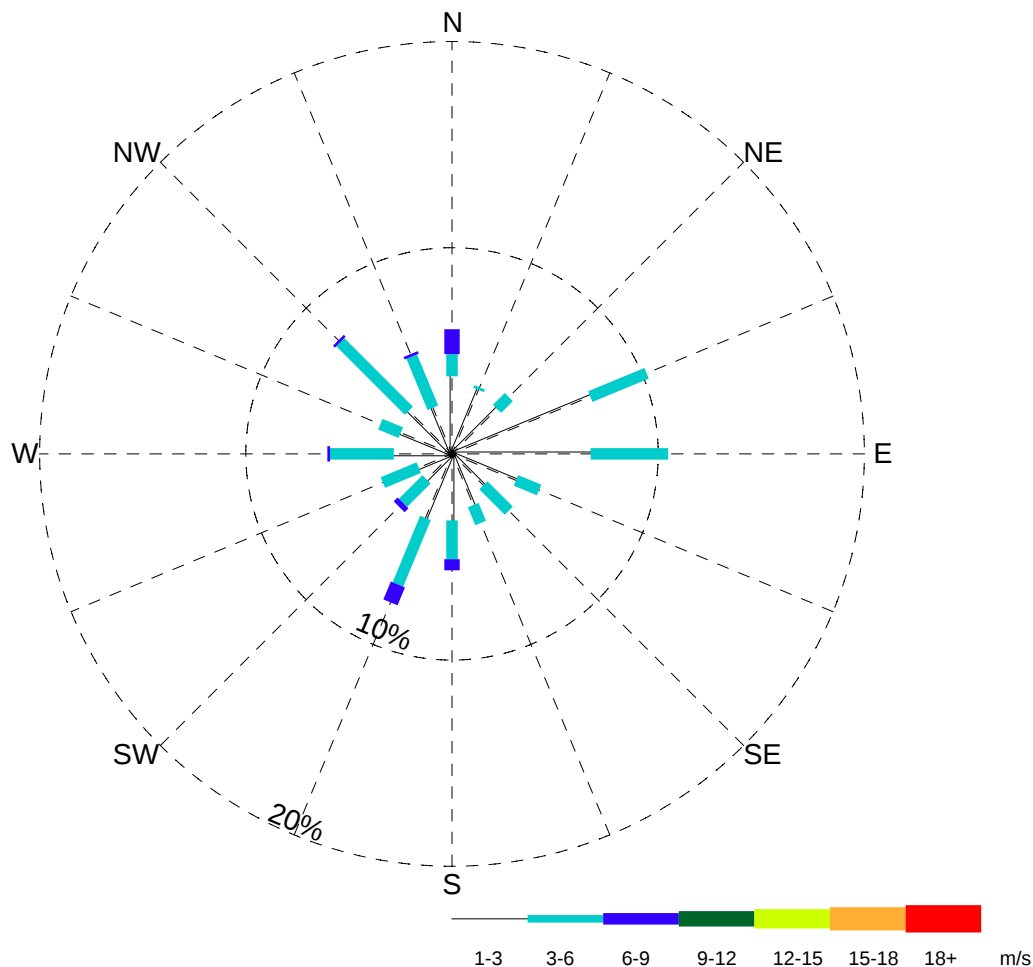
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Figure C-58



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.26	2.96	-	-	-	-	-	10.22
NE	-	3.09	0.81	-	-	-	-	-	3.90
NNE	-	3.36	0.13	-	-	-	-	-	3.49
N	-	3.76	1.08	1.21	-	-	-	-	6.05
NNW	-	2.42	2.69	0.13	-	-	-	-	5.24
NW	-	2.96	4.70	0.13	-	-	-	-	7.80
WNW	-	2.69	1.08	-	-	-	-	-	3.76
W	-	2.82	3.09	0.13	-	-	-	-	6.05
WSW	-	1.75	1.88	-	-	-	-	-	3.63
SW	-	1.75	1.61	0.27	-	-	-	-	3.63
SSW	-	3.36	3.49	0.94	-	-	-	-	7.80
S	-	3.23	1.88	0.54	-	-	-	-	5.64
SSE	-	2.69	0.94	-	-	-	-	-	3.63
SE	-	2.15	1.75	-	-	-	-	-	3.90
ESE	-	3.36	1.21	-	-	-	-	-	4.57
E	-	6.72	3.76	-	-	-	-	-	10.48
Calm	10.22	-	-	-	-	-	-	-	10.22
Total (%)	10.22	53.36	33.06	3.36	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: July 01, 2009

End Date: July 31, 2009

NOTES

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**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
July 2009**

PROJECT NO.
Y22101103

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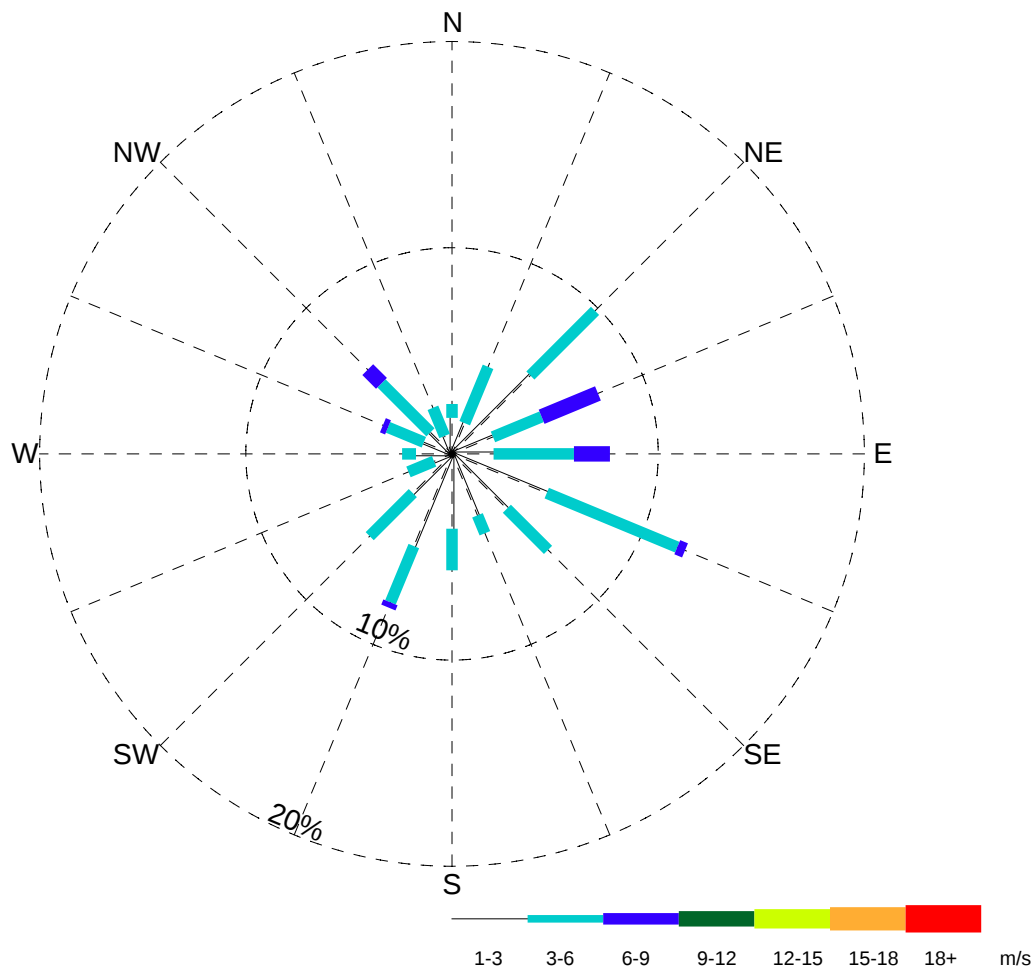
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February 2010

Figure C-59



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.15	2.55	2.96	-	-	-	-	7.66
NE	-	5.38	4.43	-	-	-	-	-	9.81
NNE	-	1.61	2.96	-	-	-	-	-	4.57
N	-	1.75	0.67	-	-	-	-	-	2.42
NNW	-	0.94	1.48	-	-	-	-	-	2.42
NW	-	1.48	3.36	0.94	-	-	-	-	5.78
WNW	-	1.48	1.88	0.27	-	-	-	-	3.63
W	-	1.75	0.67	-	-	-	-	-	2.42
WSW	-	0.94	1.34	-	-	-	-	-	2.29
SW	-	2.69	2.96	-	-	-	-	-	5.64
SSW	-	4.84	2.96	0.27	-	-	-	-	8.06
S	-	3.63	2.02	-	-	-	-	-	5.64
SSE	-	3.23	0.94	-	-	-	-	-	4.17
SE	-	3.76	2.82	-	-	-	-	-	6.59
ESE	-	4.97	6.86	0.40	-	-	-	-	12.23
E	-	2.02	3.90	1.75	-	-	-	-	7.66
Calm	9.01	-	-	-	-	-	-	-	9.01
Total (%)	9.01	42.61	41.80	6.59	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 23 days

Start Date: Aug. 01, 2009

End Date: Aug. 23, 2009

NOTES

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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
August 2009**

PROJECT NO.
Y22101103

DWN
RED

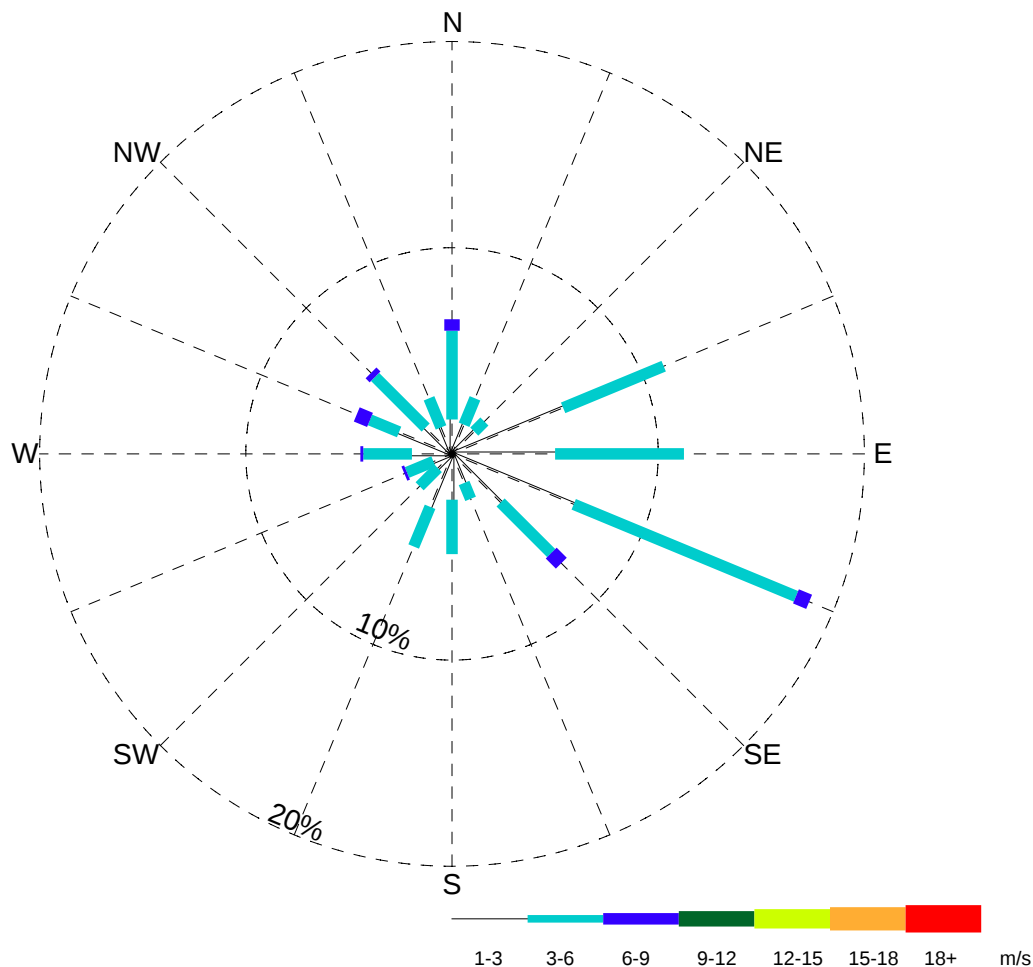
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February 2010

Figure C-60



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	5.83	5.28	-	-	-	-	-	11.11
NE	-	1.53	0.69	-	-	-	-	-	2.22
NNE	-	1.53	1.39	-	-	-	-	-	2.92
N	-	1.67	4.31	0.56	-	-	-	-	6.53
NNW	-	1.39	1.53	-	-	-	-	-	2.92
NW	-	1.81	3.47	0.28	-	-	-	-	5.56
WNW	-	2.78	1.53	0.69	-	-	-	-	5.00
W	-	1.94	2.36	0.14	-	-	-	-	4.44
WSW	-	0.97	1.39	0.14	-	-	-	-	2.50
SW	-	0.97	1.25	-	-	-	-	-	2.22
SSW	-	2.78	2.08	-	-	-	-	-	4.86
S	-	2.22	2.64	-	-	-	-	-	4.86
SSE	-	1.53	0.83	-	-	-	-	-	2.36
SE	-	3.33	3.47	0.69	-	-	-	-	7.50
ESE	-	6.39	11.67	0.69	-	-	-	-	18.75
E	-	5.00	6.25	-	-	-	-	-	11.25
Calm	5.00	-	-	-	-	-	-	-	5.00
Total (%)	5.00	41.67	50.14	3.19	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Sep. 01, 2009

End Date: Sep. 30, 2009

NOTES

CLIENT



**EBA Engineering
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**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
September 2009**

PROJECT NO.
Y22101103

DWN
RED

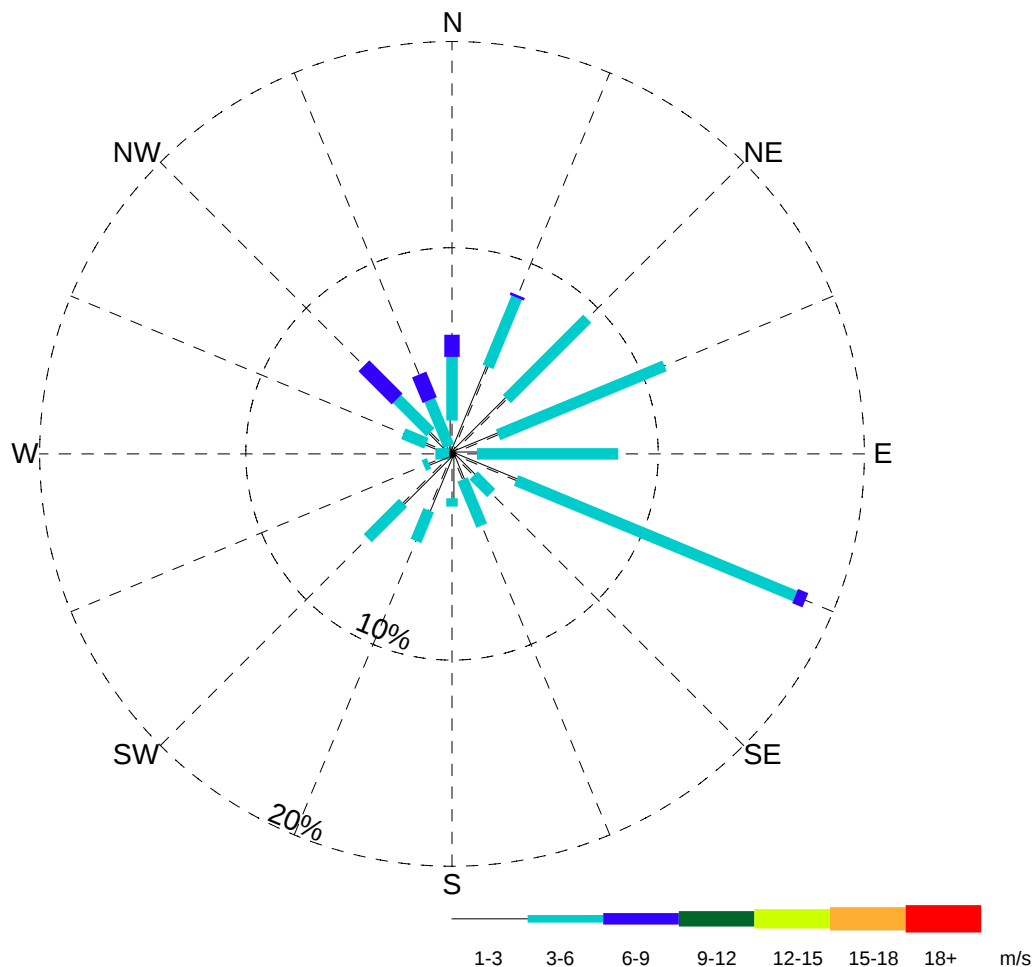
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DATE
February 2010

Figure C-61



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	2.42	8.74	-	-	-	-	-	11.16
NE	-	3.76	5.51	-	-	-	-	-	9.27
NNE	-	4.57	3.63	0.13	-	-	-	-	8.33
N	-	1.61	3.09	1.08	-	-	-	-	5.78
NNW	-	0.40	2.42	1.34	-	-	-	-	4.17
NW	-	1.48	2.29	2.29	-	-	-	-	6.05
WNW	-	1.34	1.21	-	-	-	-	-	2.55
W	-	0.13	0.67	-	-	-	-	-	0.81
WSW	-	1.21	0.27	-	-	-	-	-	1.48
SW	-	3.36	2.42	-	-	-	-	-	5.78
SSW	-	2.96	1.61	-	-	-	-	-	4.57
S	-	2.15	0.40	-	-	-	-	-	2.55
SSE	-	1.34	2.42	-	-	-	-	-	3.76
SE	-	1.48	1.21	-	-	-	-	-	2.69
ESE	-	3.36	14.65	0.54	-	-	-	-	18.55
E	-	1.21	6.86	-	-	-	-	-	8.06
Calm	4.43	-	-	-	-	-	-	-	4.43
Total (%)	4.43	32.80	57.39	5.38	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Oct. 01, 2009

End Date: Oct. 31, 2009

NOTES

CLIENT



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**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
OCTOBER 2009**

PROJECT NO.
Y22101103

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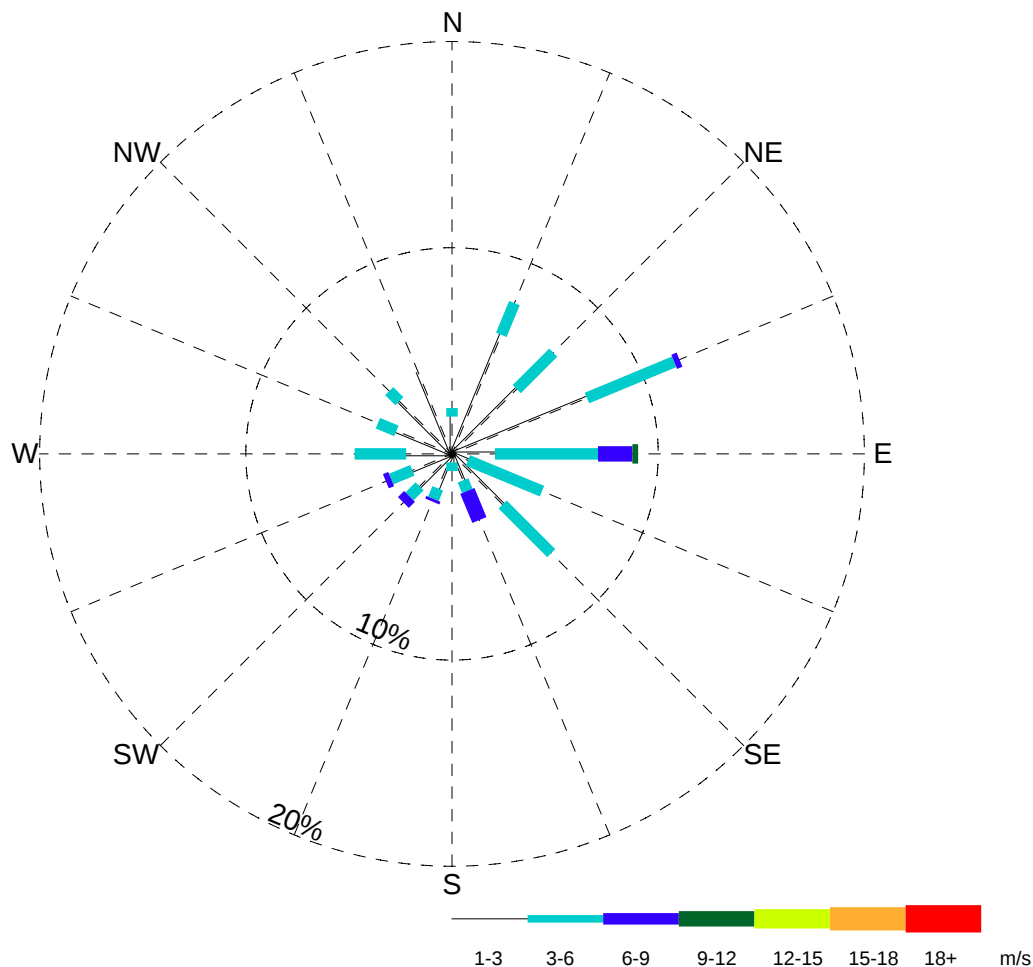
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February 2010

Figure C-62



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.08	4.58	0.28	-	-	-	-	11.94
NE	-	4.44	2.50	-	-	-	-	-	6.94
NNE	-	6.25	1.67	-	-	-	-	-	7.92
N	-	1.81	0.42	-	-	-	-	-	2.22
NNW	-	4.31	-	-	-	-	-	-	4.31
NW	-	3.61	0.69	-	-	-	-	-	4.31
WNW	-	2.92	0.97	-	-	-	-	-	3.89
W	-	2.22	2.50	-	-	-	-	-	4.72
WSW	-	2.08	1.11	0.28	-	-	-	-	3.47
SW	-	2.22	0.69	0.42	-	-	-	-	3.33
SSW	-	1.81	0.56	0.14	-	-	-	-	2.50
S	-	0.42	0.42	-	-	-	-	-	0.83
SSE	-	1.39	0.56	1.53	-	-	-	-	3.47
SE	-	3.47	3.33	-	-	-	-	-	6.81
ESE	-	0.83	3.89	-	-	-	-	-	4.72
E	-	2.08	5.00	1.67	0.28	-	-	-	9.03
Calm	19.58	-	-	-	-	-	-	-	19.58
Total (%)	19.58	46.94	28.89	4.31	0.28	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 30 days

Start Date: Nov. 01, 2009

End Date: Nov. 30, 2009

NOTES

CLIENT



EBA Engineering Consultants Ltd. 

**YELLOWKNIFE GOLD PROJECT
2009 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Wind Rose
November 2009**

PROJECT NO.
Y22101103

DWN
RED

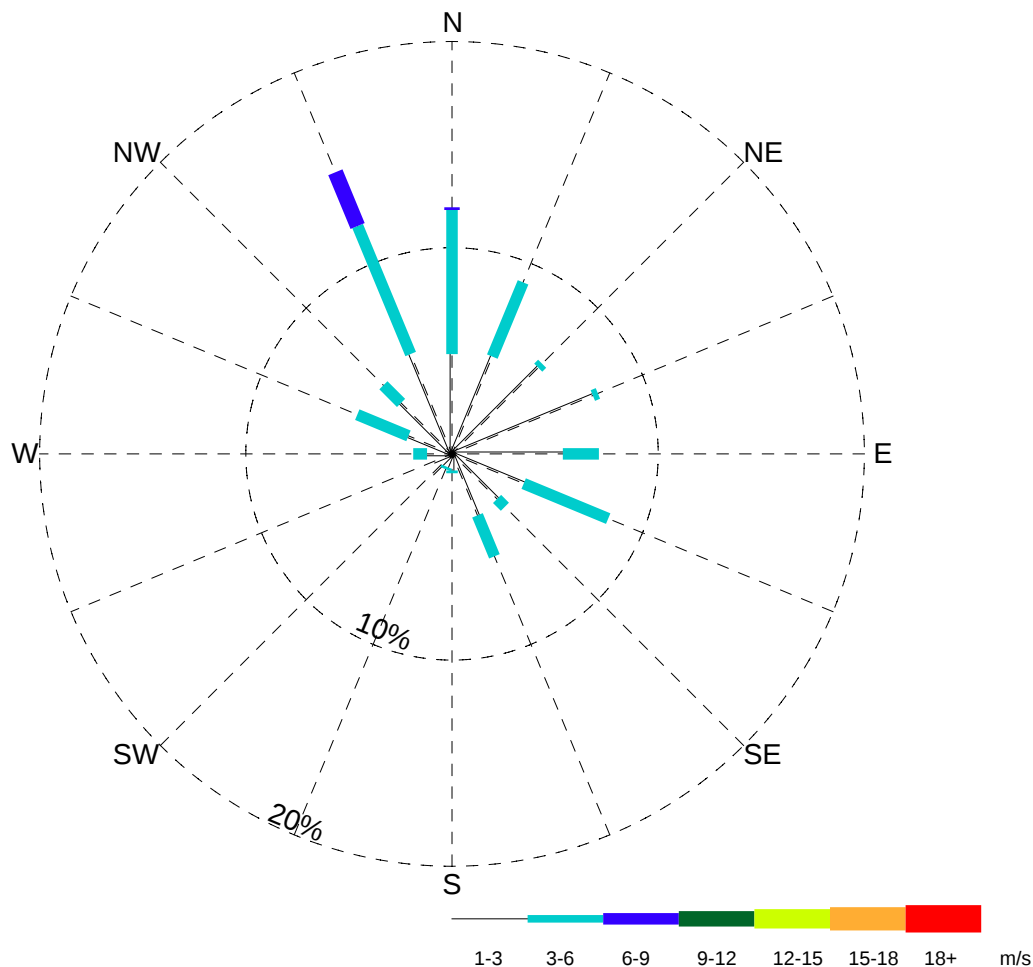
CHK
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REV
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EBA-VANC

DATE
February 2010

Figure C-63



Wind Speed & Direction Frequency Distribution Table

Direction	Percent Occurrence (%)								Total (%)
	0-1 m/s	1-3 m/s	3-6 m/s	6-9 m/s	9-12 m/s	12-15 m/s	15-18 m/s	18+ m/s	
ENE	-	7.39	0.27	-	-	-	-	-	7.66
NE	-	5.91	0.27	-	-	-	-	-	6.18
NNE	-	5.11	3.90	-	-	-	-	-	9.01
N	-	4.84	6.99	0.13	-	-	-	-	11.96
NNW	-	5.24	6.72	2.82	-	-	-	-	14.78
NW	-	3.49	1.21	-	-	-	-	-	4.70
WNW	-	2.29	2.69	-	-	-	-	-	4.97
W	-	1.21	0.67	-	-	-	-	-	1.88
WSW	-	0.94	-	-	-	-	-	-	0.94
SW	-	1.34	-	-	-	-	-	-	1.34
SSW	-	0.67	0.13	-	-	-	-	-	0.81
S	-	0.81	0.13	-	-	-	-	-	0.94
SSE	-	3.23	2.15	-	-	-	-	-	5.38
SE	-	3.09	0.54	-	-	-	-	-	3.63
ESE	-	3.76	4.43	-	-	-	-	-	8.20
E	-	5.38	1.75	-	-	-	-	-	7.12
Calm	10.48	-	-	-	-	-	-	-	10.48
Total (%)	10.48	54.70	31.85	2.96	-	-	-	-	100.00

Station Name: Tyhee

NAD 27 location:

N63° 11' 6.2" W113° 53' 40.2"

Elevation above SL: 300 m

Tower Height: 10 m

Record Length: 31 days

Start Date: Dec. 01, 2009

End Date: Dec. 31, 2009

NOTES

CLIENT



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Consultants Ltd.**



YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Wind Rose
December 2009**

PROJECT NO.
Y22101103

DWN
RED

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REV
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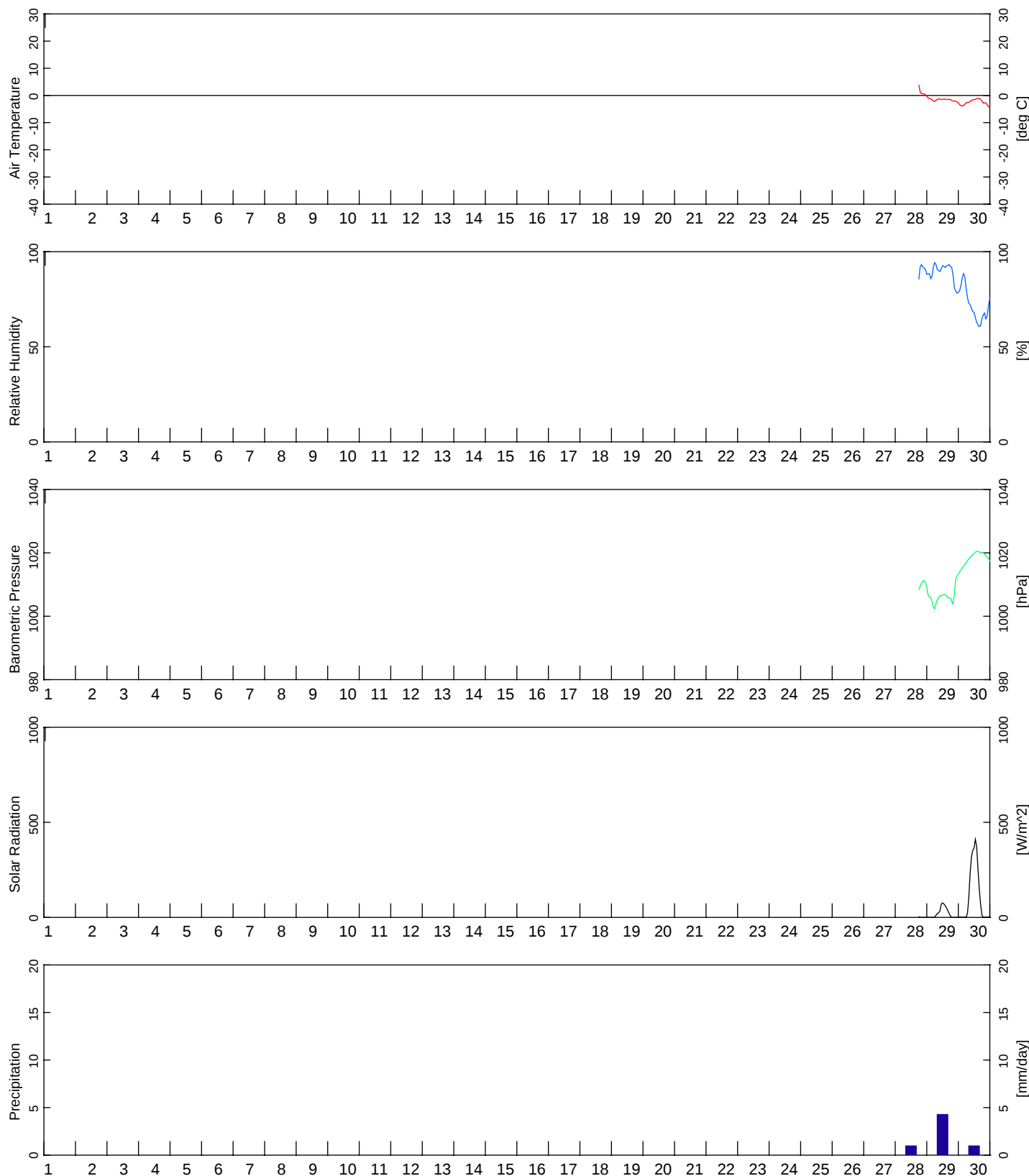
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DATE
February 2010

Figure C-64

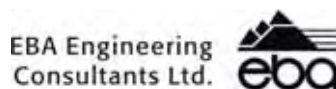
APPENDIX

APPENDIX D SUMMARY OF WEATHER PARAMETERS – SEPTEMBER 2004 TO DECEMBER 2008



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
September 2004**

PROJECT NO.
Y22101057

DWN
RED

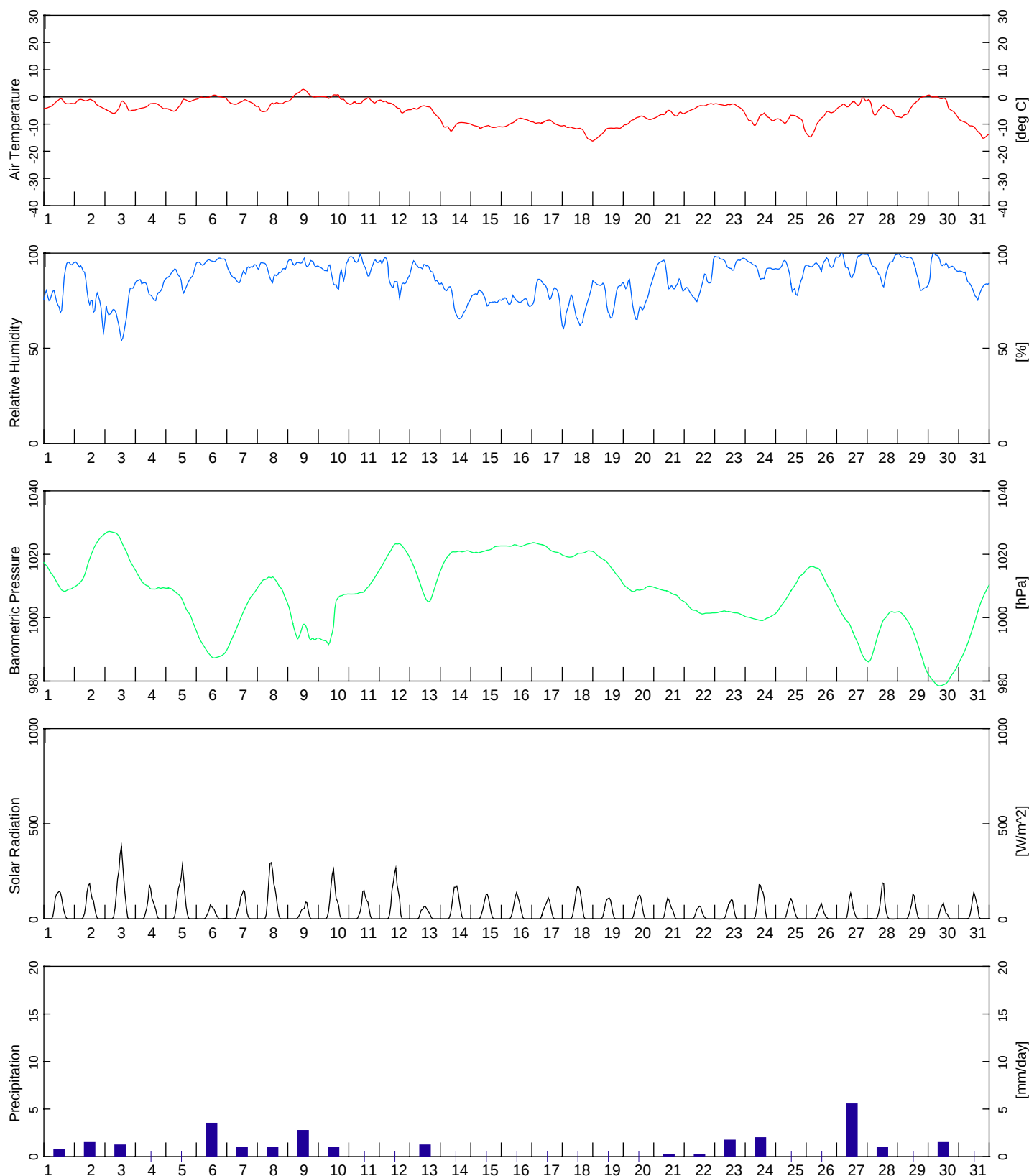
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Figure D-01



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
October 2004**

PROJECT NO.

Y22101057

DWN

RED

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REV

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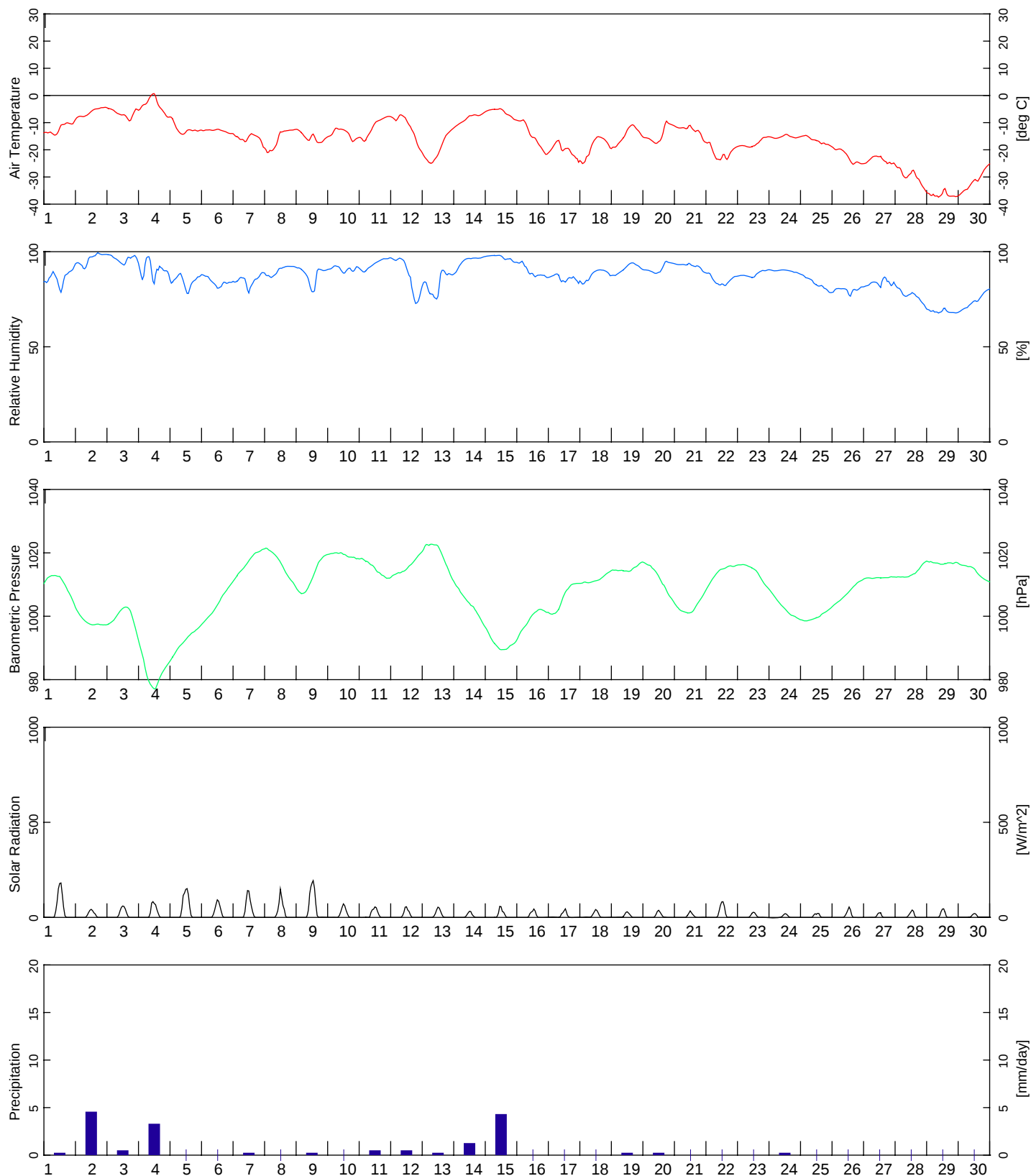
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Figure D-02



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**Tyhee Station
Weather Data
November 2004**

PROJECT NO.
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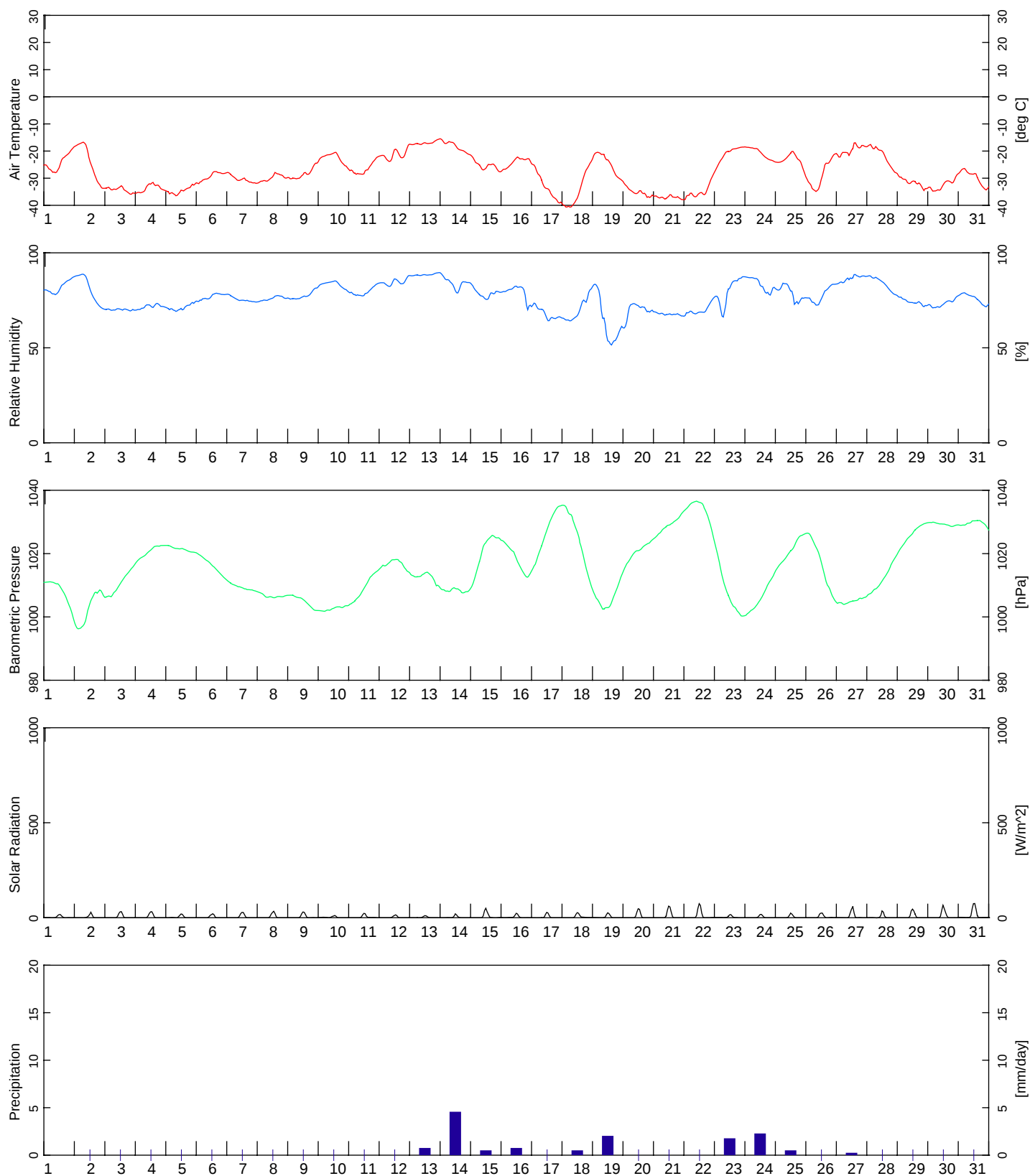
DWN
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Figure D-03



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
December 2004**

PROJECT NO.
Y22101057

OFFICE
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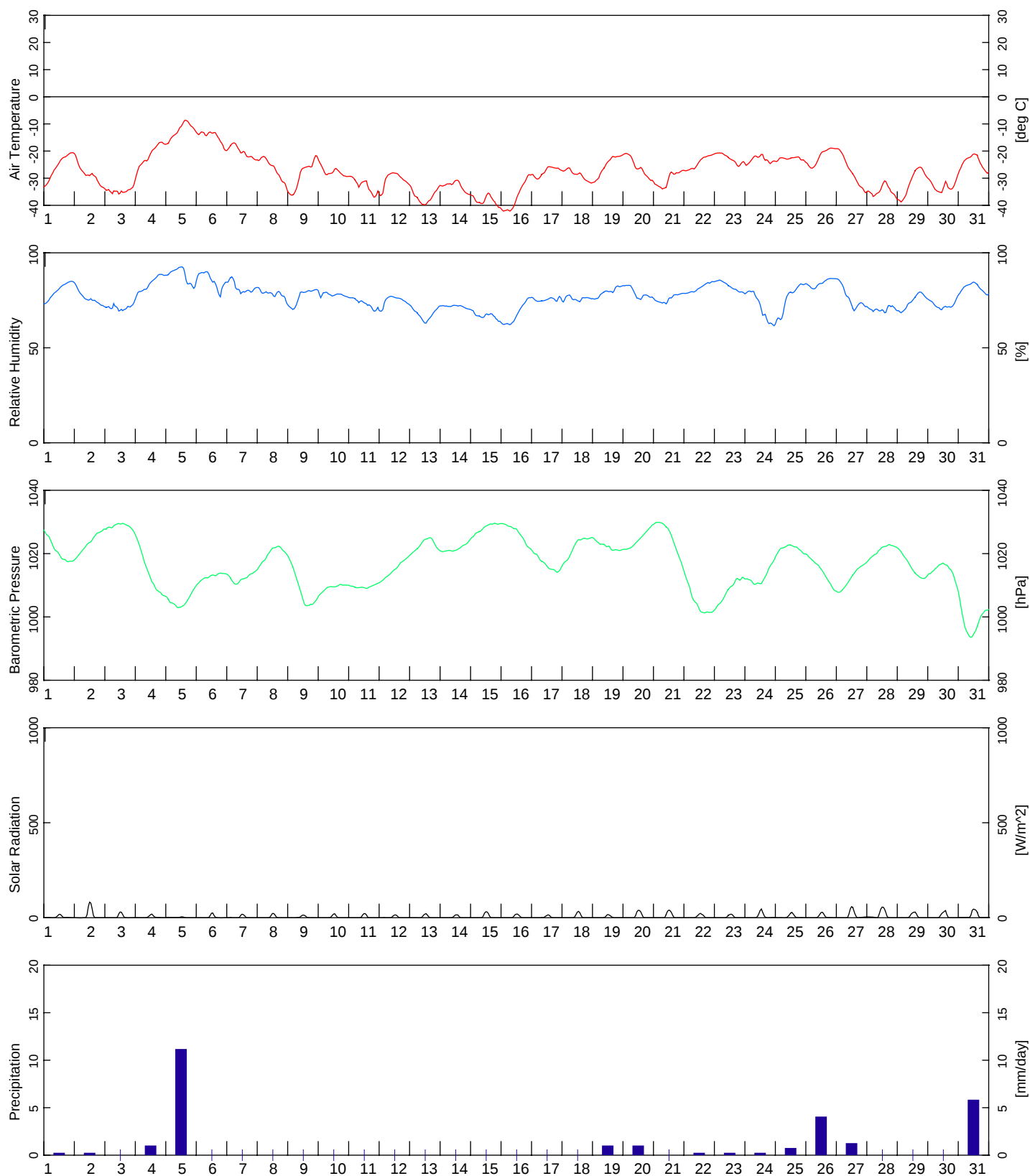
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Figure D-04



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
January 2005**

PROJECT NO.
Y22101057

DWN
RED

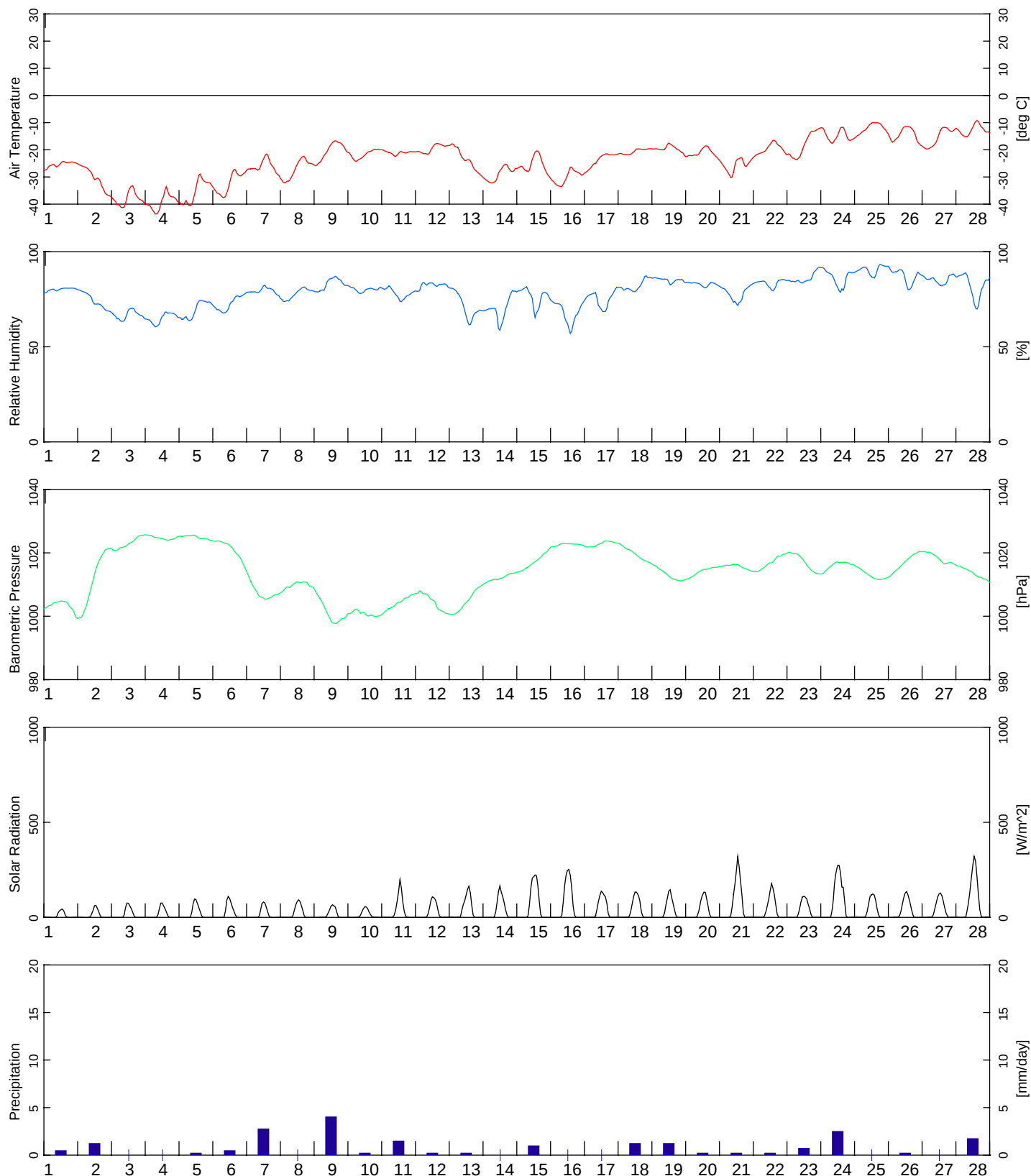
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Figure D-05



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
February 2005**

PROJECT NO.
Y22101057

DWN
RED

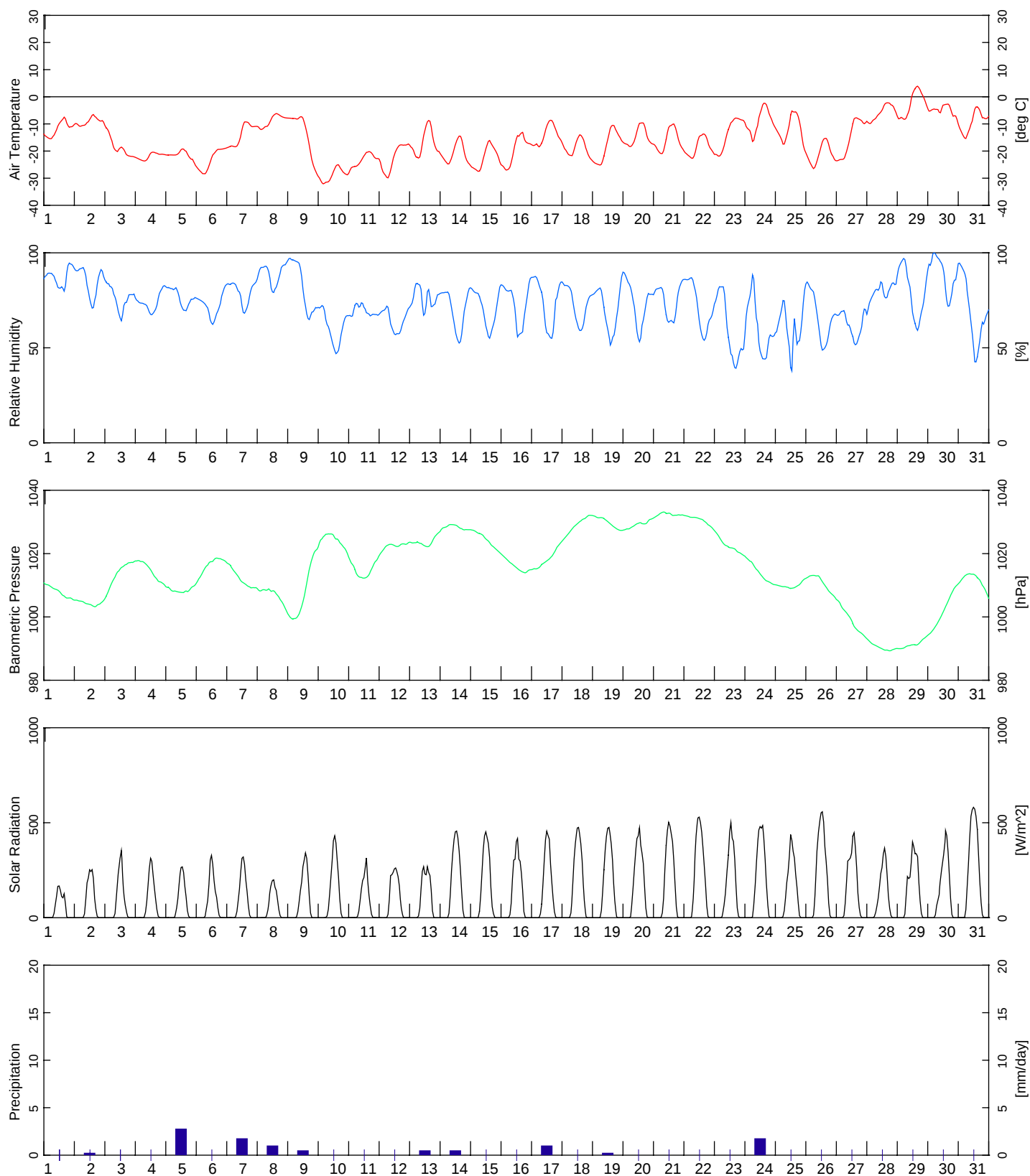
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Figure D-06



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
March 2005**

PROJECT NO.
Y22101057

DWN
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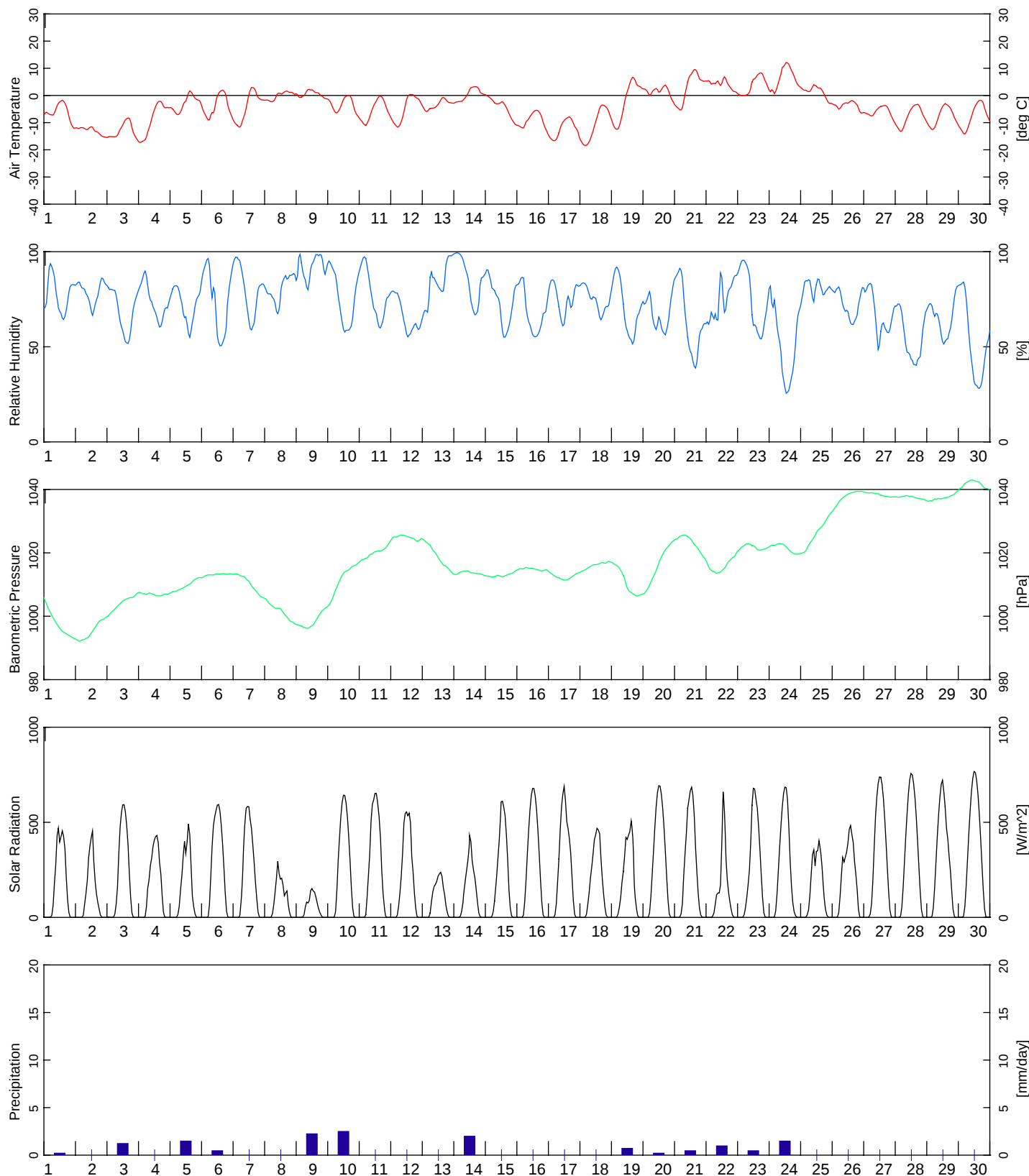
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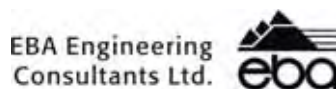
DATE
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Figure D-07



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
April 2005**

PROJECT NO.
Y22101057

DWN
RED

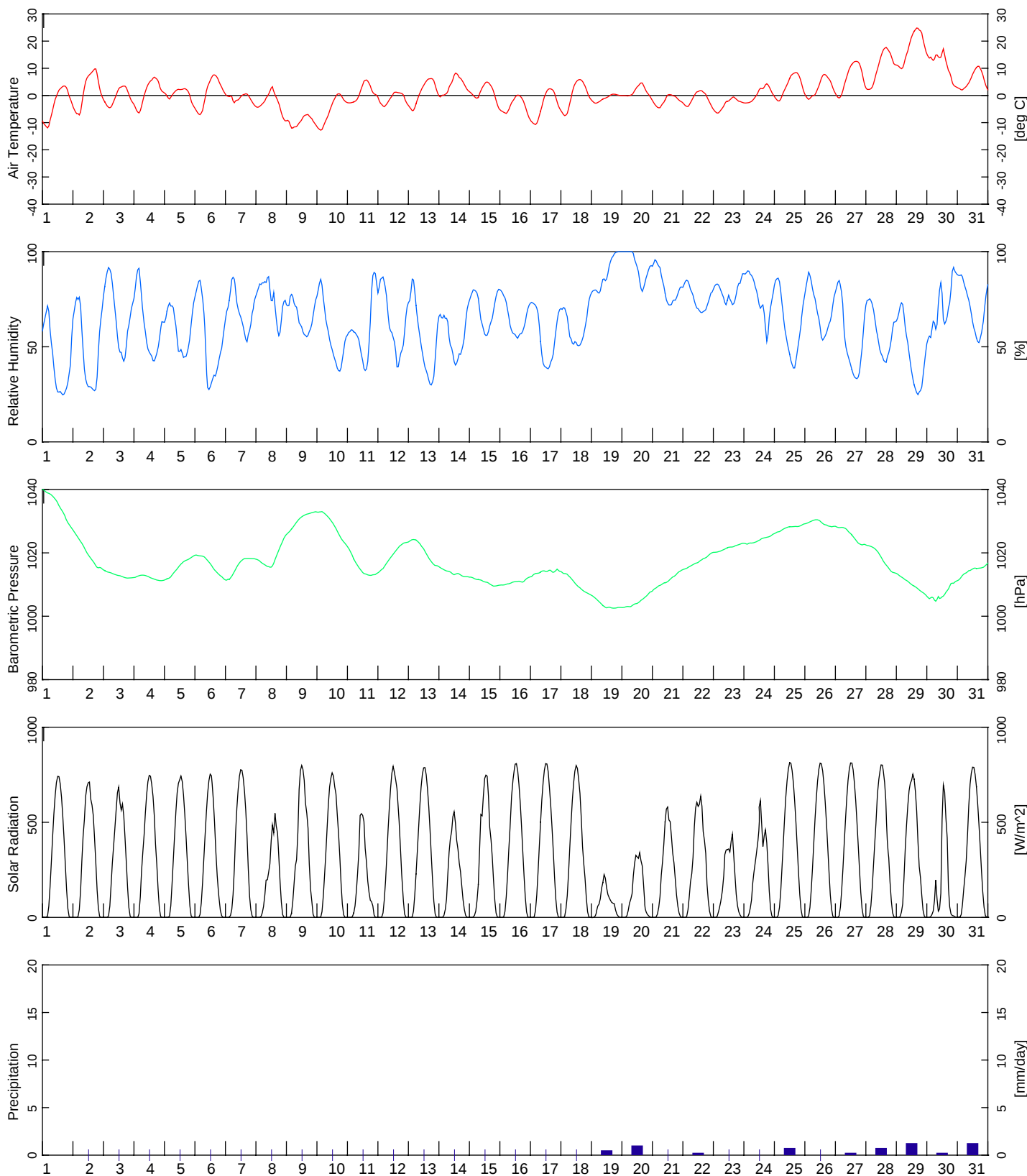
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Figure D-08



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**Tyhee Station
Weather Data
May 2005**

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Y22101057

DWN
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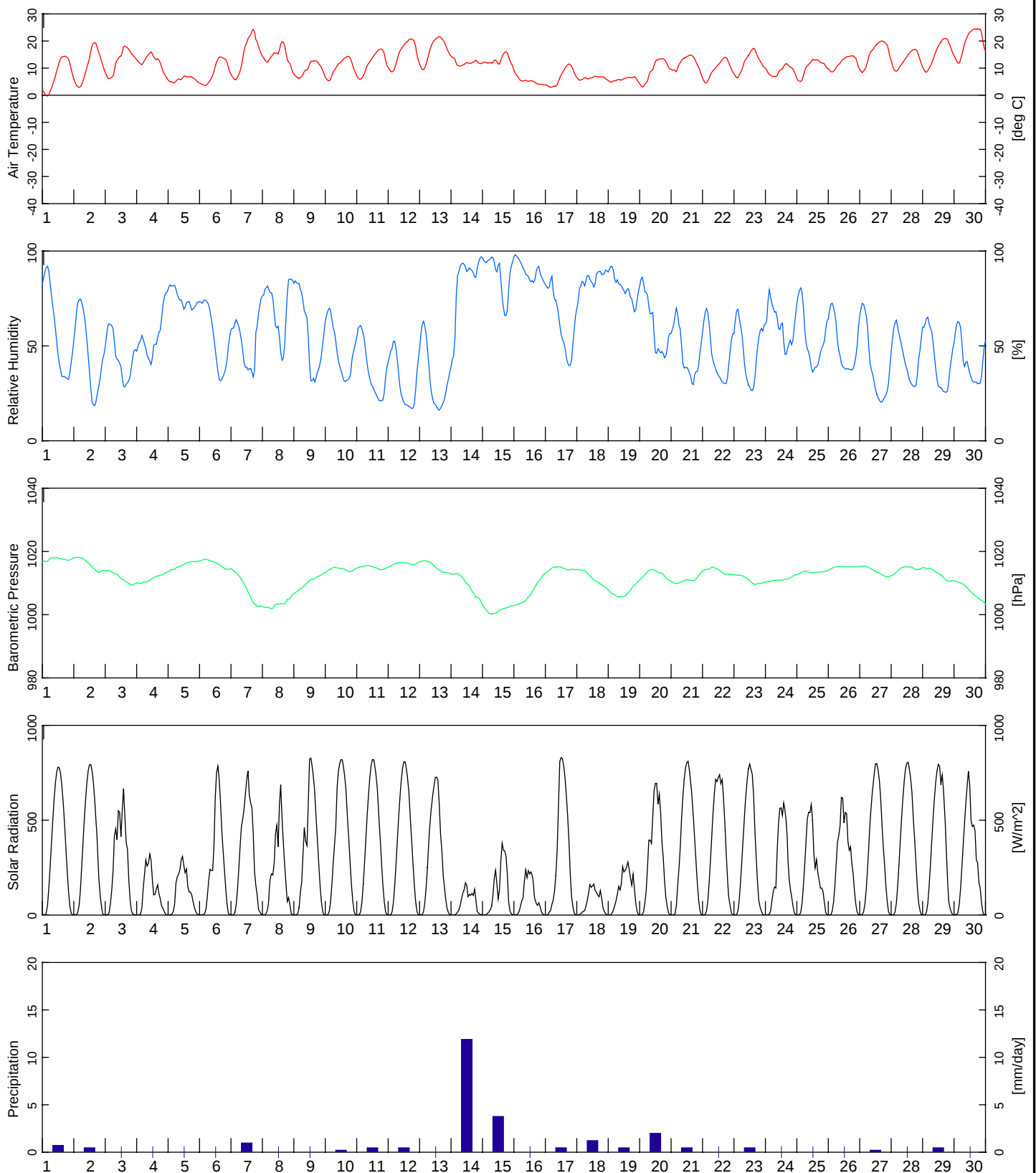
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Figure D-09



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**Tyhee Station
Weather Data
June 2005**

PROJECT NO.
Y22101057

DWN
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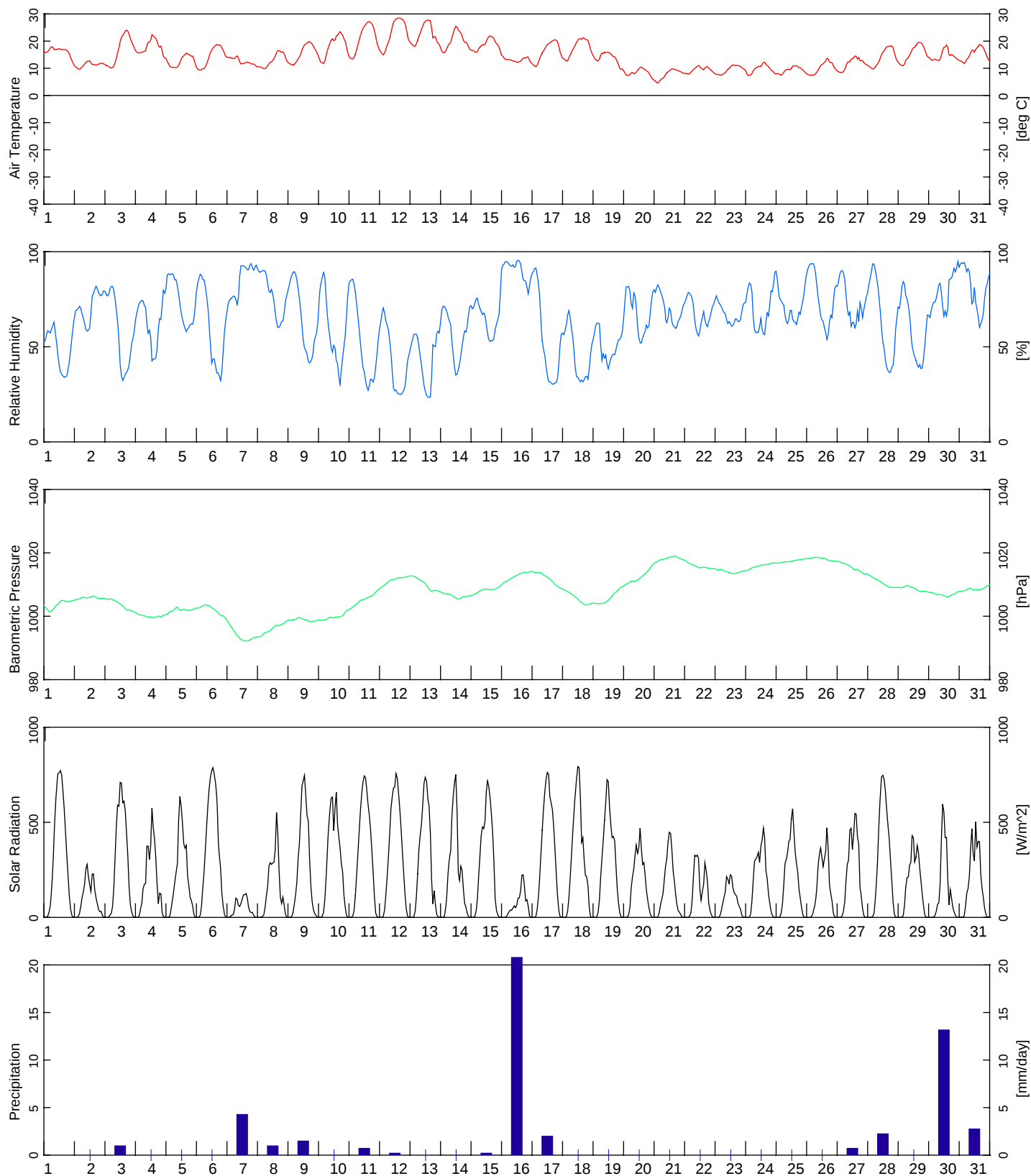
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Figure D-10



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**Tyhee Station
Weather Data
July 2005**

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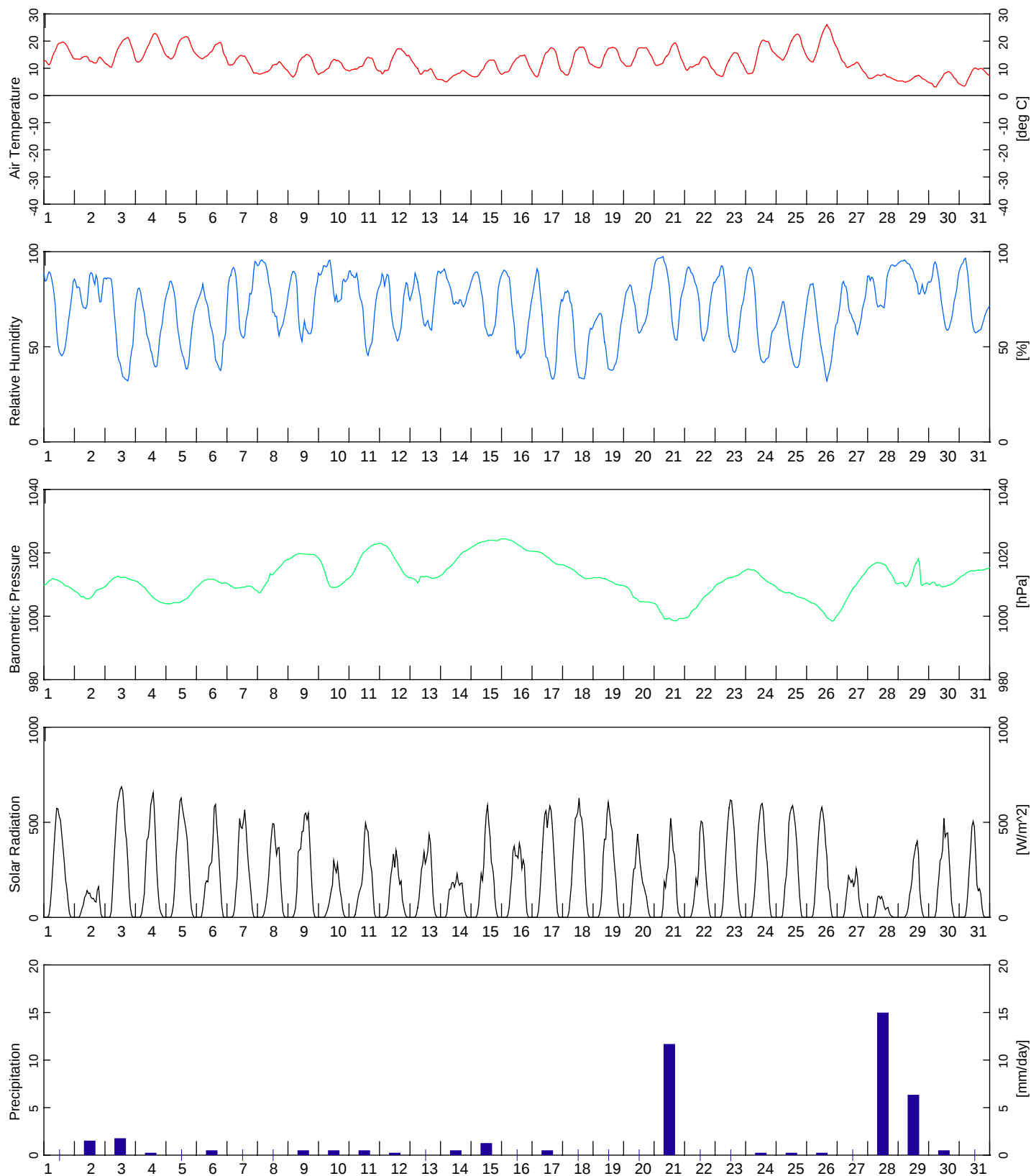
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Figure D-11



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**Tyhee Station
Weather Data
August 2005**

PROJECT NO.
Y22101057

DWN
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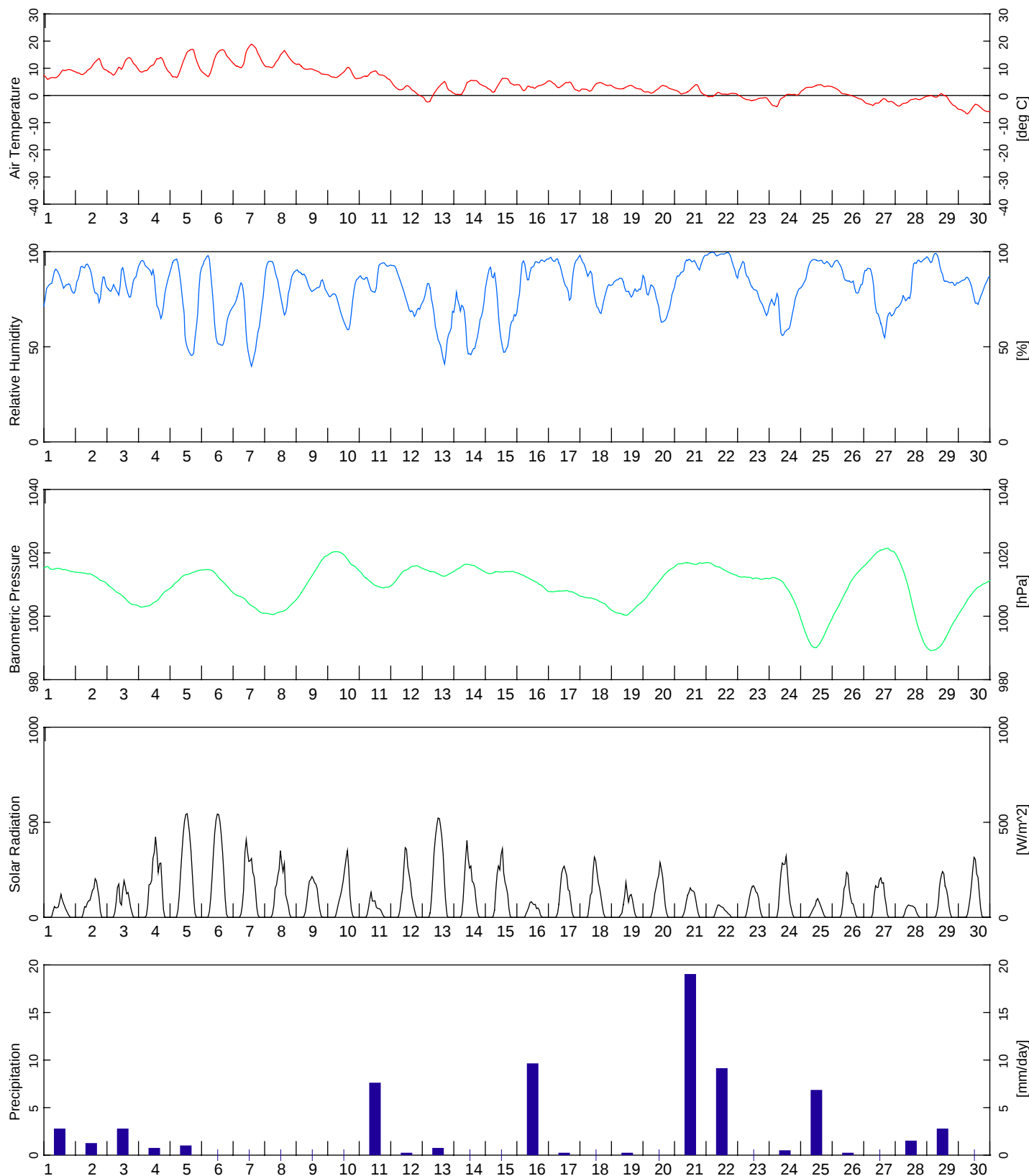
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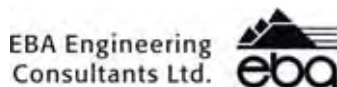
DATE
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Figure D-12



NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Weather Data
September 2005**

PROJECT NO.
Y22101057

DWN
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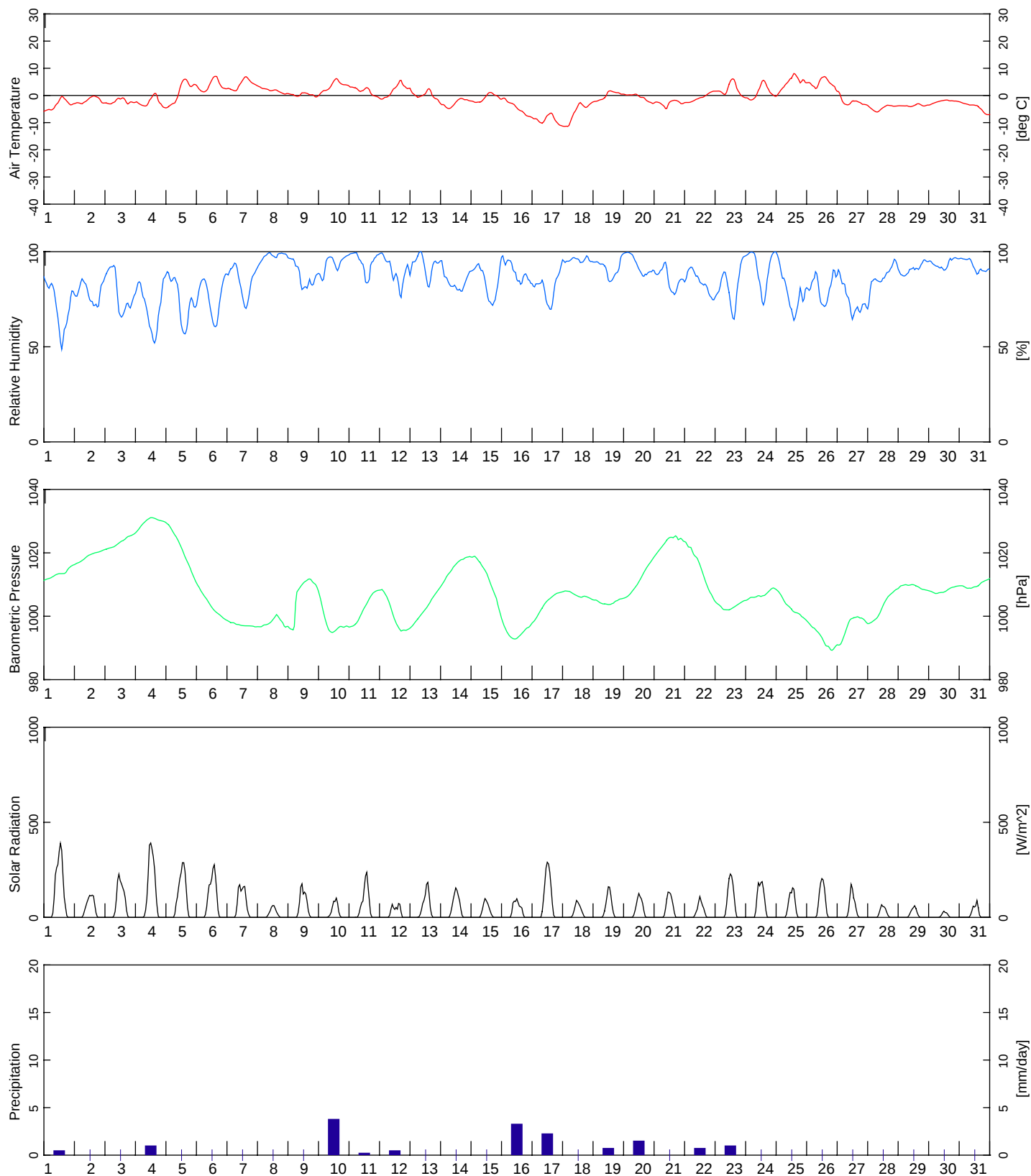
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Figure D-13



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
October 2005**

PROJECT NO.

Y22101057

DWN

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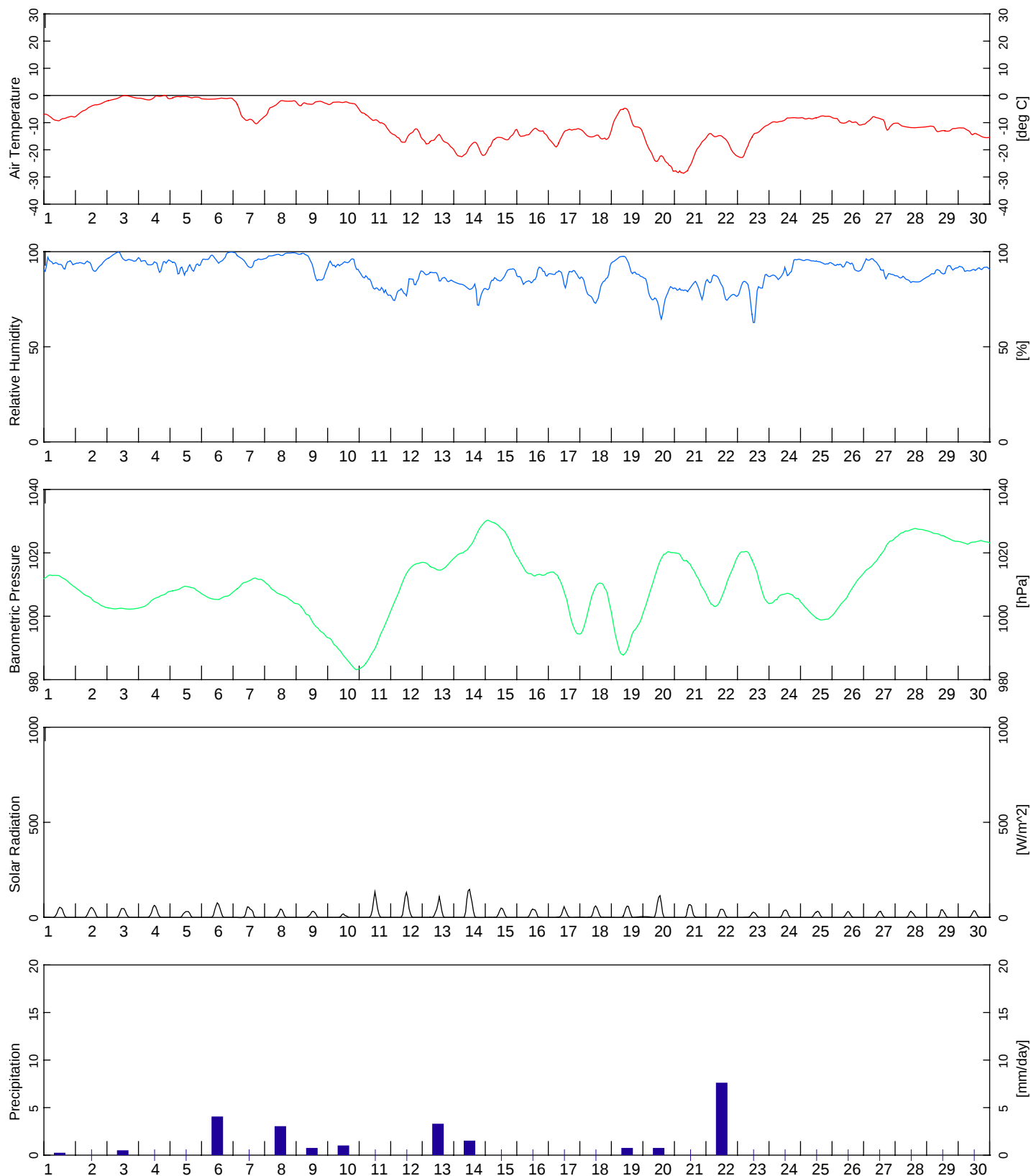
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Figure D-14



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
November 2005**

PROJECT NO.
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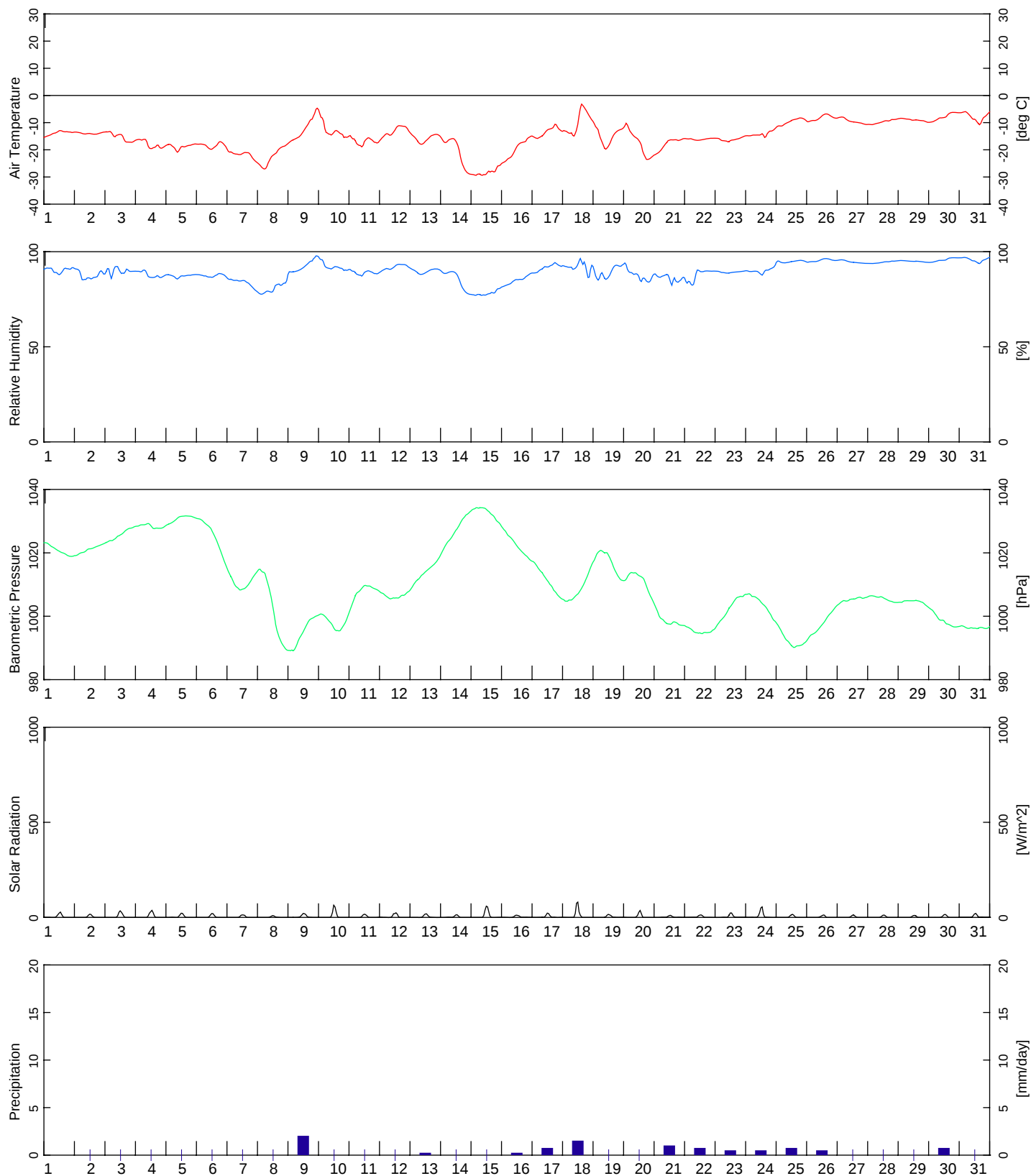
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Figure D-15



NOTES

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**Tyhee Station
Weather Data
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PROJECT NO.

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DWN

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CHK

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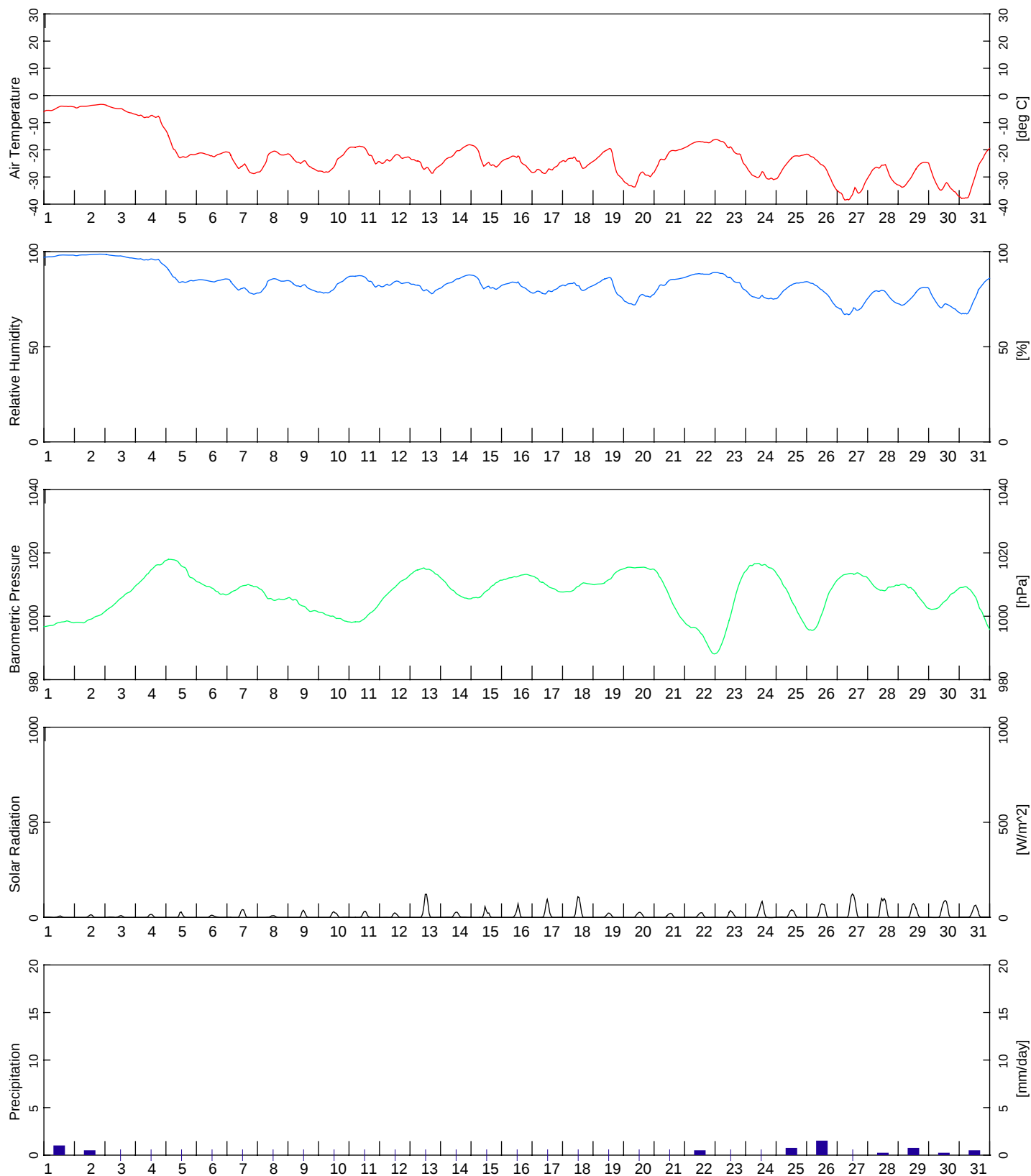
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Figure D-16



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
January 2006**

PROJECT NO.
Y22101057

DWN
RED

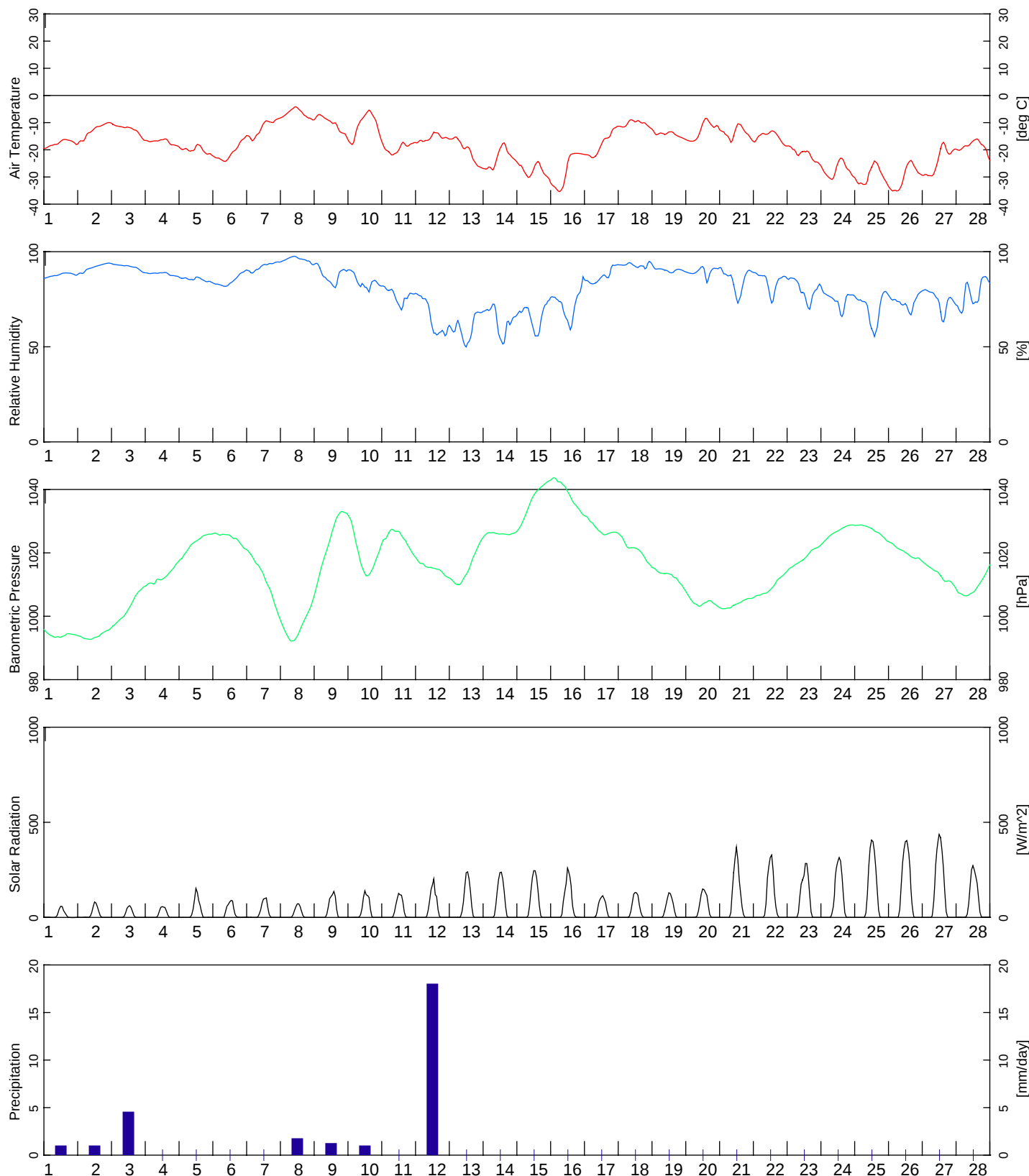
CHK
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Figure D-17



NOTES

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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
February 2006**

PROJECT NO.
Y22101057

DWN
RED

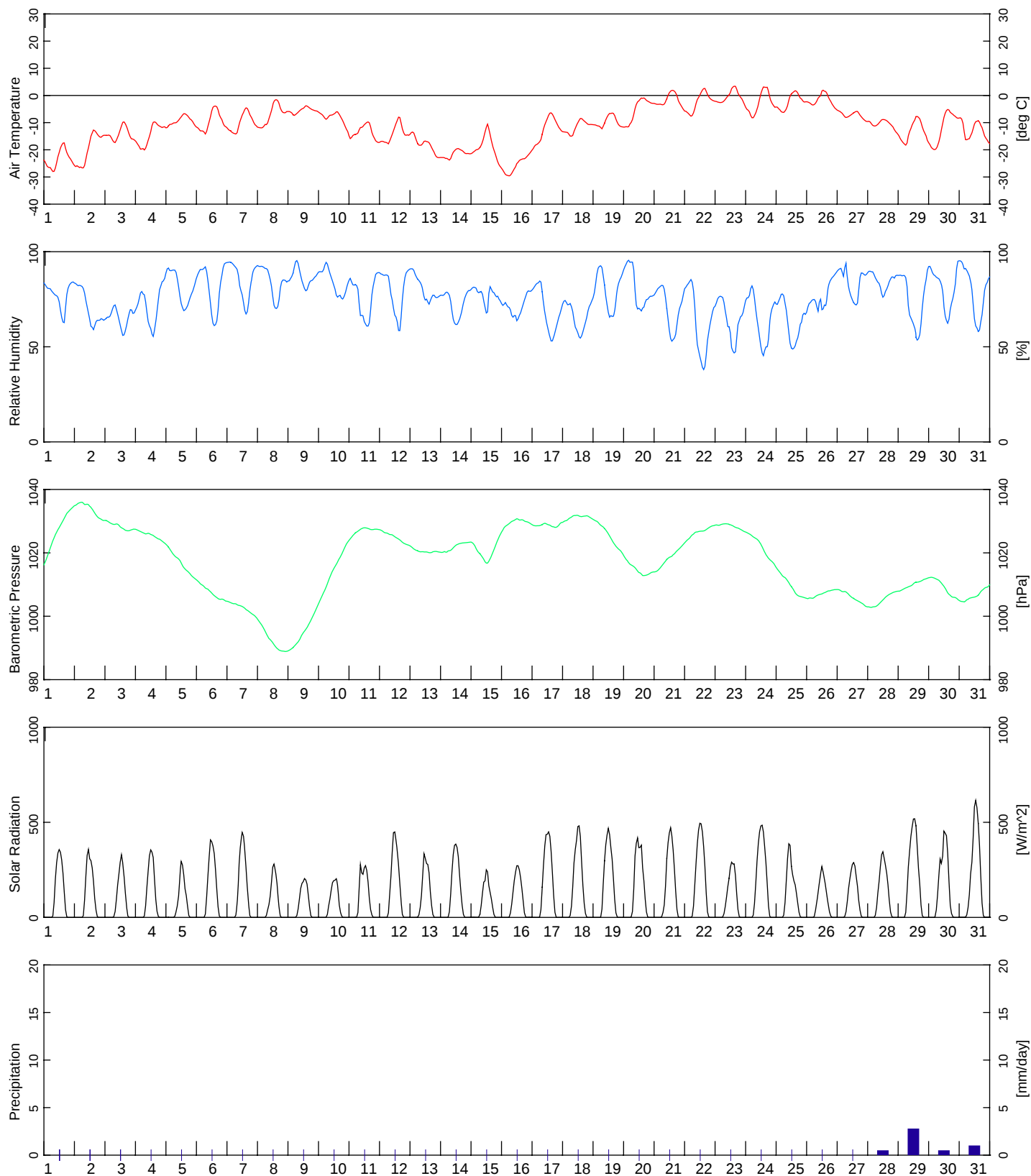
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Figure D-18



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
March 2006**

PROJECT NO.
Y22101057

DWN
RED

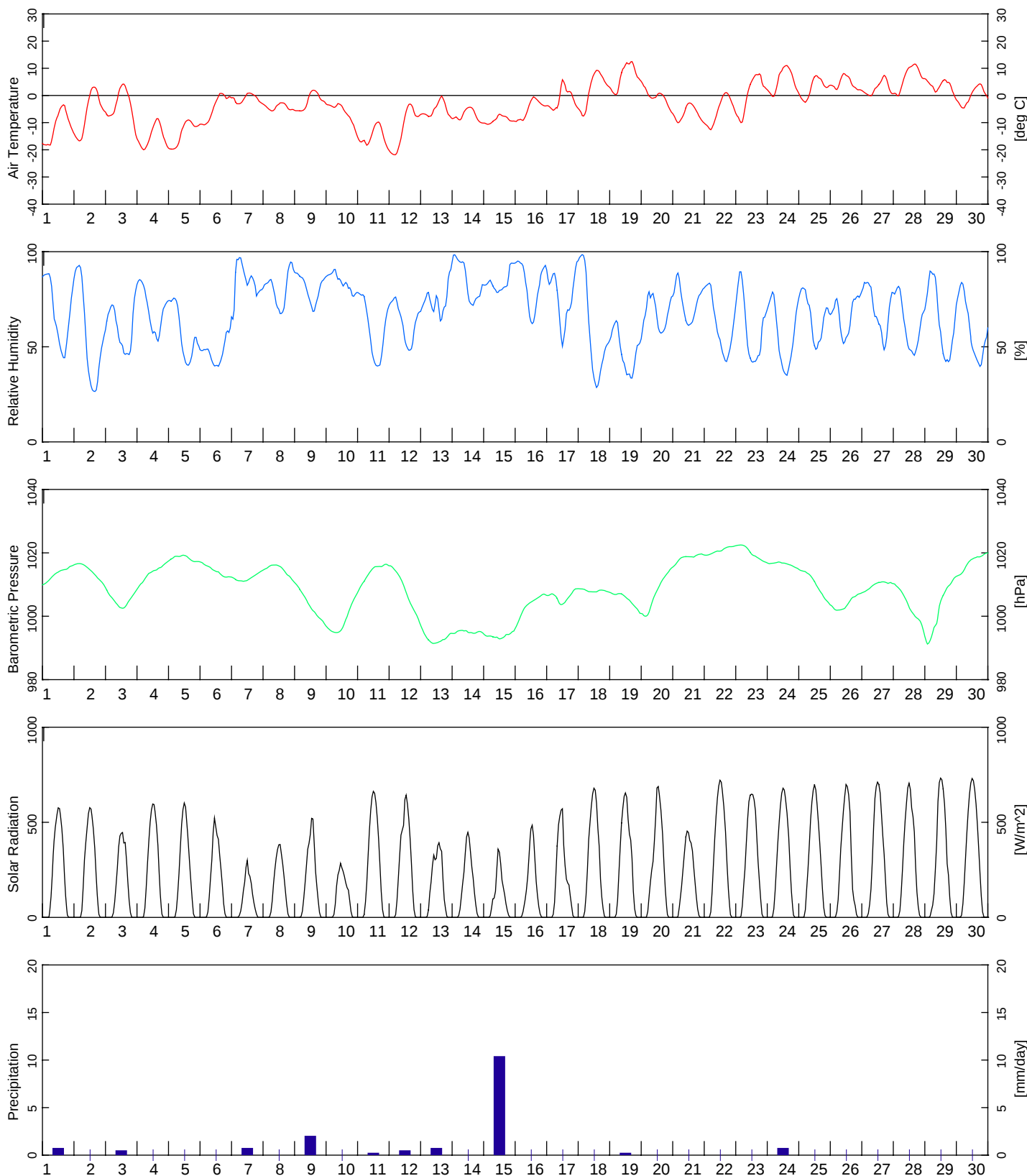
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OFFICE
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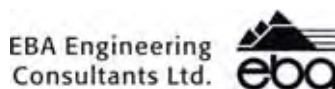
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Figure D-19



NOTES

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**YELLOWKNIFE GOLD PROJECT
2008 HYDROMETEOROLOGICAL REPORT**

**Tyhee Station
Weather Data
April 2006**

PROJECT NO.
Y22101057

DWN
RED

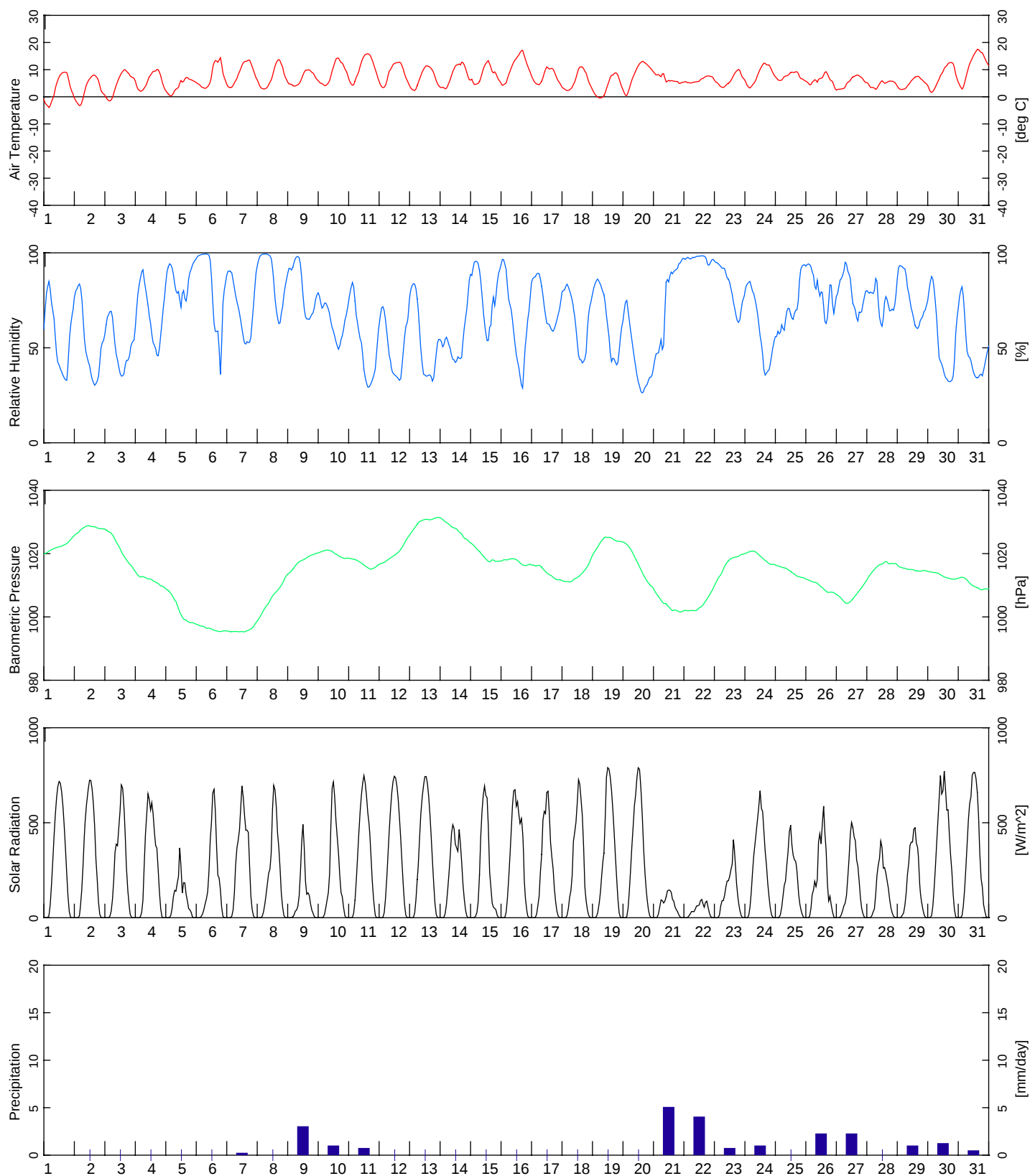
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Figure D-20



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
May 2006**

PROJECT NO.
Y22101057

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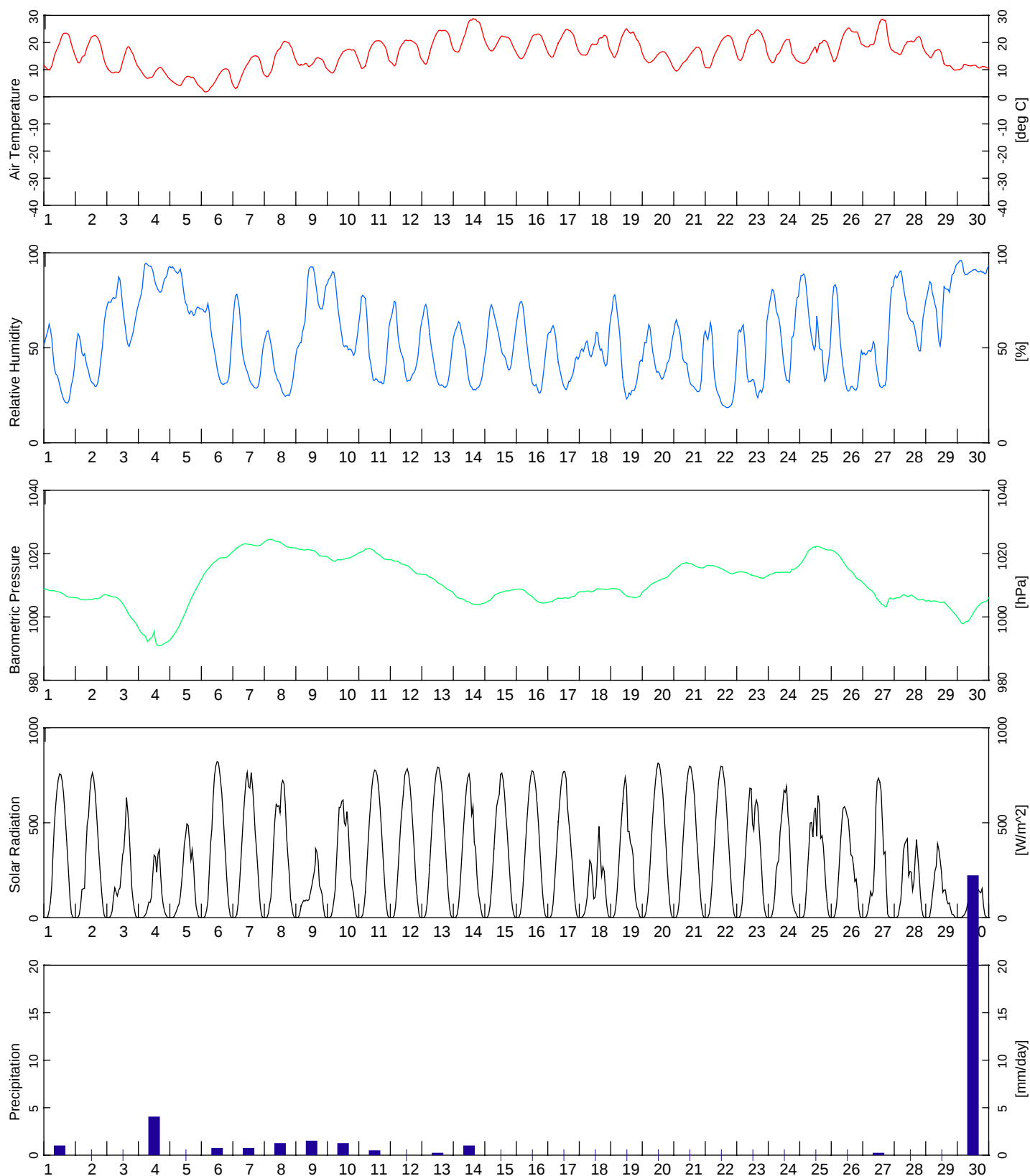
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Figure D-21



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
June 2006**

PROJECT NO.
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DWN
RED

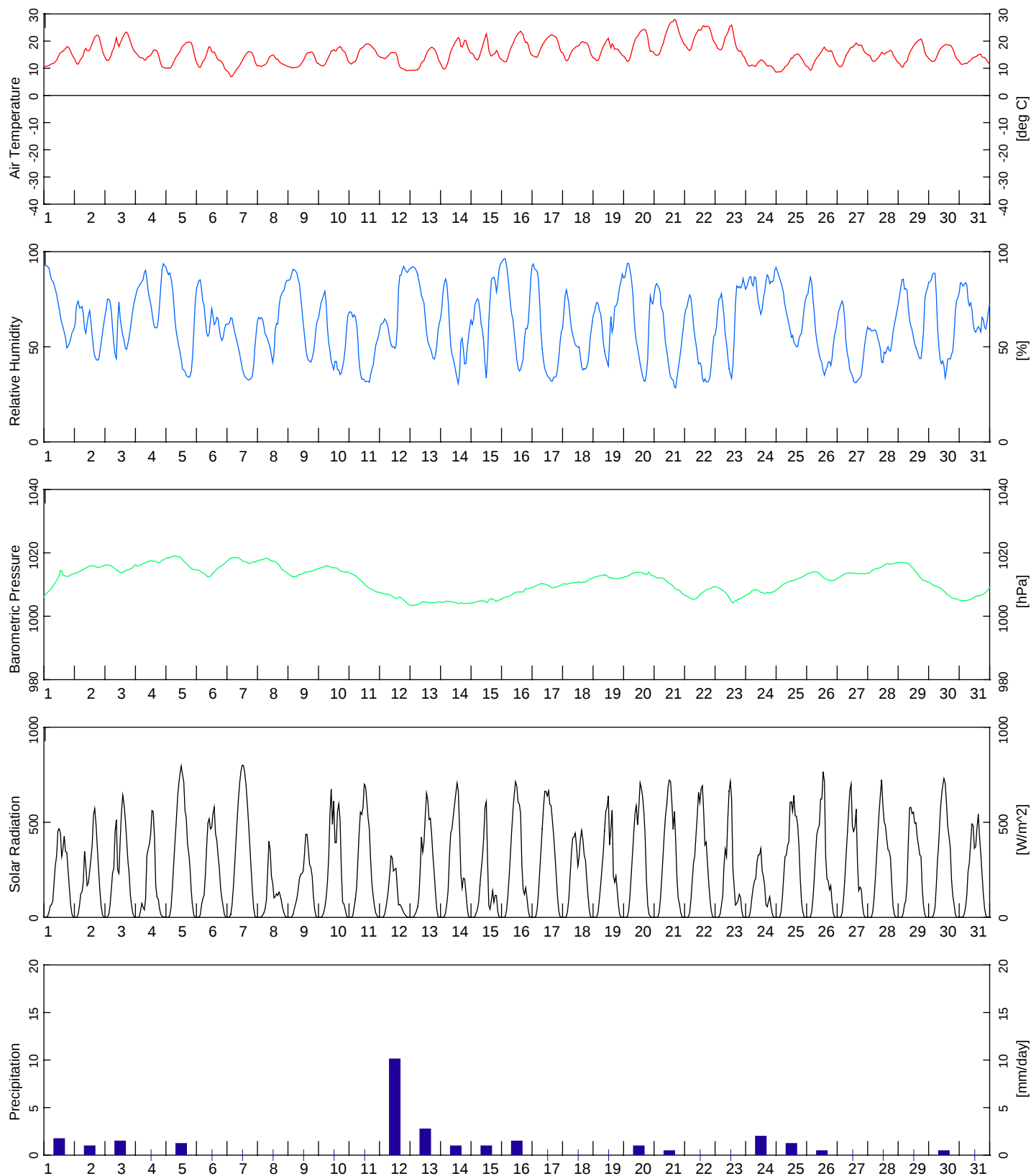
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Figure D-22



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
July 2006**

PROJECT NO.
Y22101057

DWN
RED

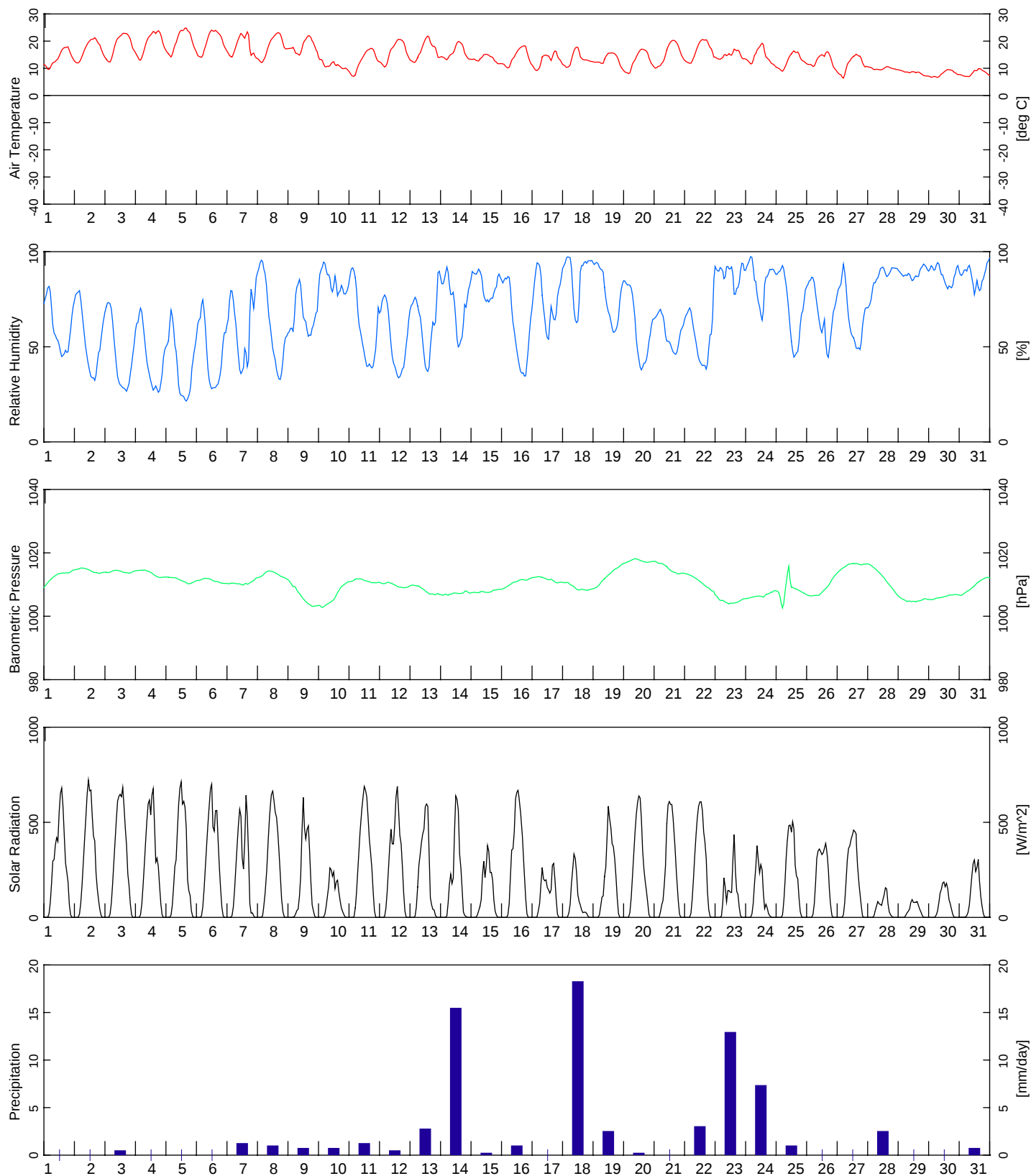
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Figure D-23



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
August 2006**

PROJECT NO.
Y22101057

DWN
RED

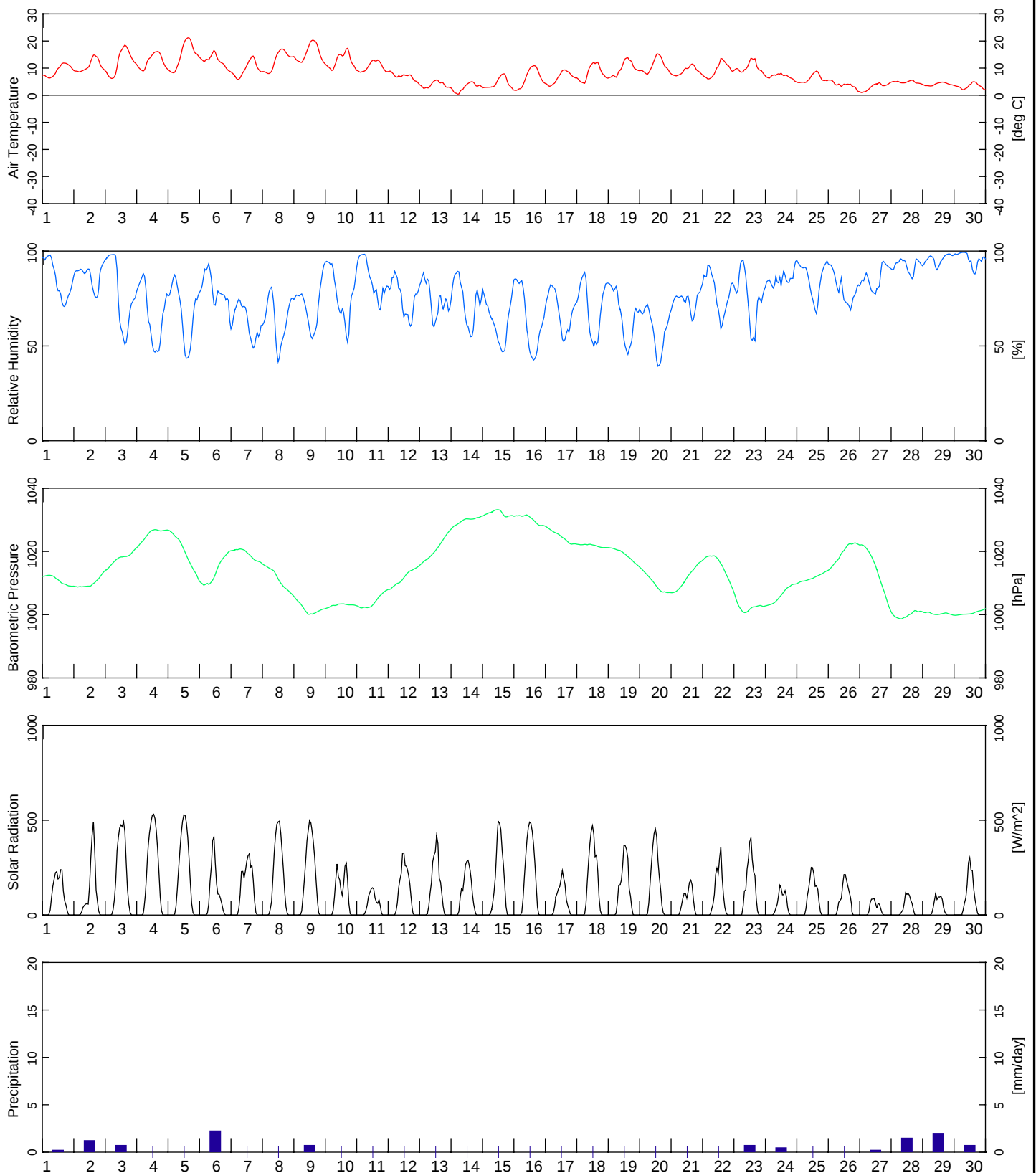
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Figure D-24



NOTES

CLIENT



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
September 2006**

PROJECT NO.
Y22101057

DWN
RED

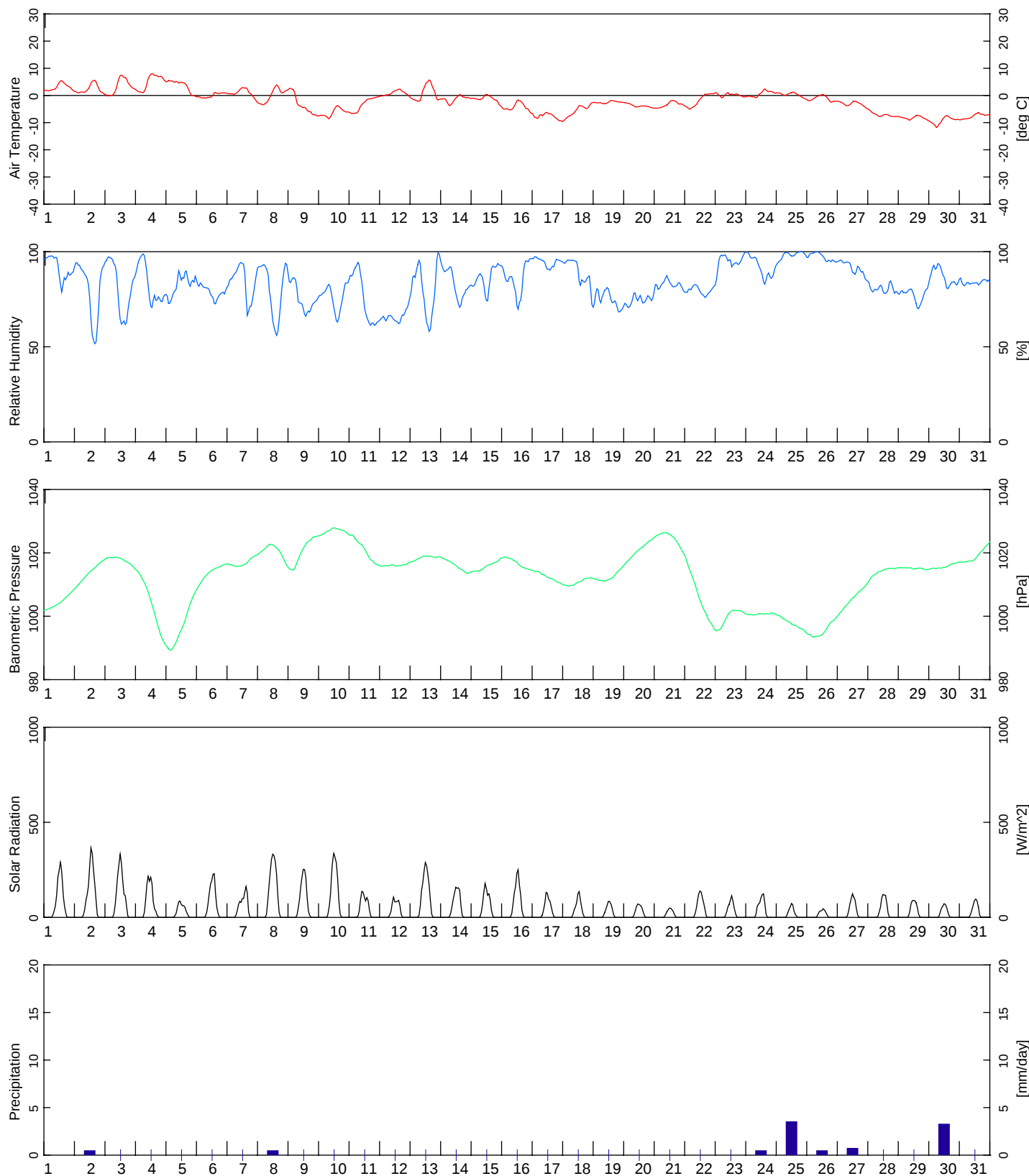
CHK
JAS

REV
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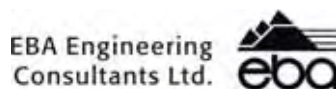
DATE
July 2009

Figure D-25



NOTES

CLIENT



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
October 2006**

PROJECT NO.
Y22101057

DWN
RED

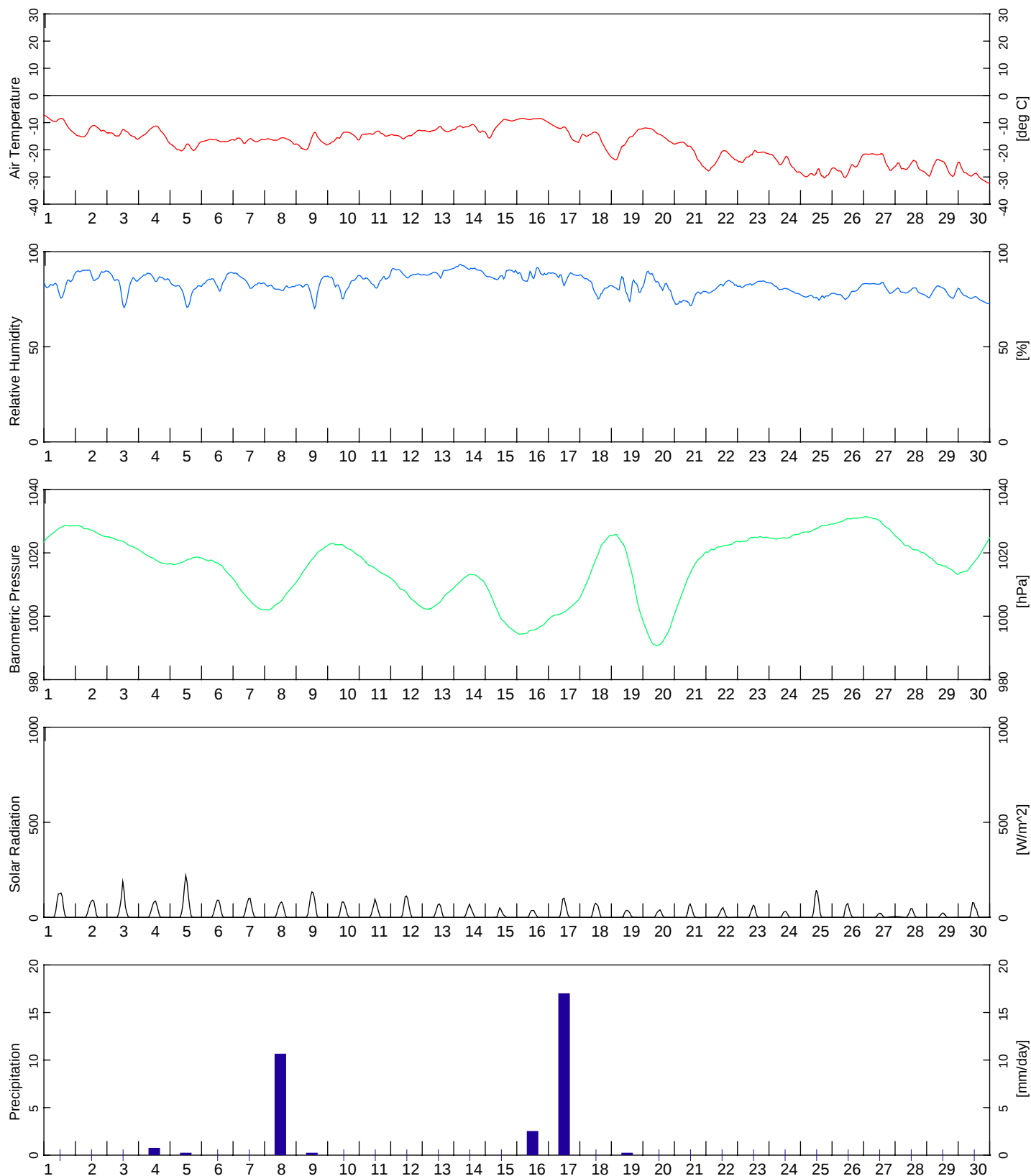
CHK
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Figure D-26



NOTES

CLIENT



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
November 2006**

PROJECT NO.
Y22101057

DWN
RED

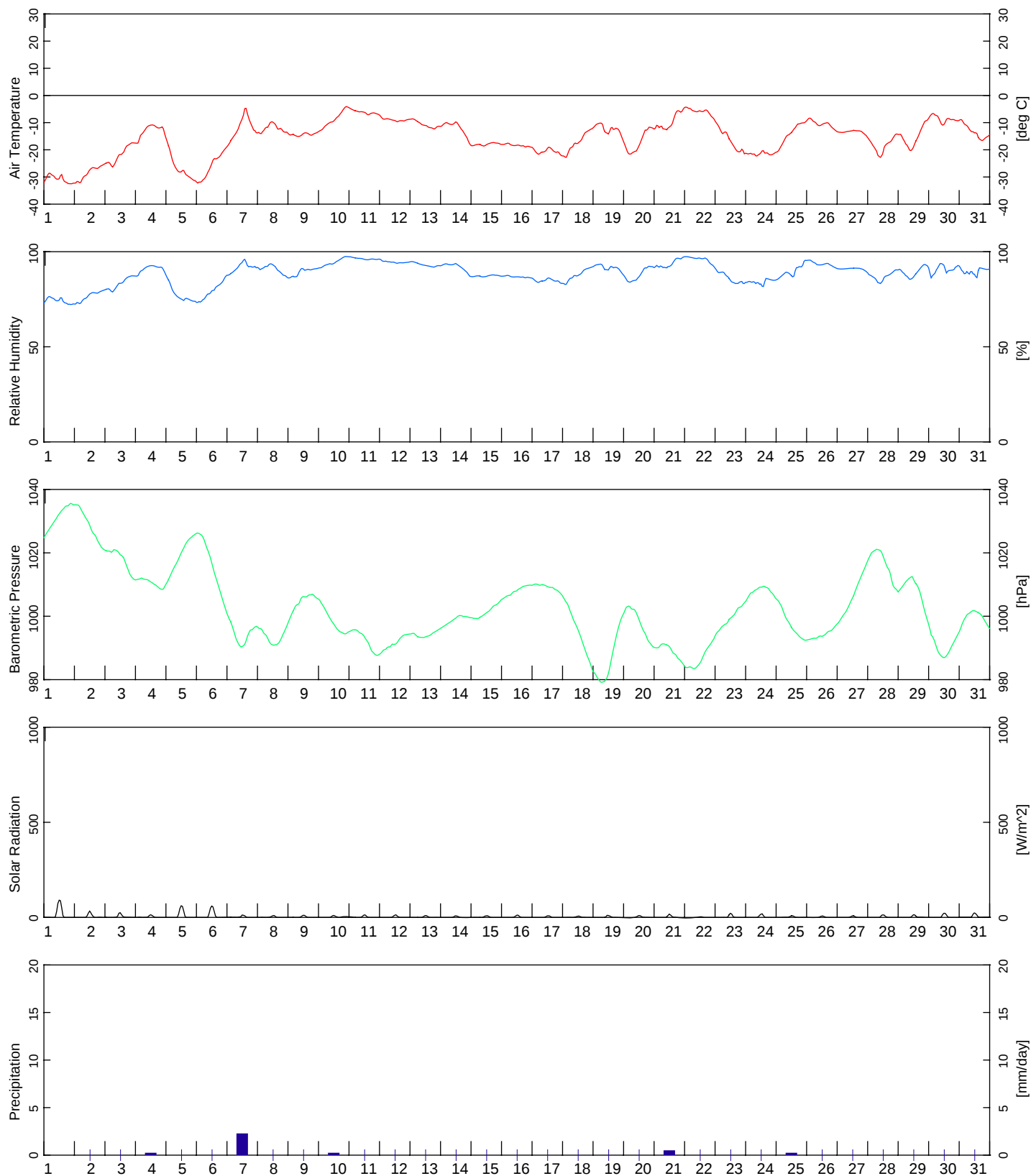
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Figure D-27



NOTES

CLIENT



EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
December 2006**

PROJECT NO.
Y22101057

DWN
RED

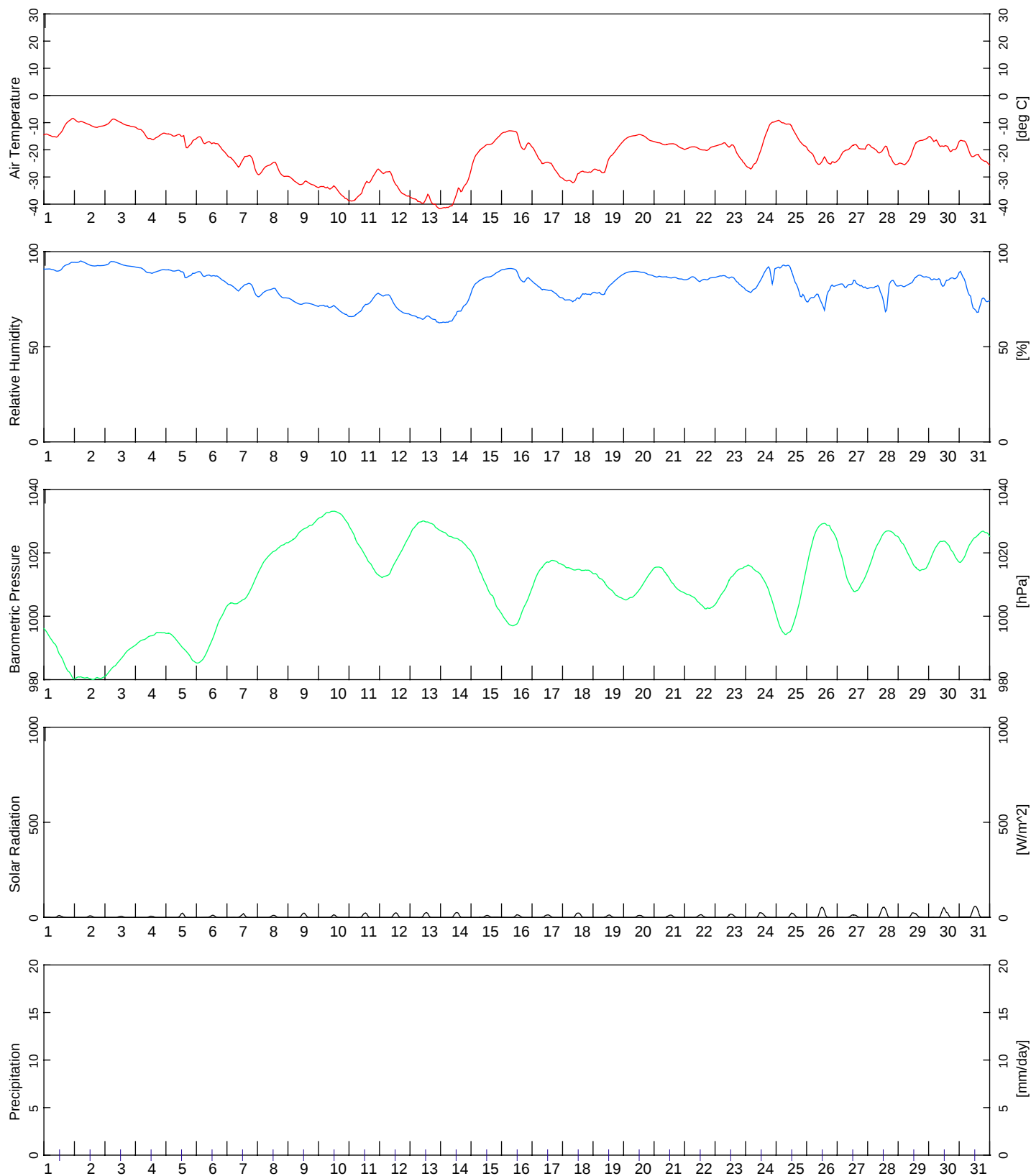
CHK
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July 2009

Figure D-28



NOTES

CLIENT



EBA Engineering Consultants Ltd. 

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
January 2007**

PROJECT NO.
Y22101057

DWN
RED

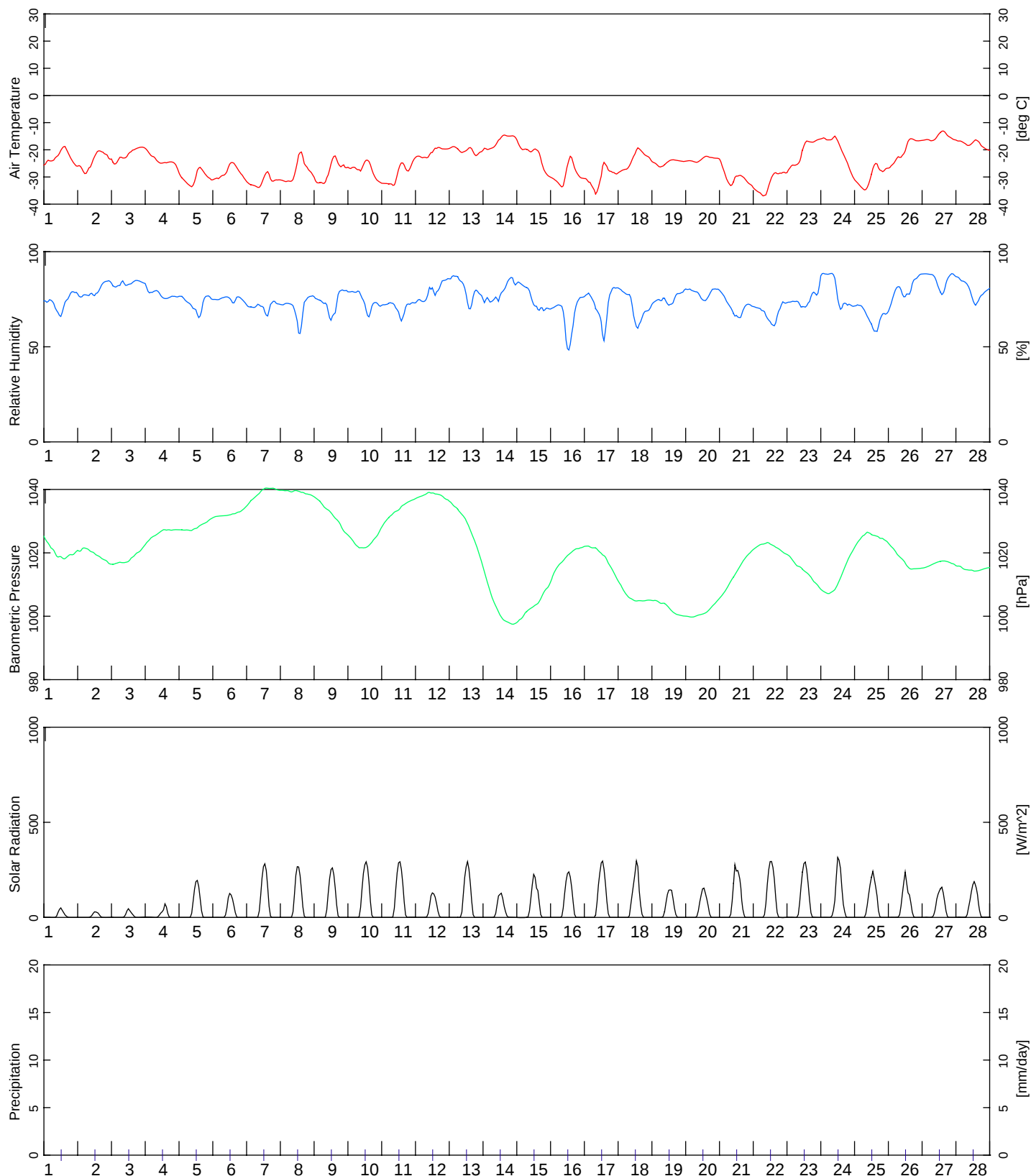
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Figure D-29



NOTES

CLIENT



EBA Engineering Consultants Ltd. 

YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
February 2007**

PROJECT NO.
Y22101057

OFFICE
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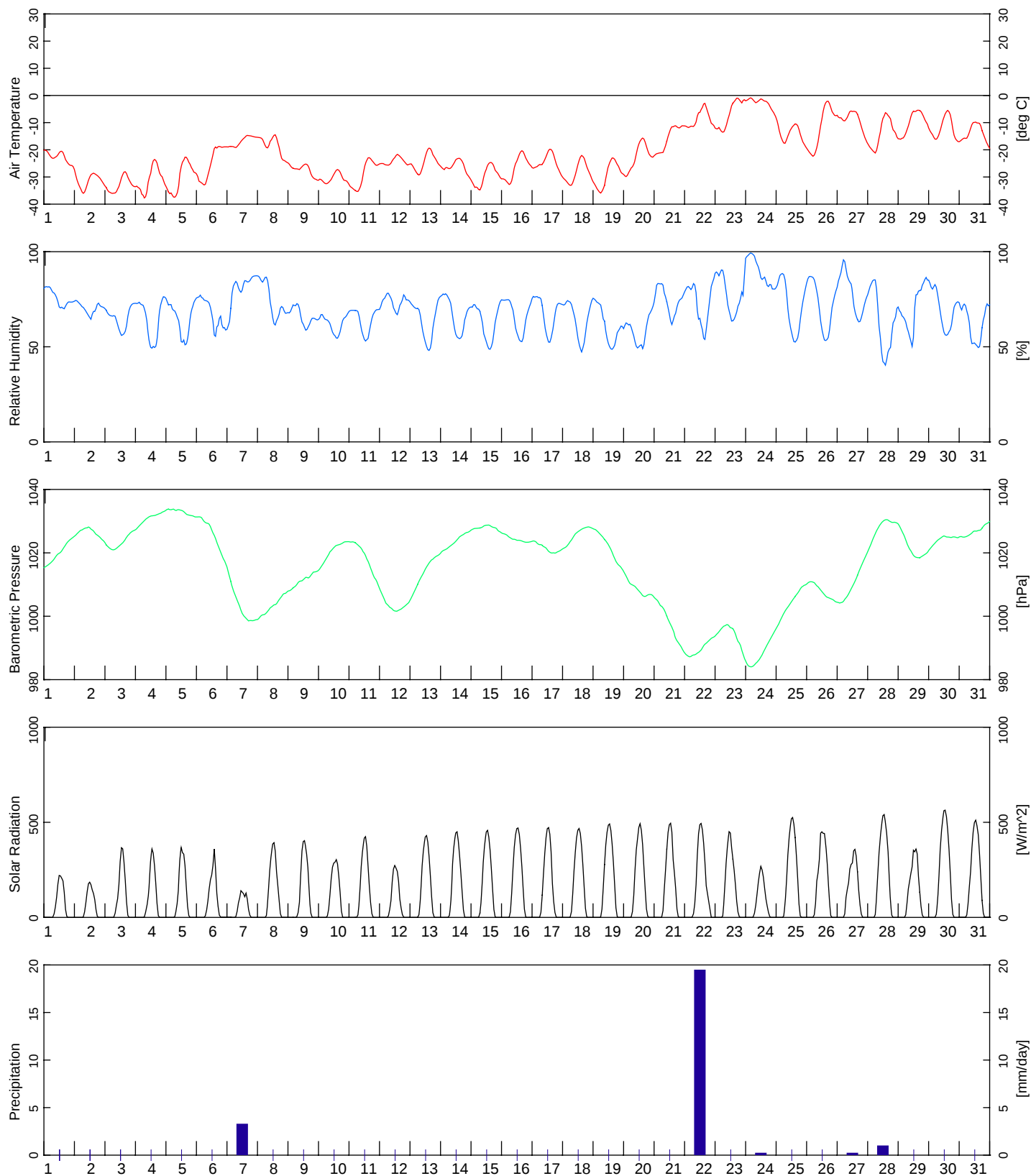
DWN
RED

DATE
July 2009

CHK
JAS

REV
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Figure D-30



NOTES

CLIENT



EBA Engineering Consultants Ltd.



YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
March 2007**

PROJECT NO.

Y22101057

DWN

RED

CHK

JAS

REV

0

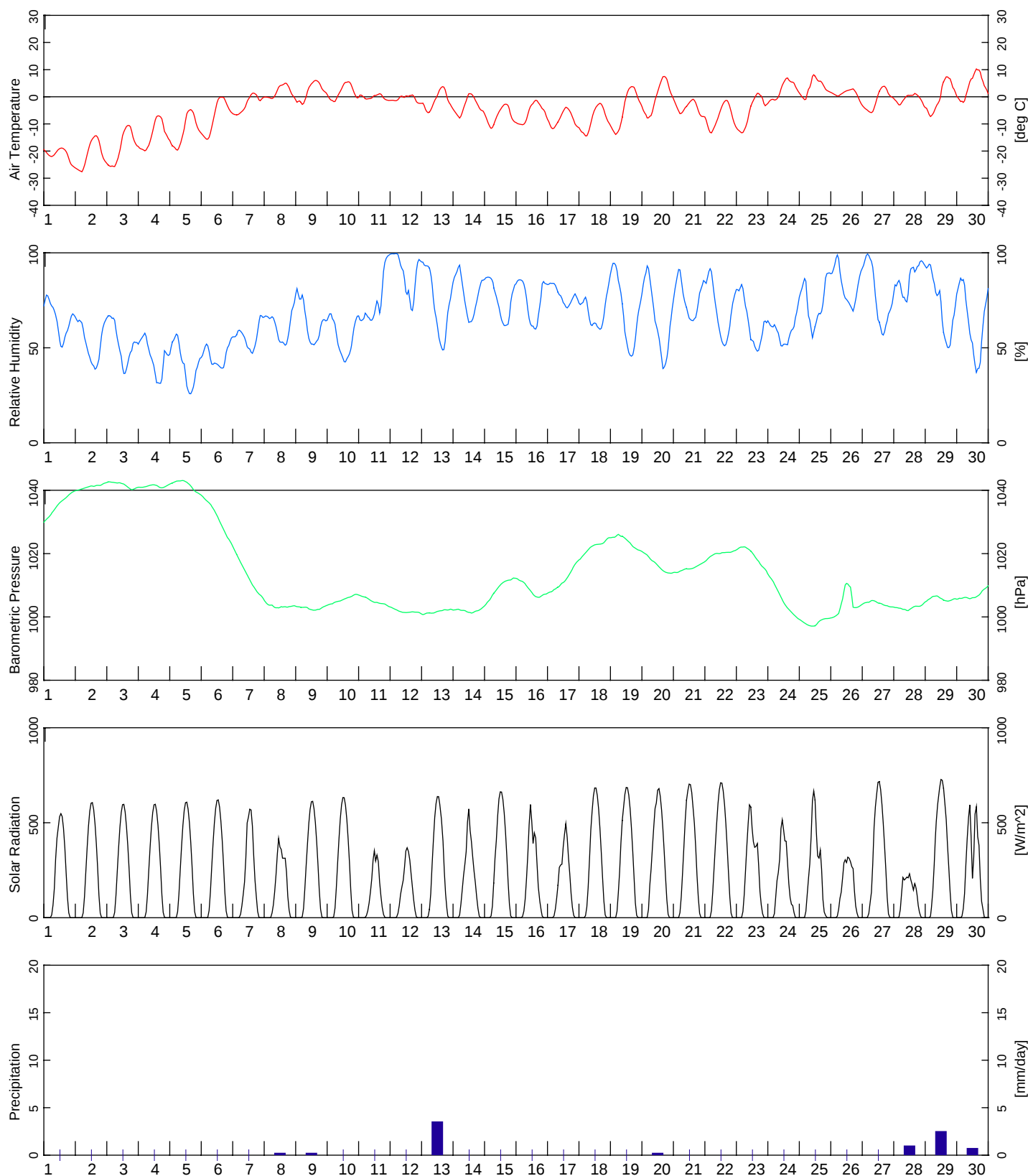
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Figure D-31



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
April 2007**

PROJECT NO.

Y22101057

DWN

RED

CHK

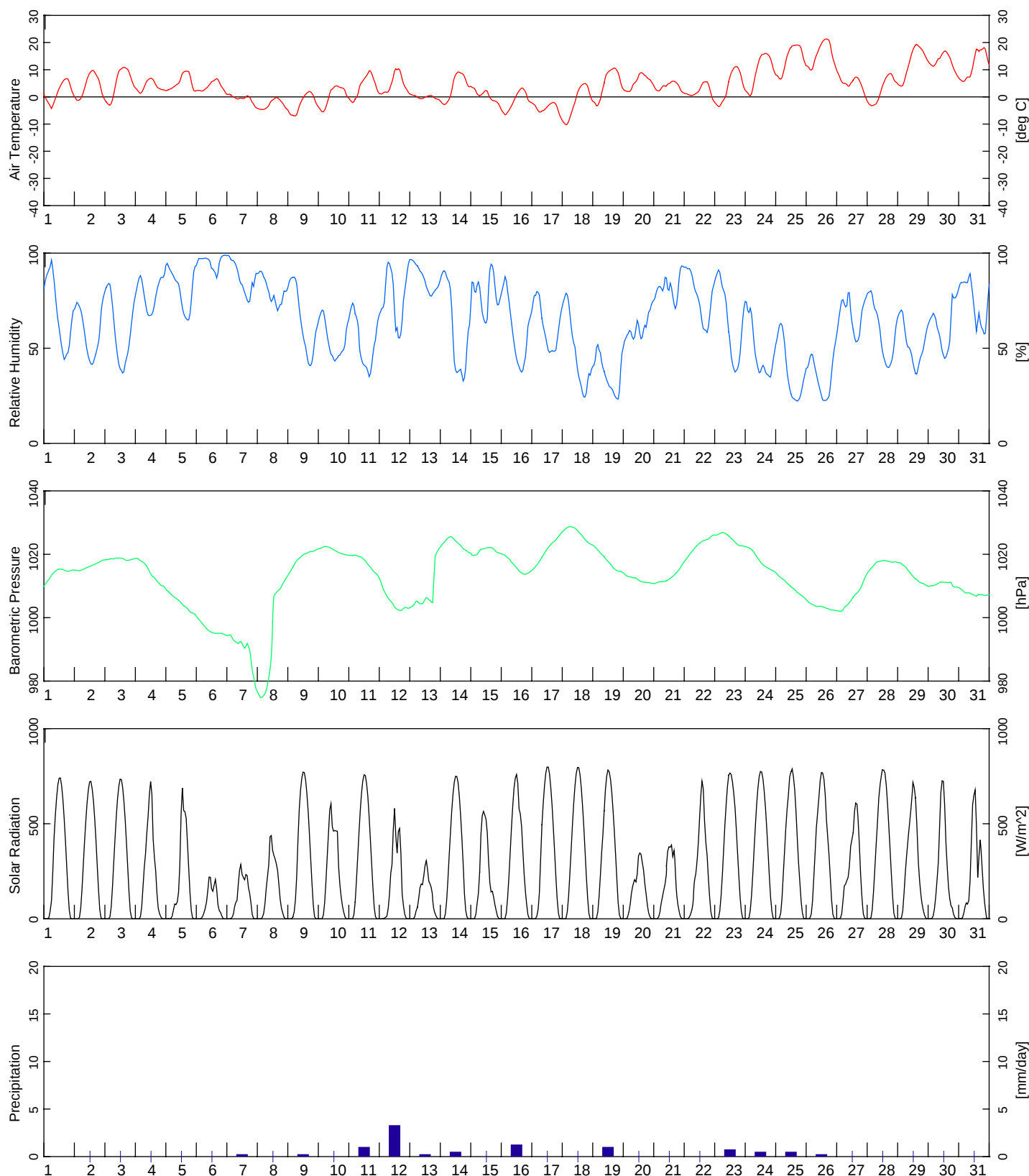
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DATE
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Figure D-32



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
May 2007**

PROJECT NO.
Y22101057

DWN
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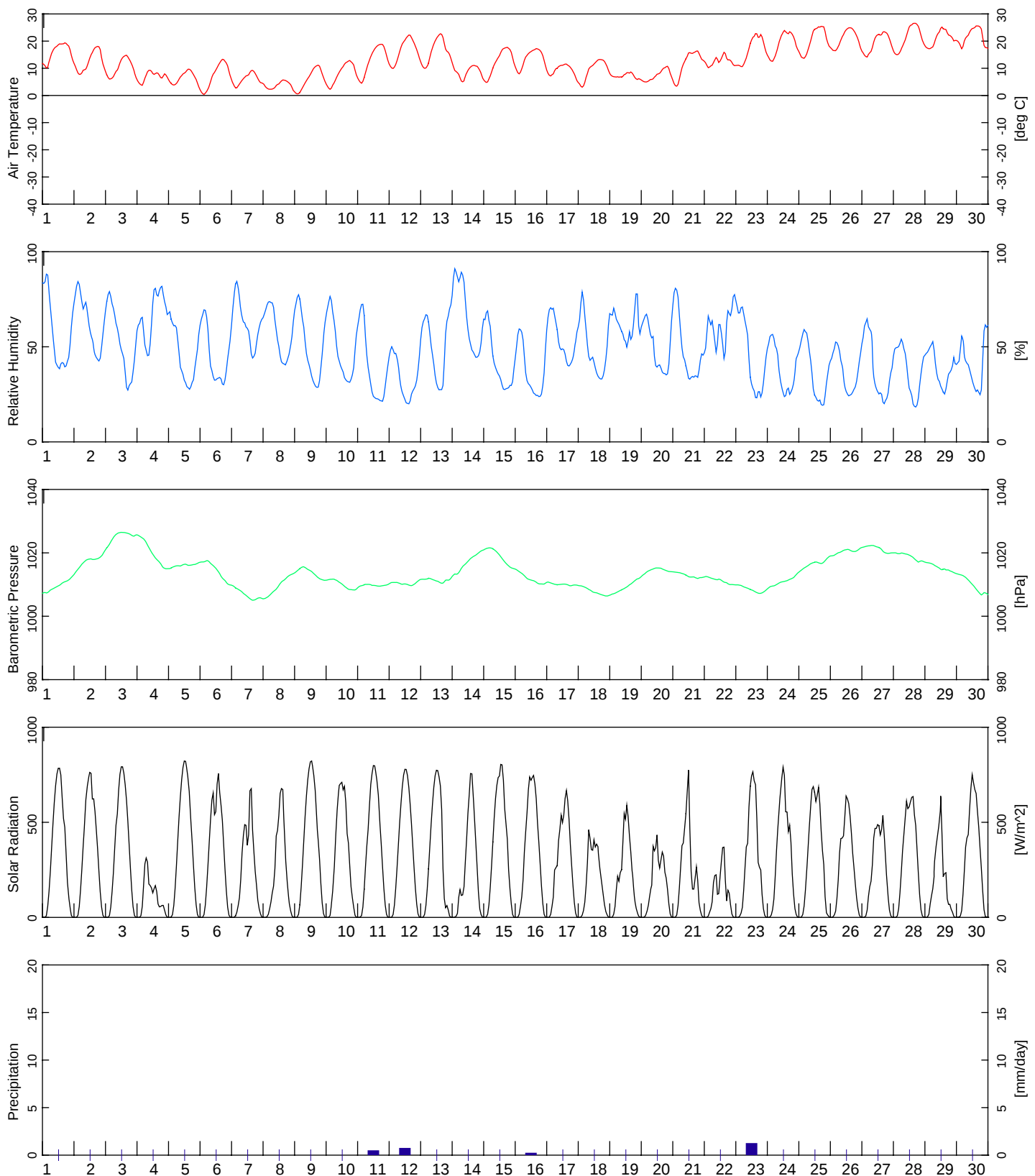
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Figure D33



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**Tyhee Station
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June 2007**

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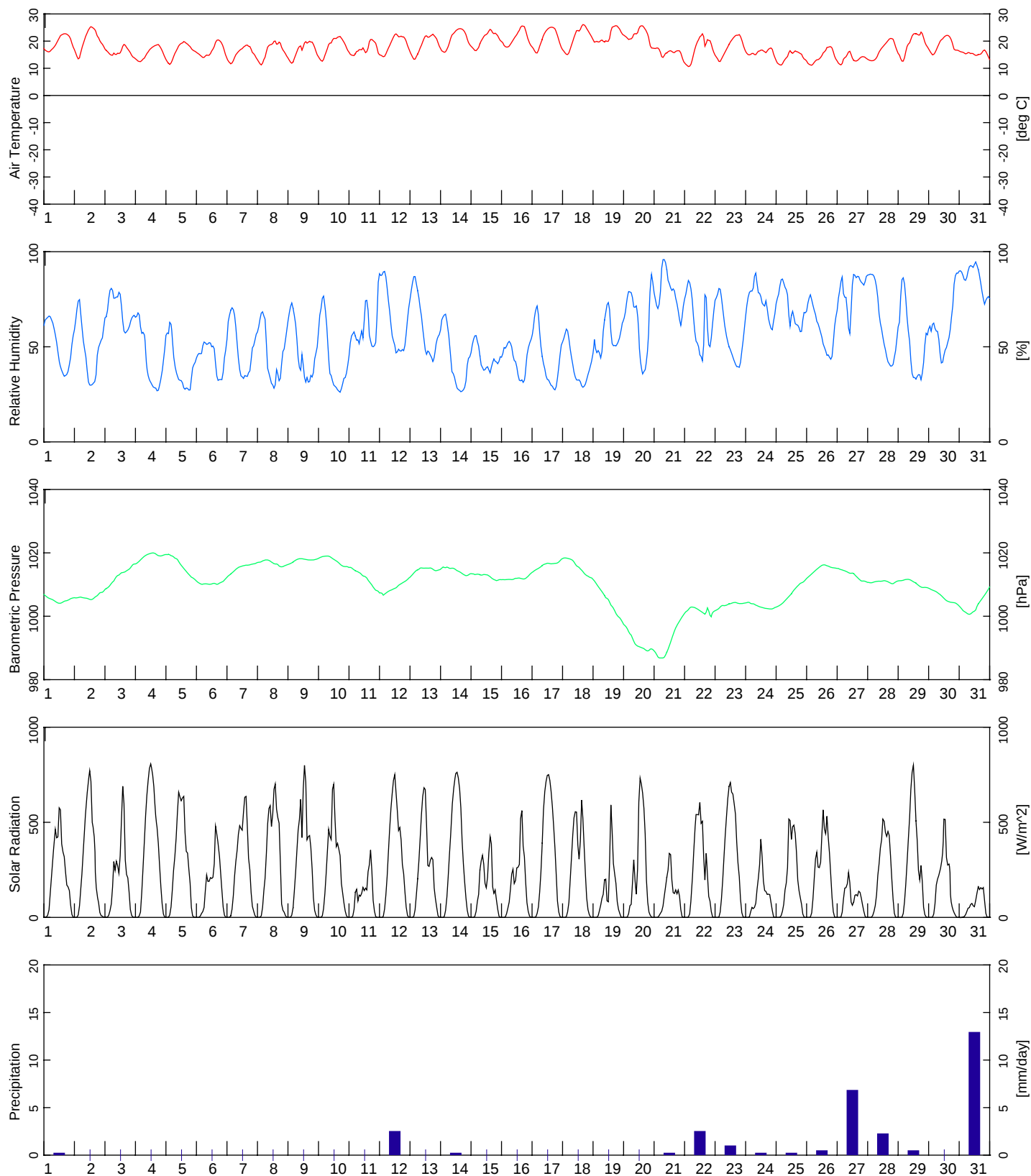
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Figure D-34



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**Tyhee Station
Weather Data
July 2007**

PROJECT NO.
Y22101057

DWN
RED

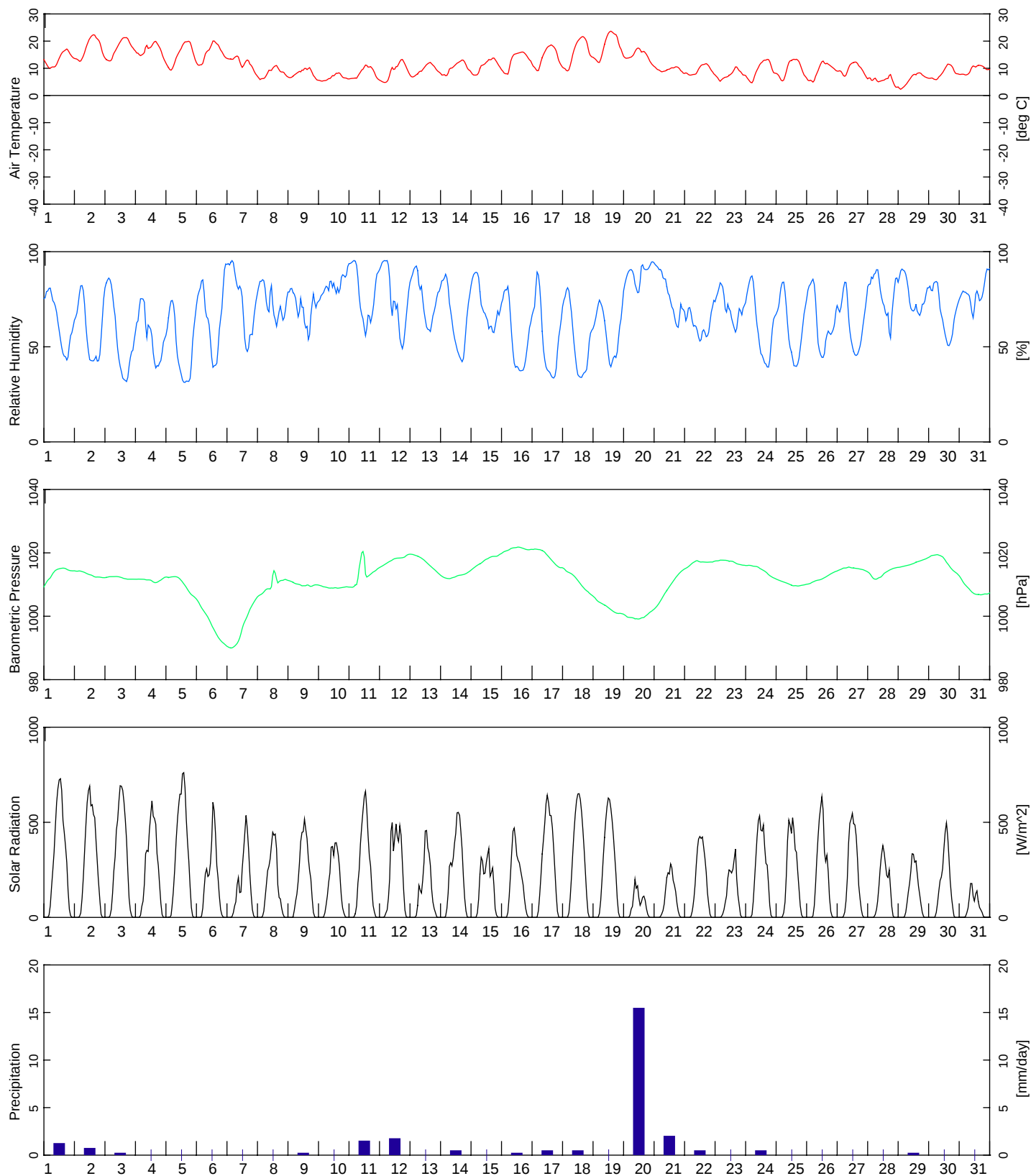
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Figure D-35



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**Tyhee Station
Weather Data
August 2007**

PROJECT NO.
Y22101057

DWN
RED

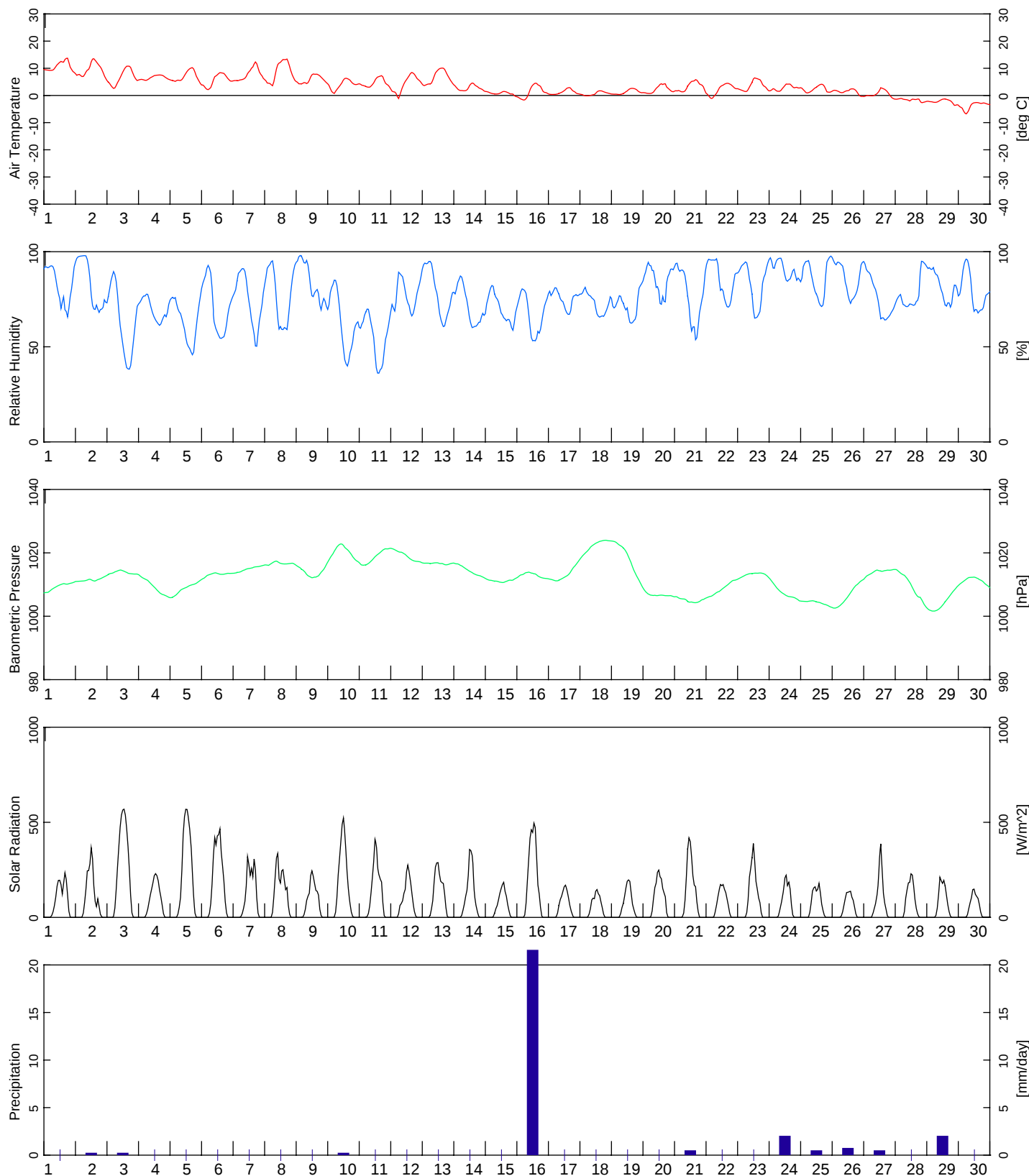
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Figure D-36



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**Tyhee Station
Weather Data
September 2007**

PROJECT NO.
Y22101057

DWN
RED

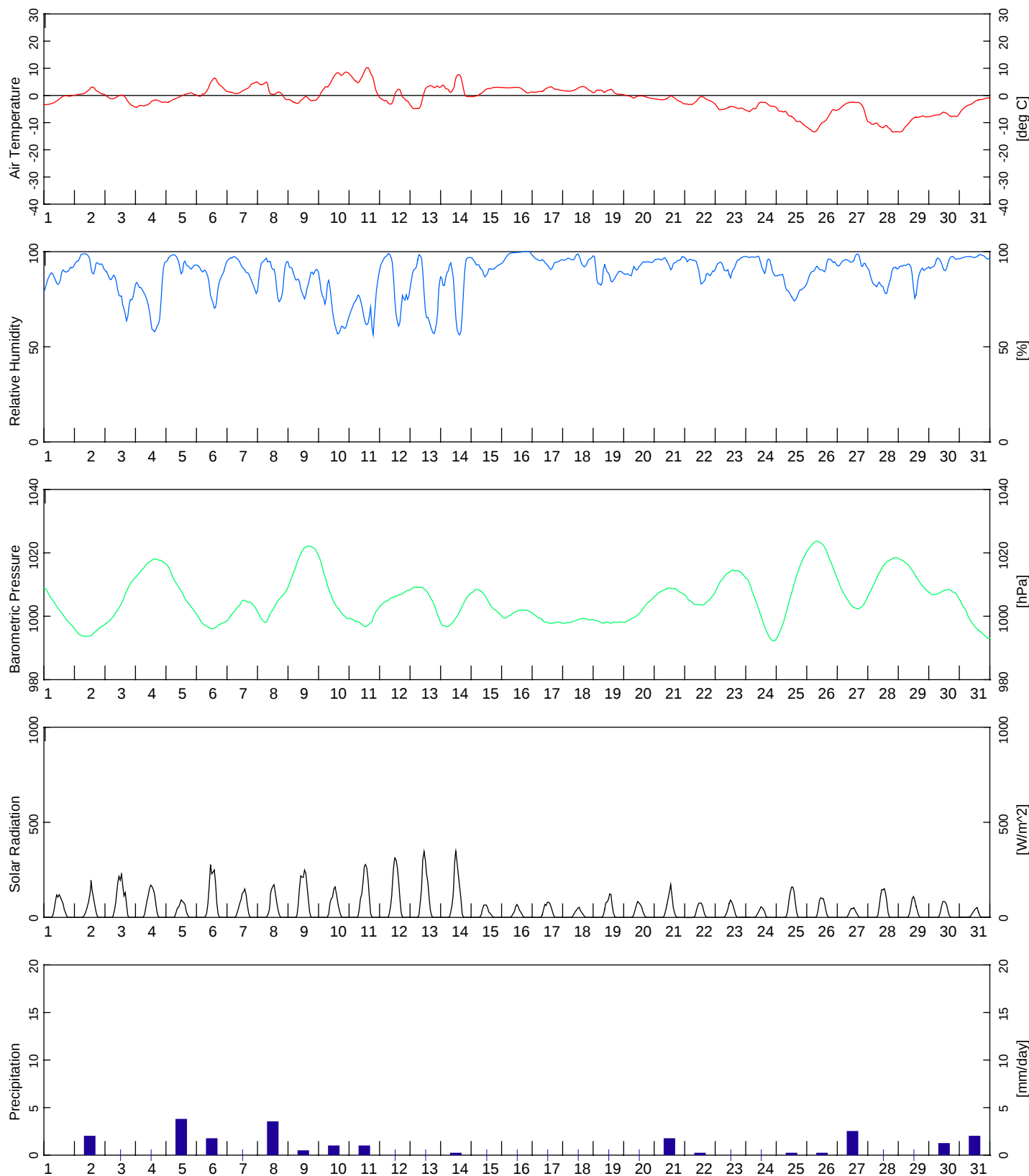
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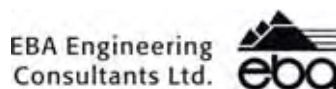
DATE
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Figure D-37



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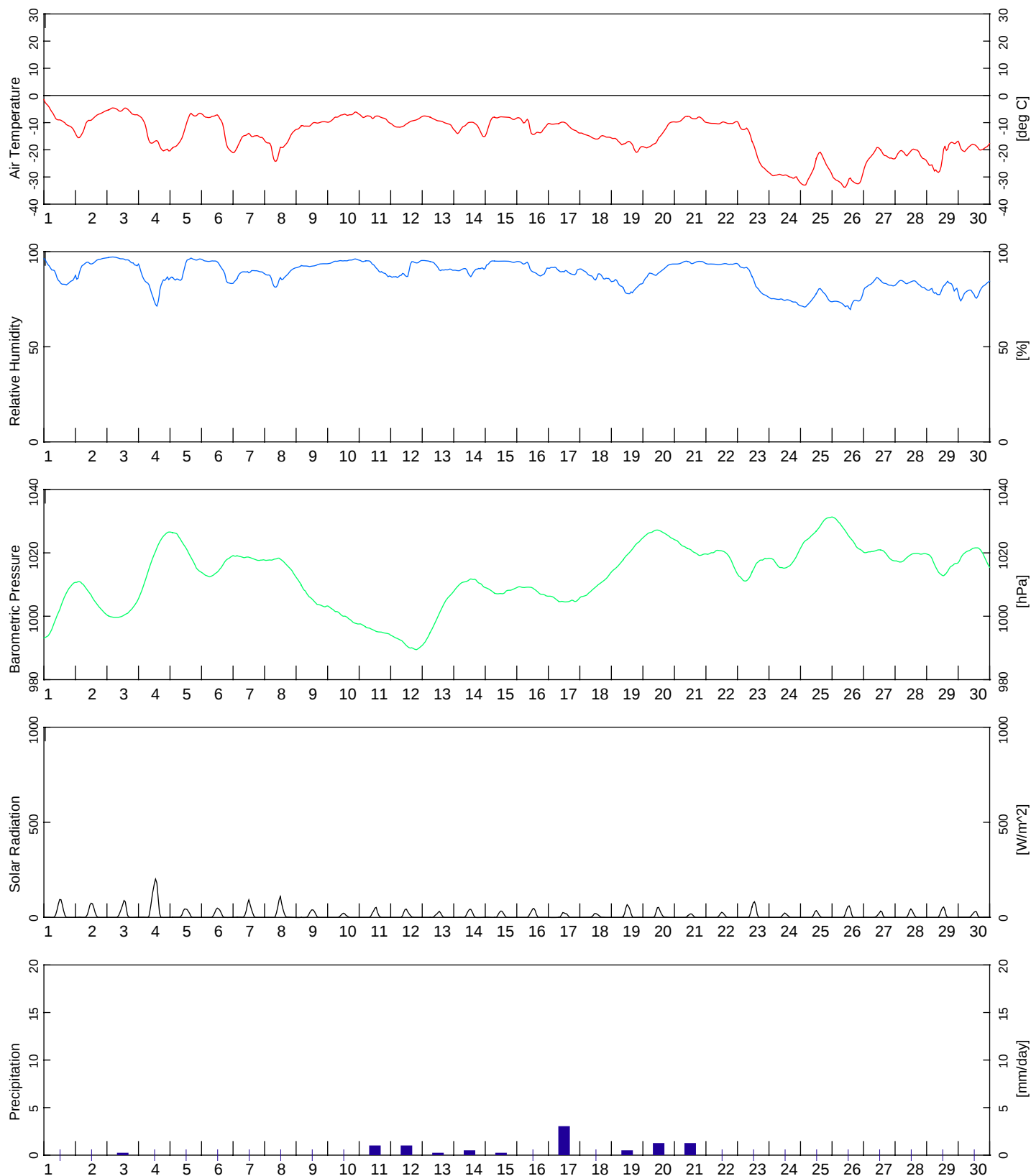


YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
October 2007**

PROJECT NO. Y22101057	DWN RED	CHK JAS	REV 0
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Figure D-38



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Weather Data
November 2007**

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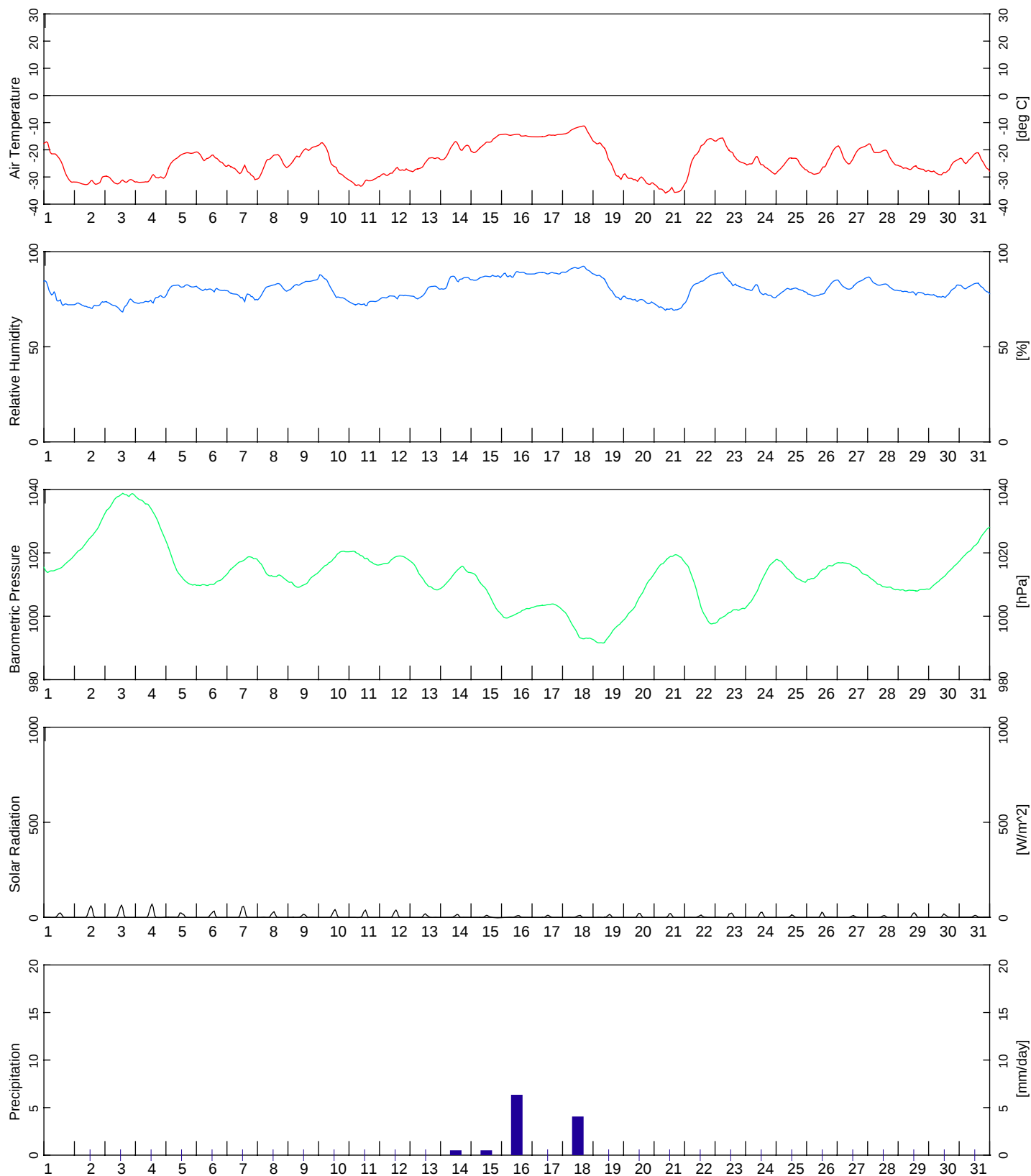
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Figure D-39



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**Tyhee Station
Weather Data
December 2007**

PROJECT NO.

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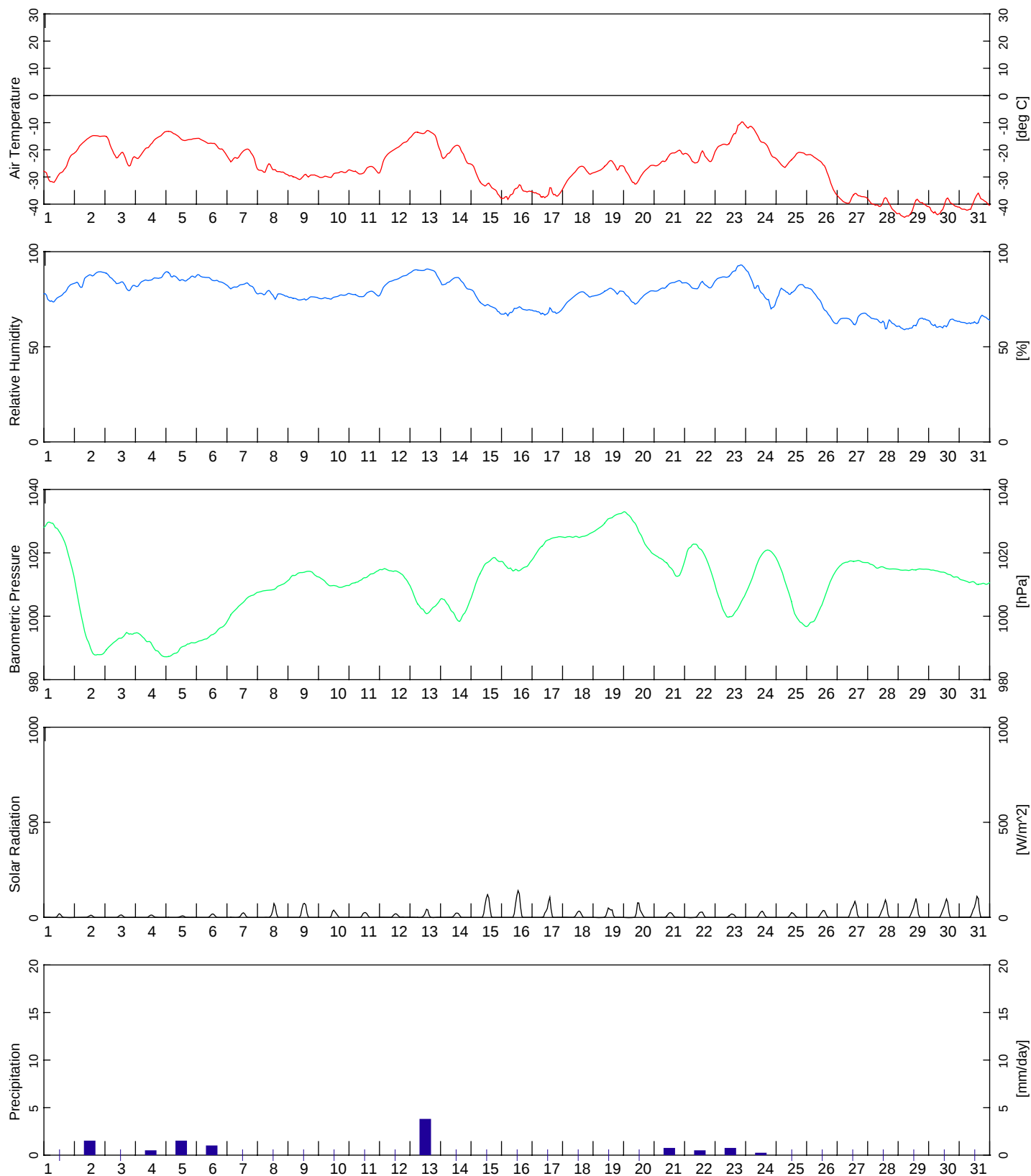
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Figure D-40



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Weather Data
January 2008**

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RED

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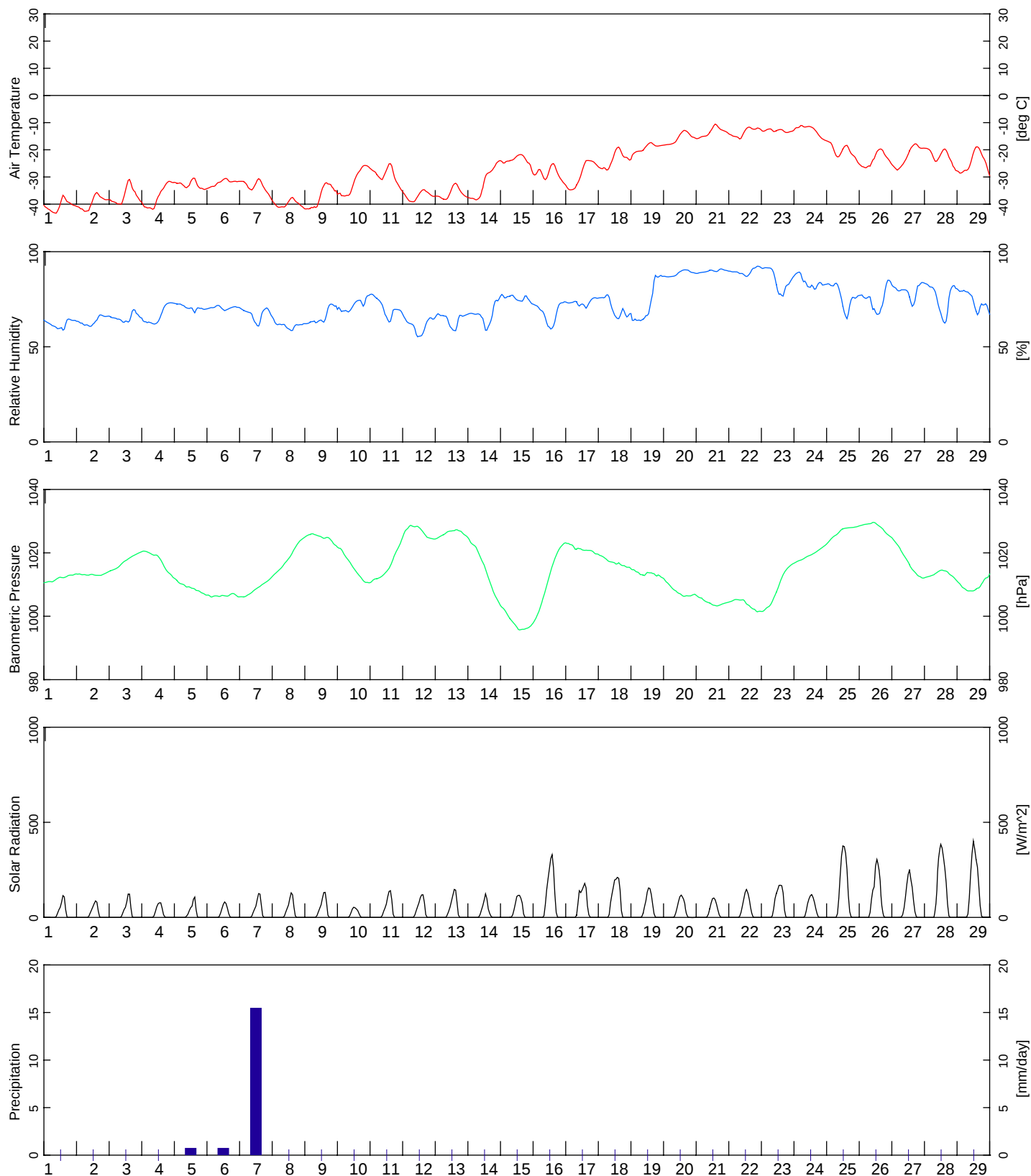
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Figure D-41



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**Tyhee Station
Weather Data
February 2008**

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Y22101057

DWN
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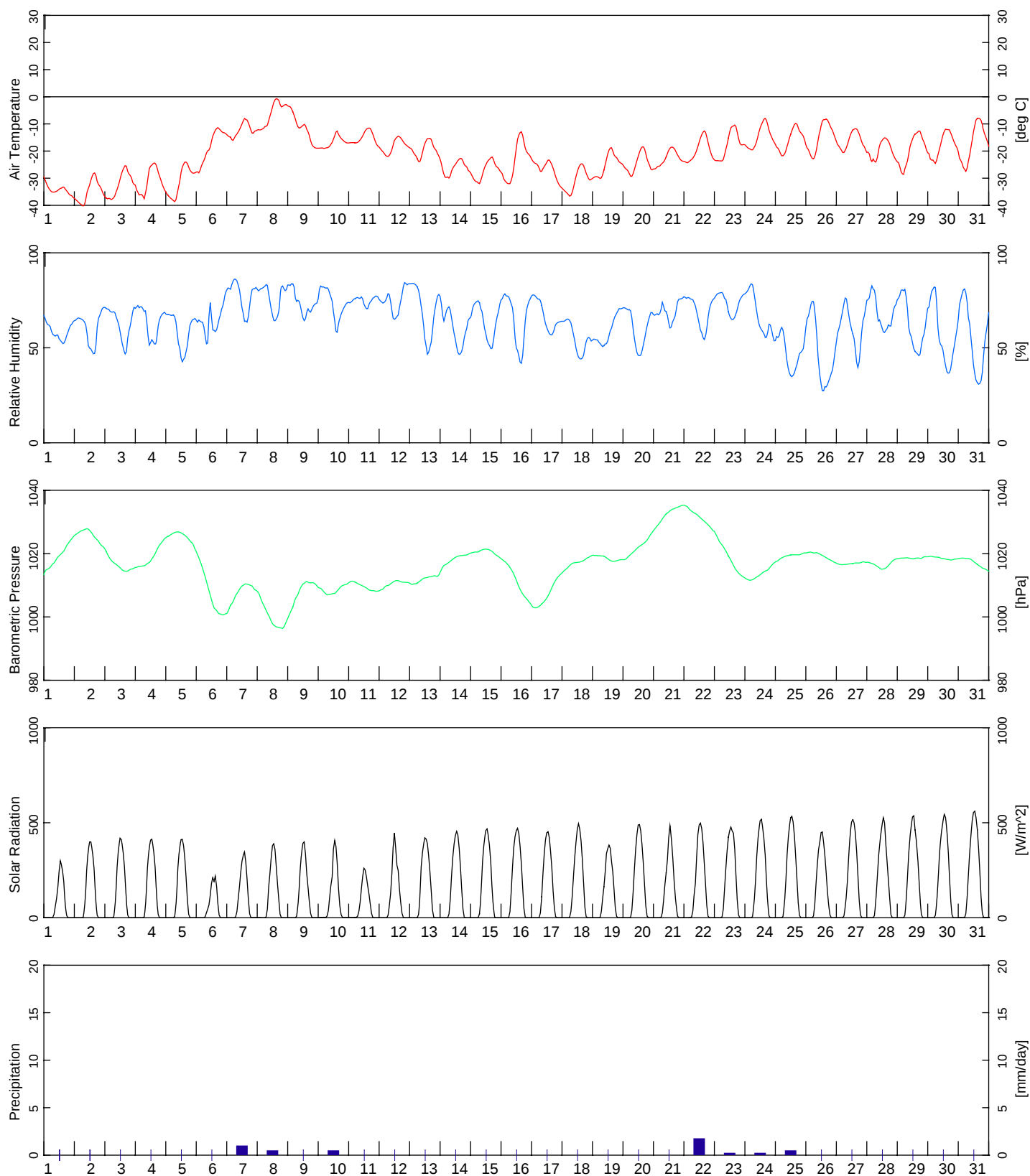
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Figure D-42



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**Tyhee Station
Weather Data
March 2008**

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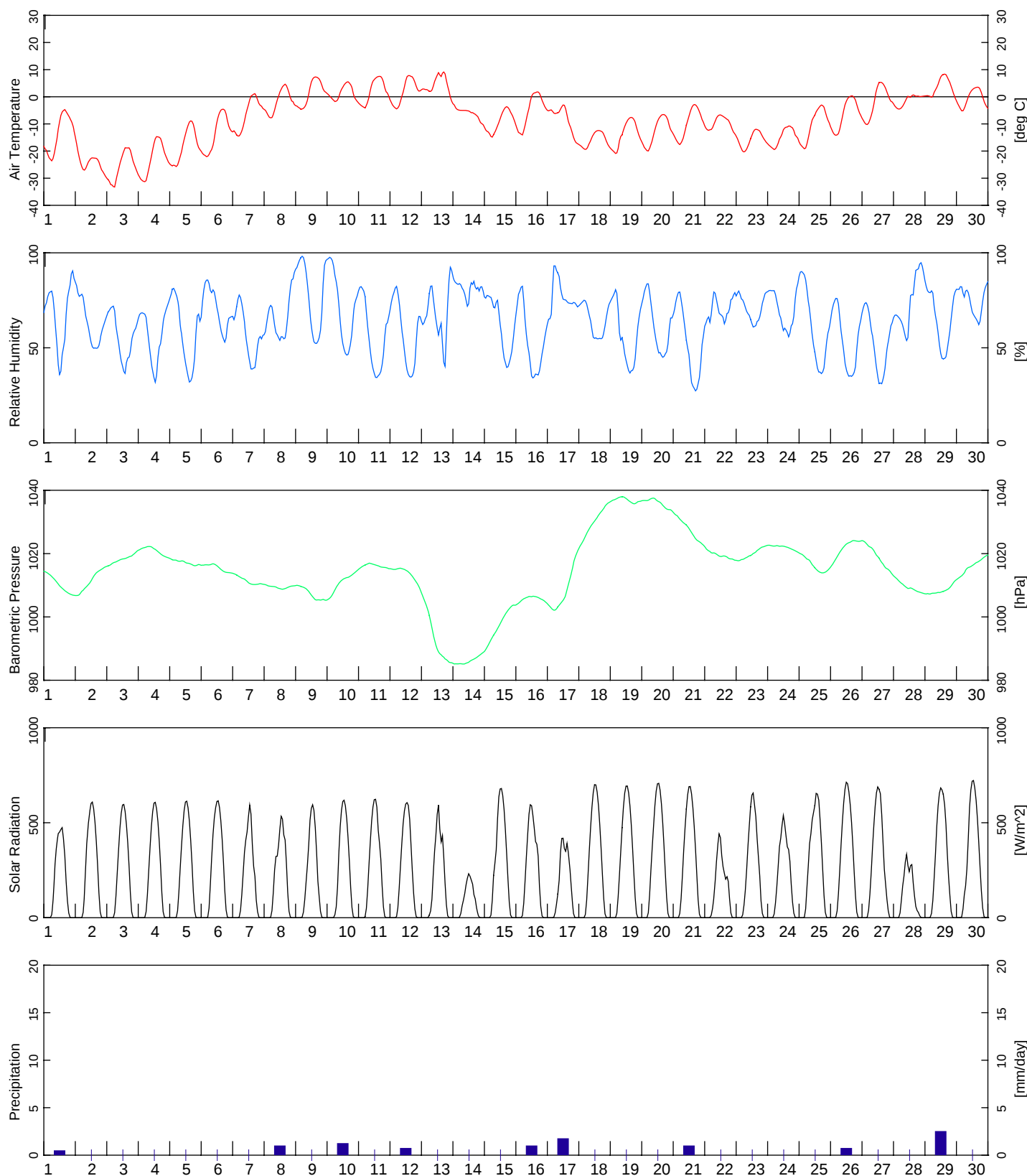
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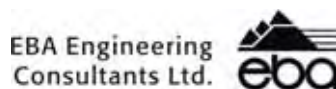
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Figure D-43



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
April 2008**

PROJECT NO.
Y22101057

DWN
RED

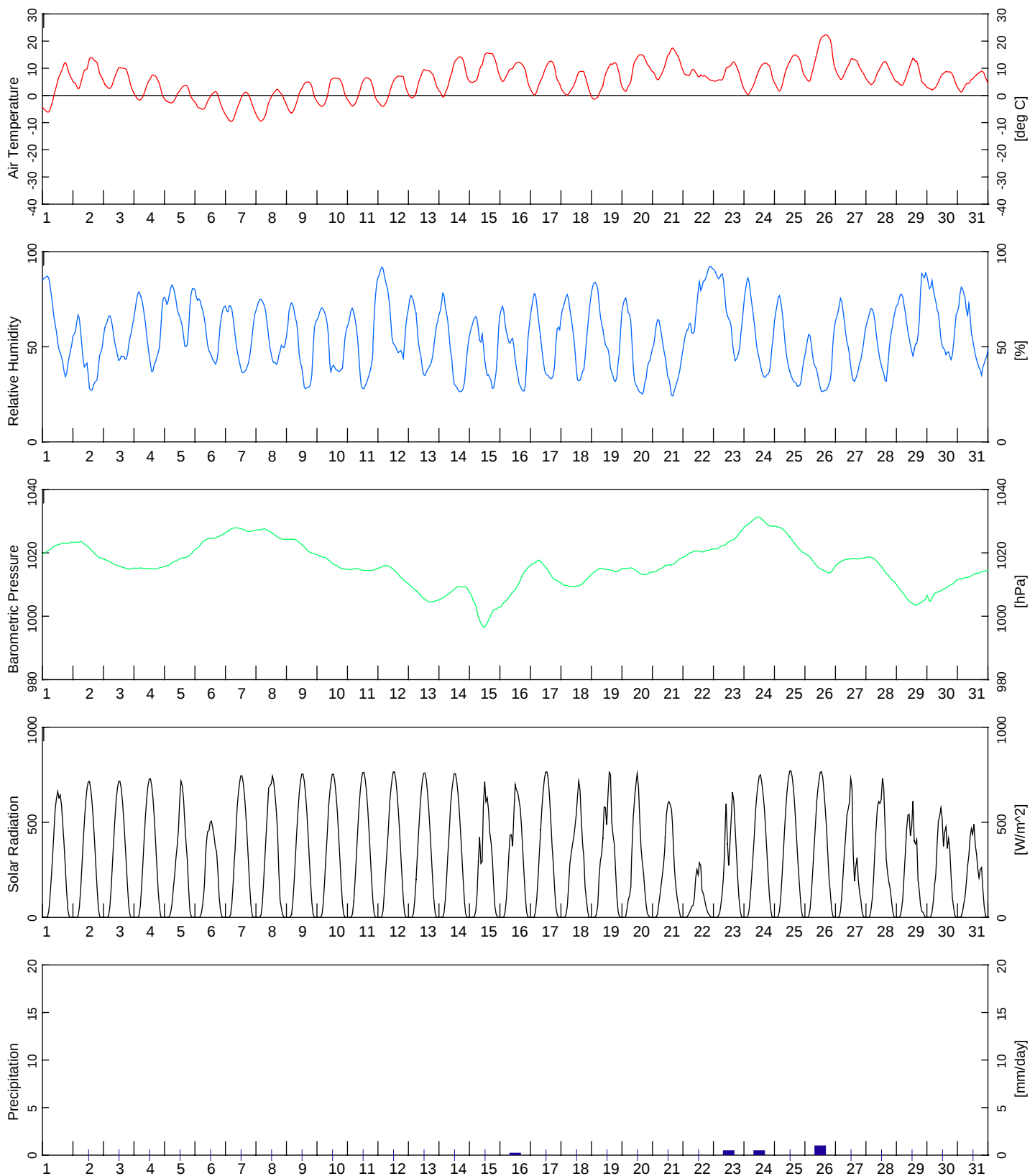
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Figure D-44



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
May 2008**

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DWN
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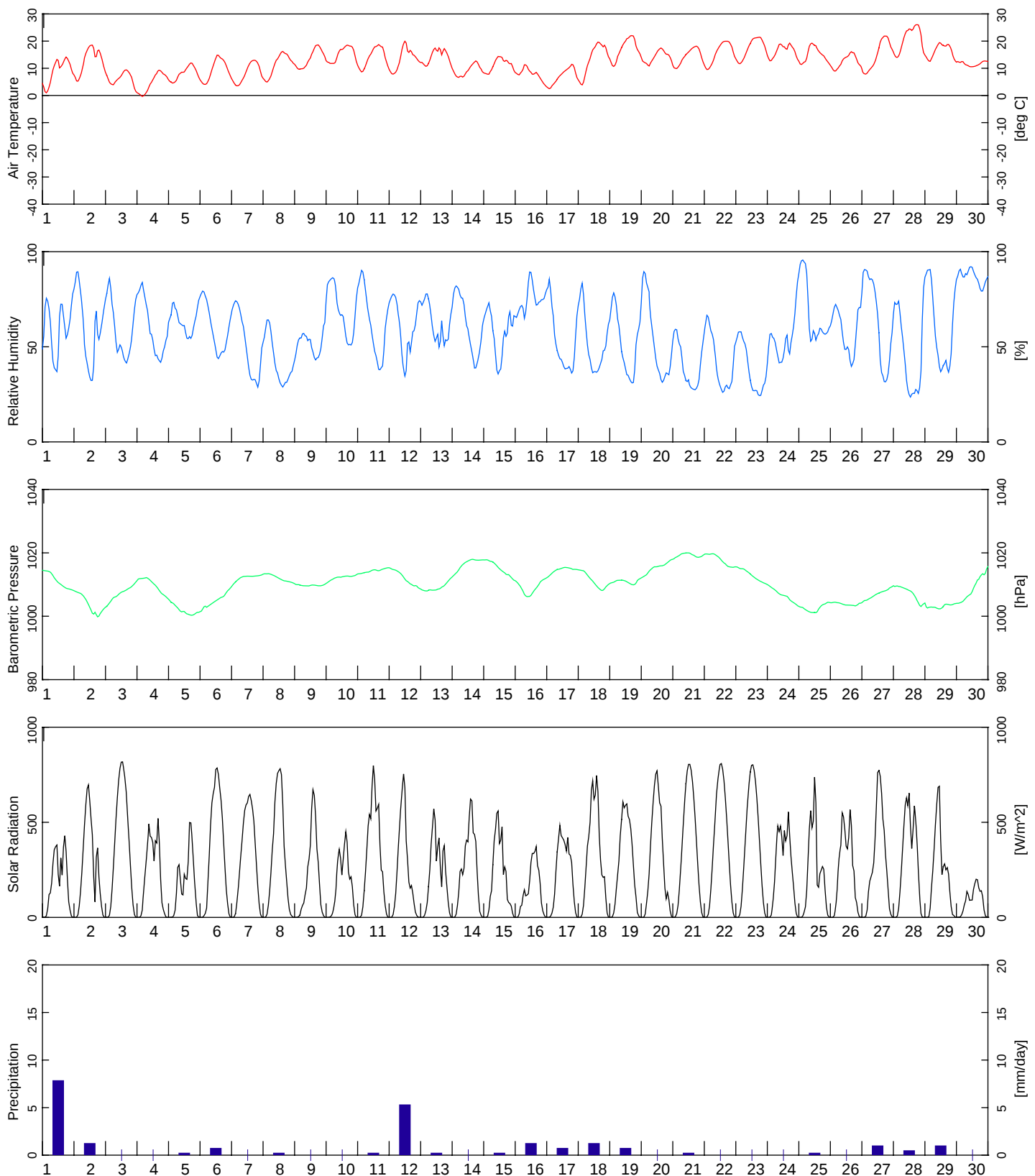
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Figure D-45



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**Tyhee Station
Weather Data
June 2008**

PROJECT NO.
Y22101057

DWN
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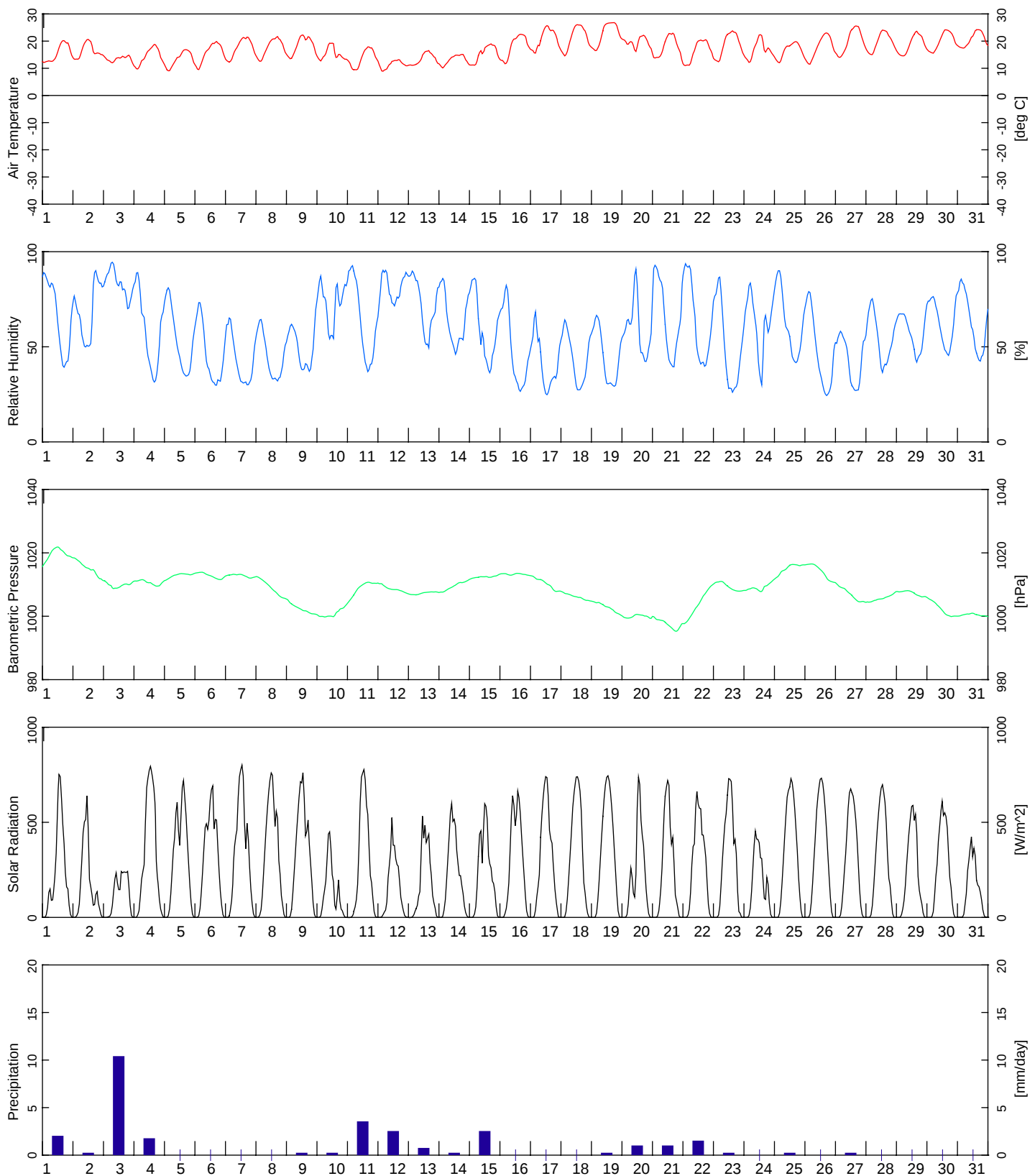
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Figure D-46



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
July 2008**

PROJECT NO.
Y22101057

DWN
RED

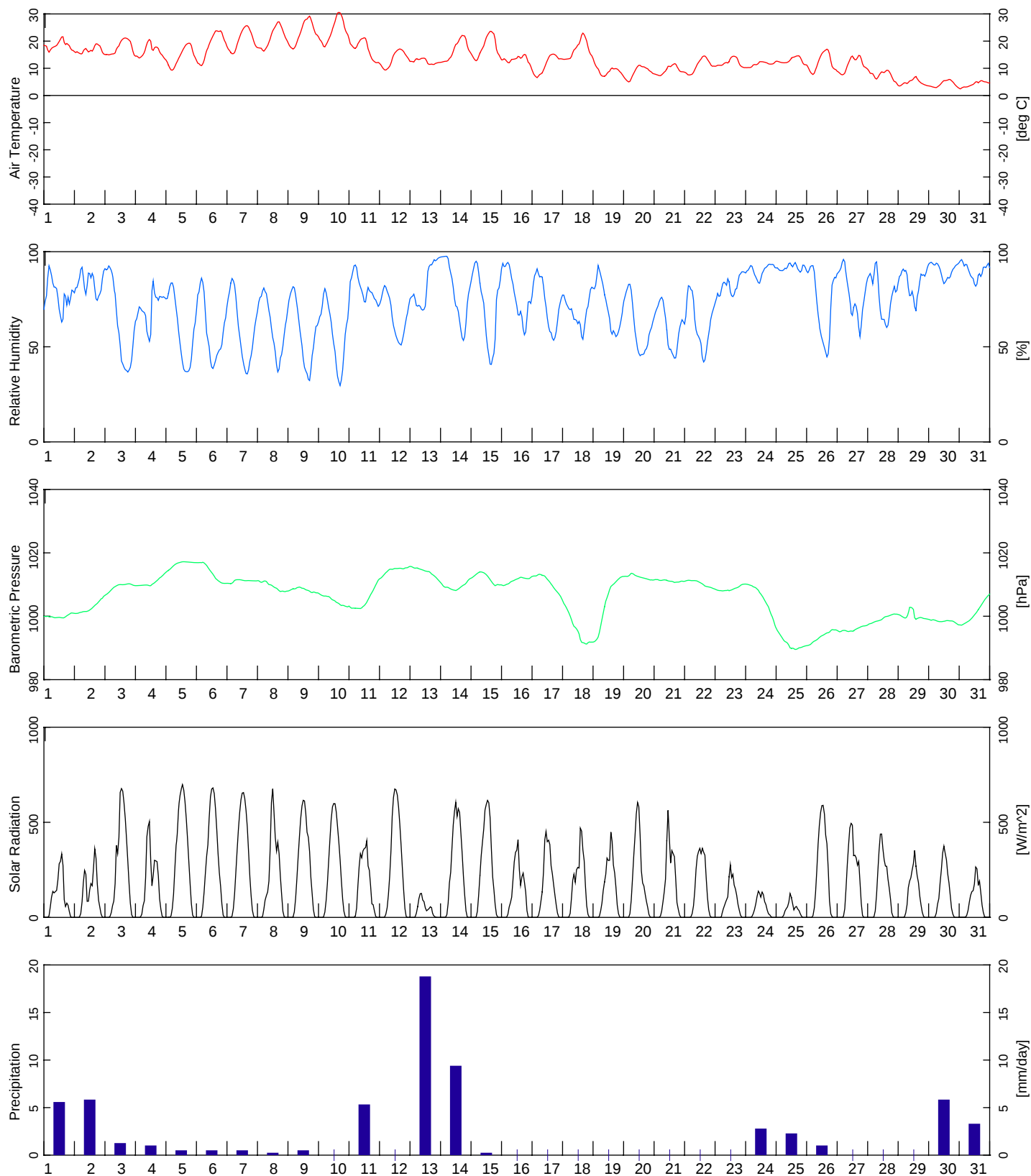
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Figure D-47



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
August 2008**

PROJECT NO.
Y22101057

DWN
RED

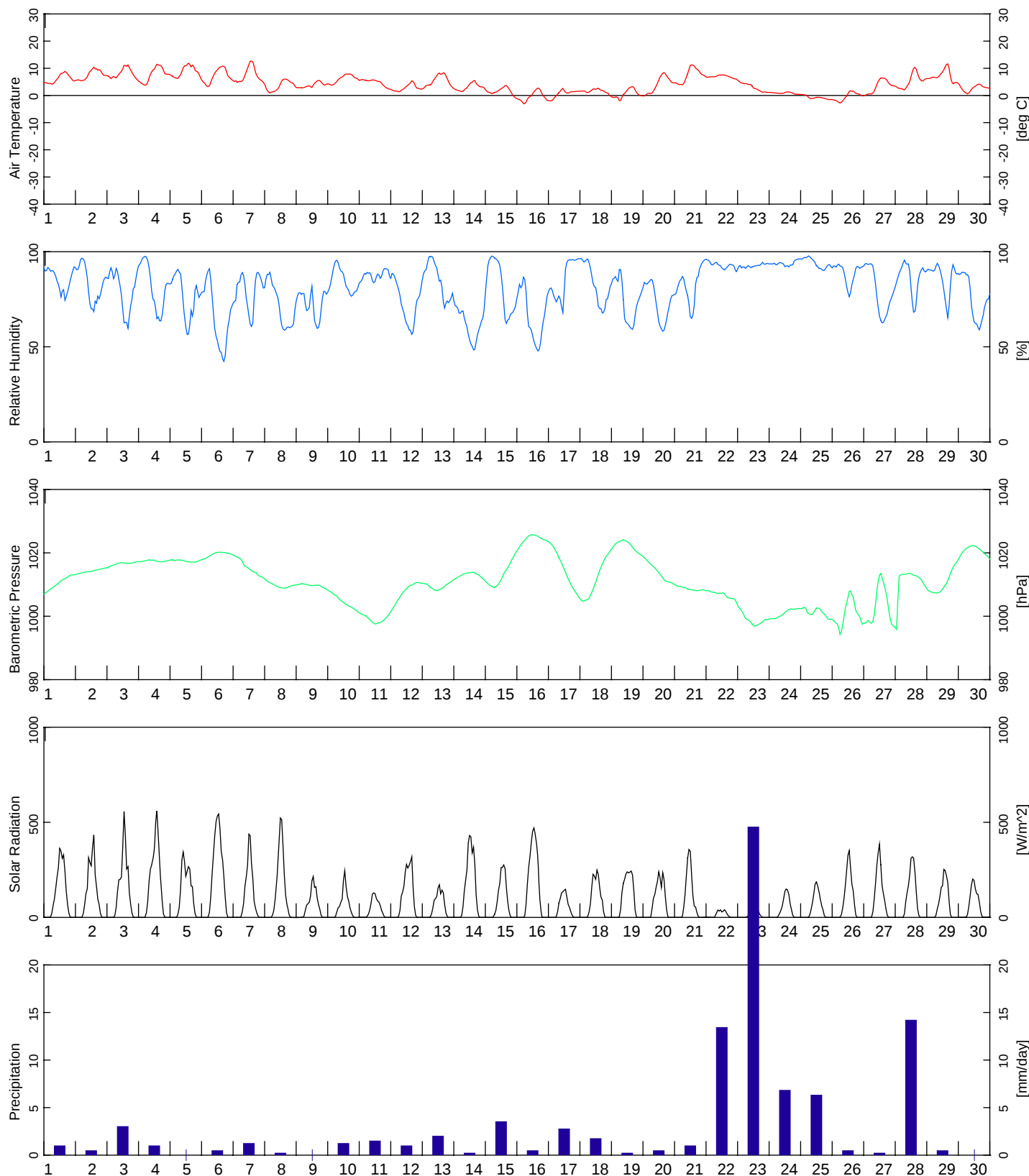
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Figure D-48



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**Tyhee Station
Weather Data
September 2008**

PROJECT NO.
Y22101057

DWN
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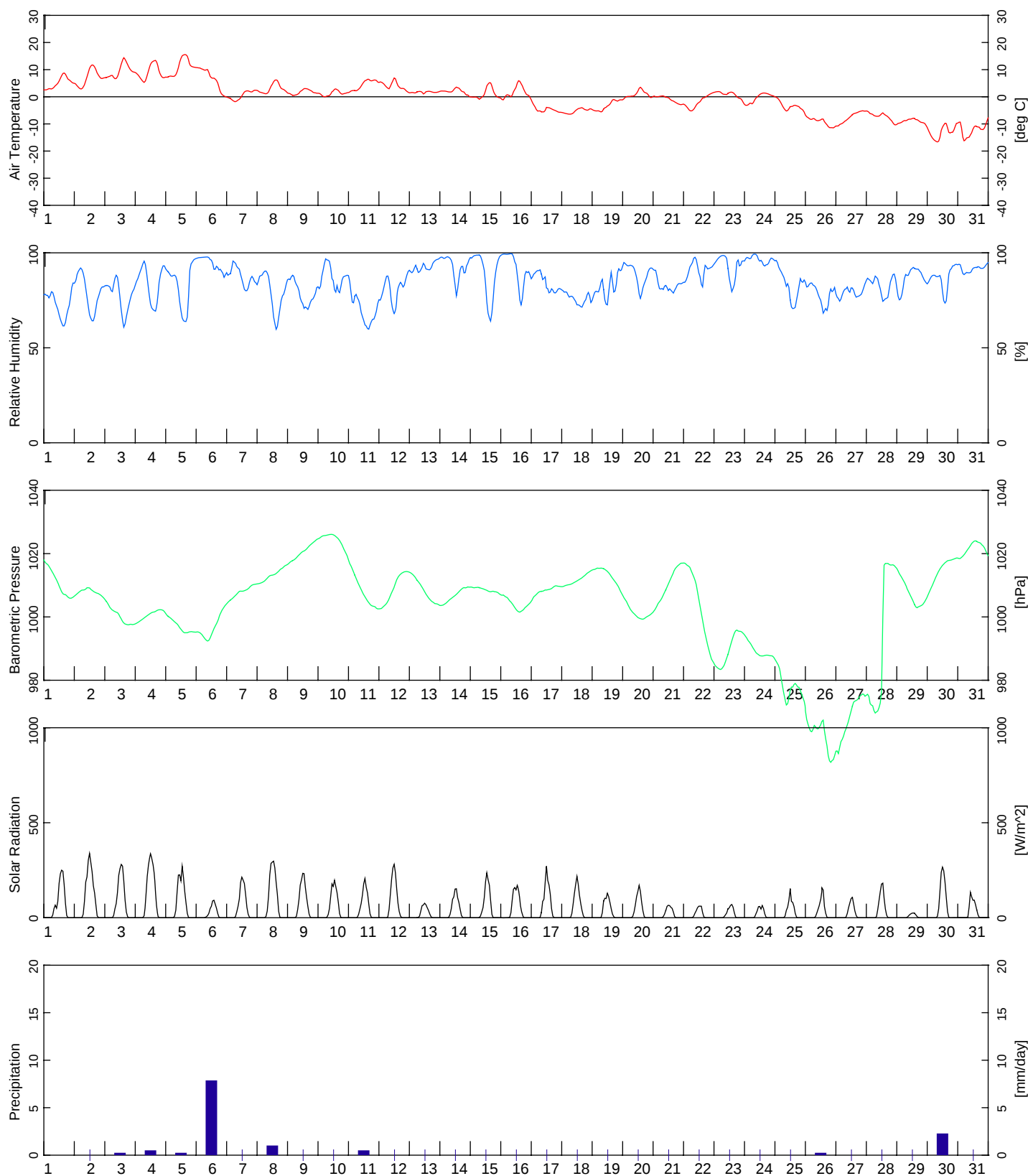
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Figure D-49



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YELLOWKNIFE GOLD PROJECT 2008 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
October 2008**

PROJECT NO.
Y22101057

DWN
RED

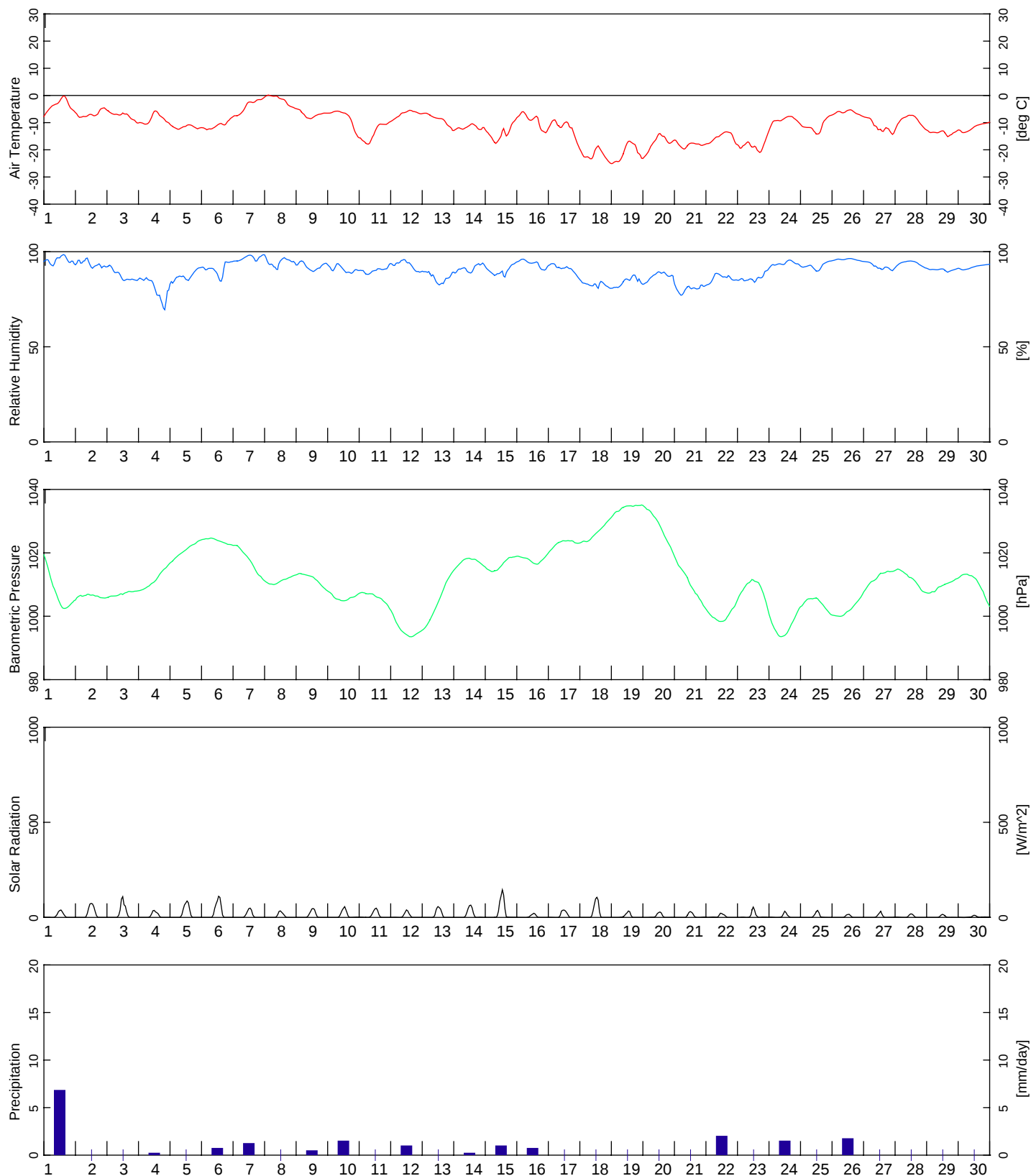
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Figure D-50



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**Tyhee Station
Weather Data
November 2008**

PROJECT NO.
Y22101057

DWN
RED

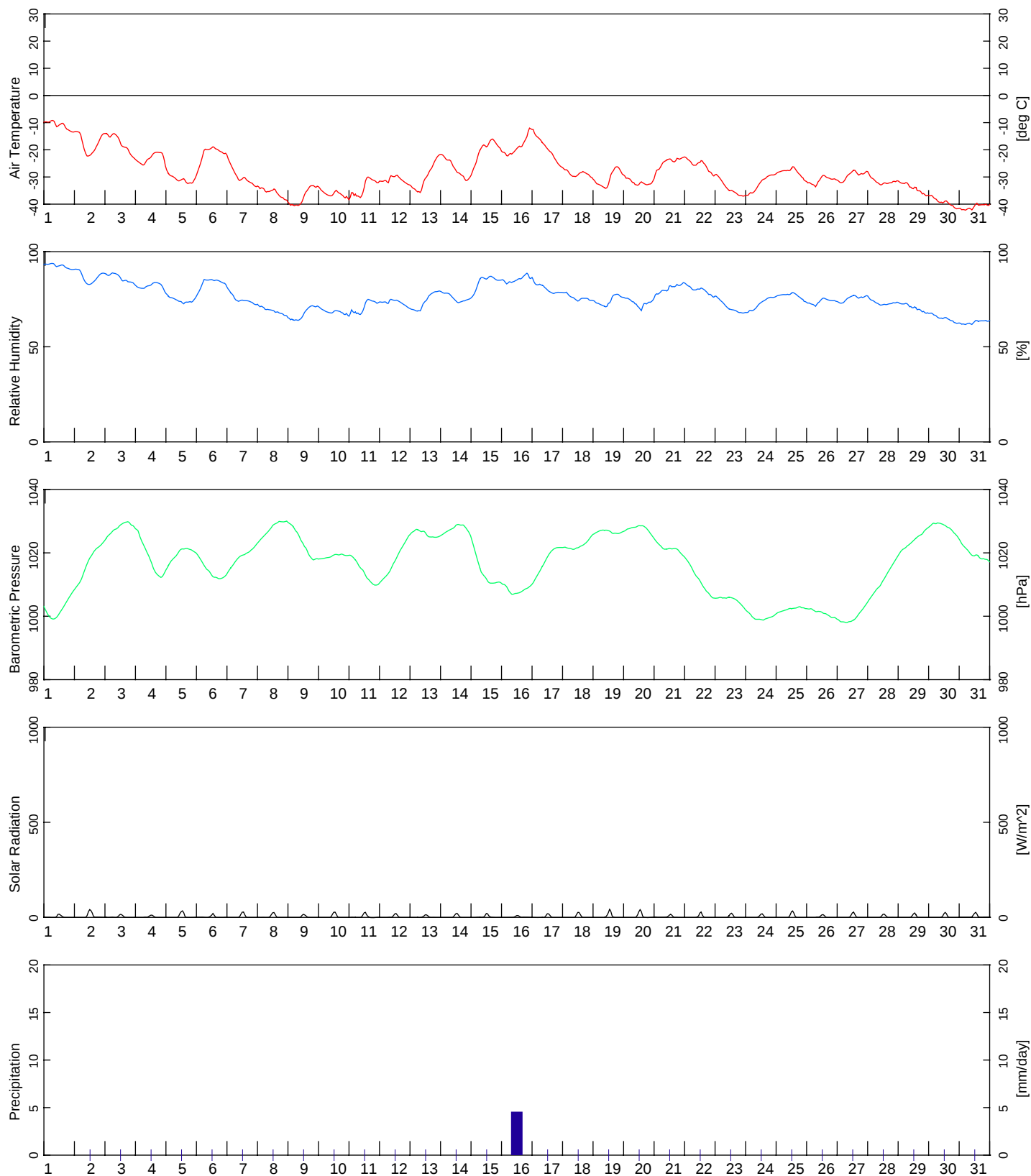
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Figure D-51



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**Tyhee Station
Weather Data
December 2008**

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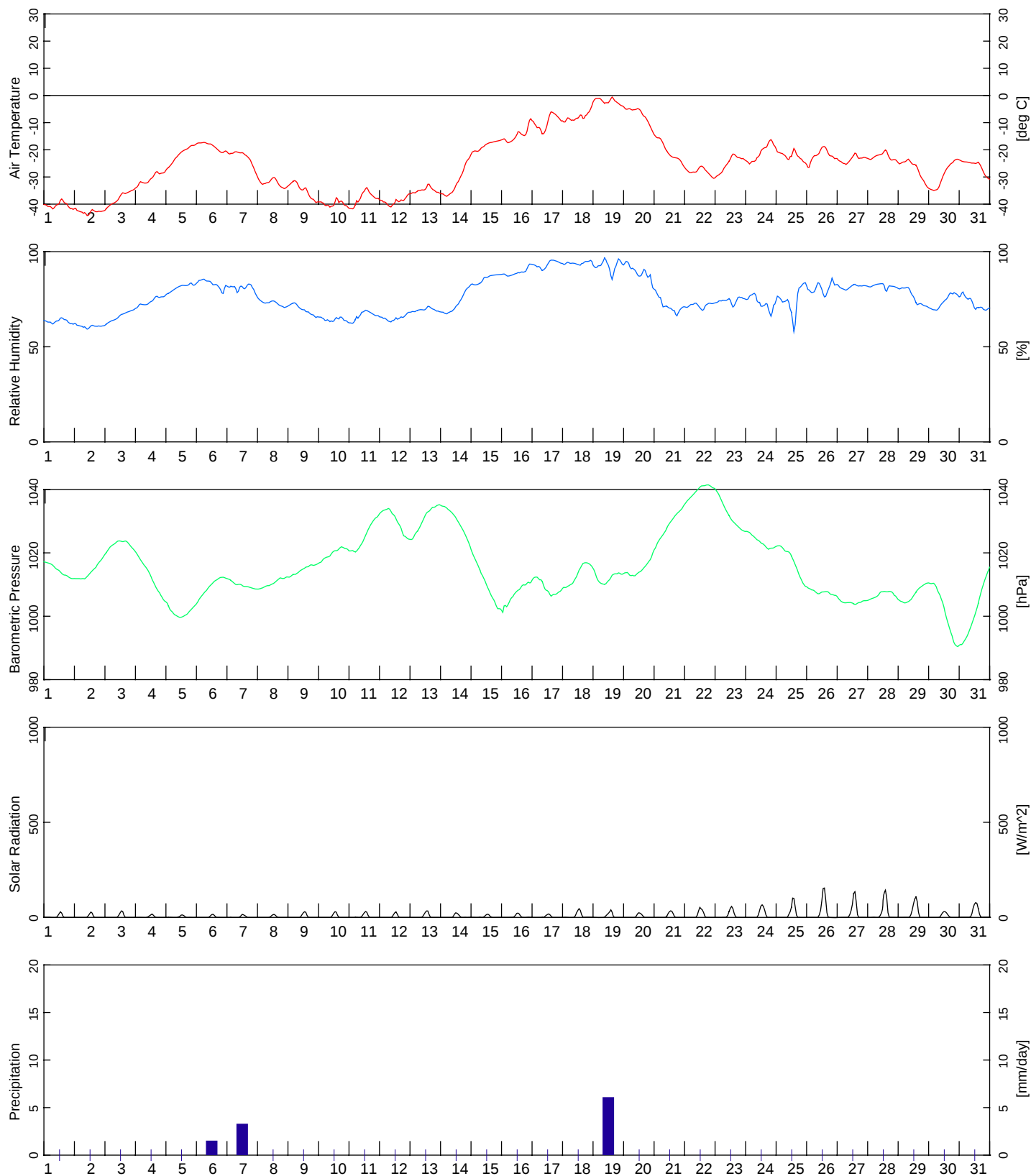
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Figure D-52



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**Tyhee Station
Weather Data
January 2009**

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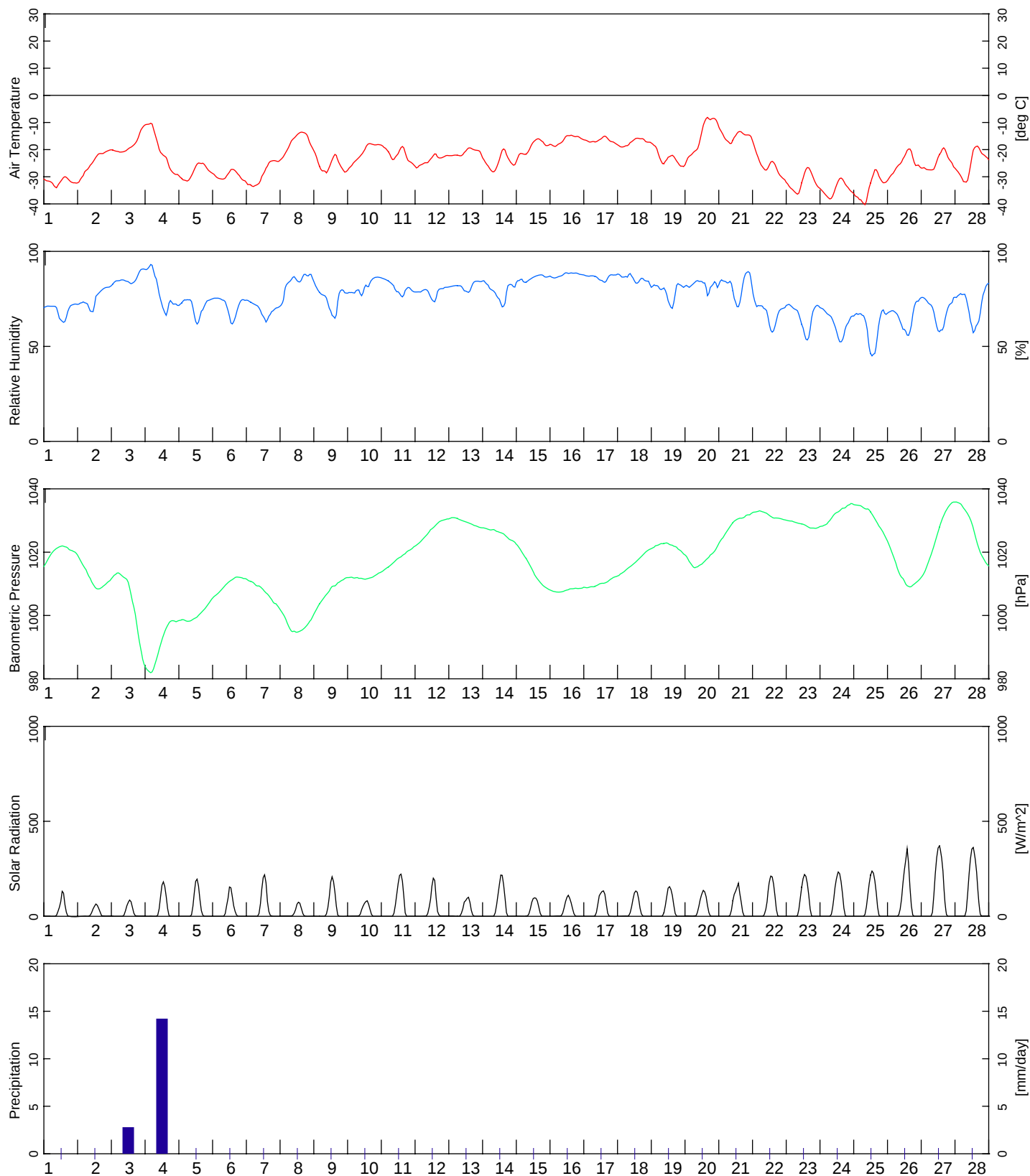
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Figure D-53



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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
February 2009**

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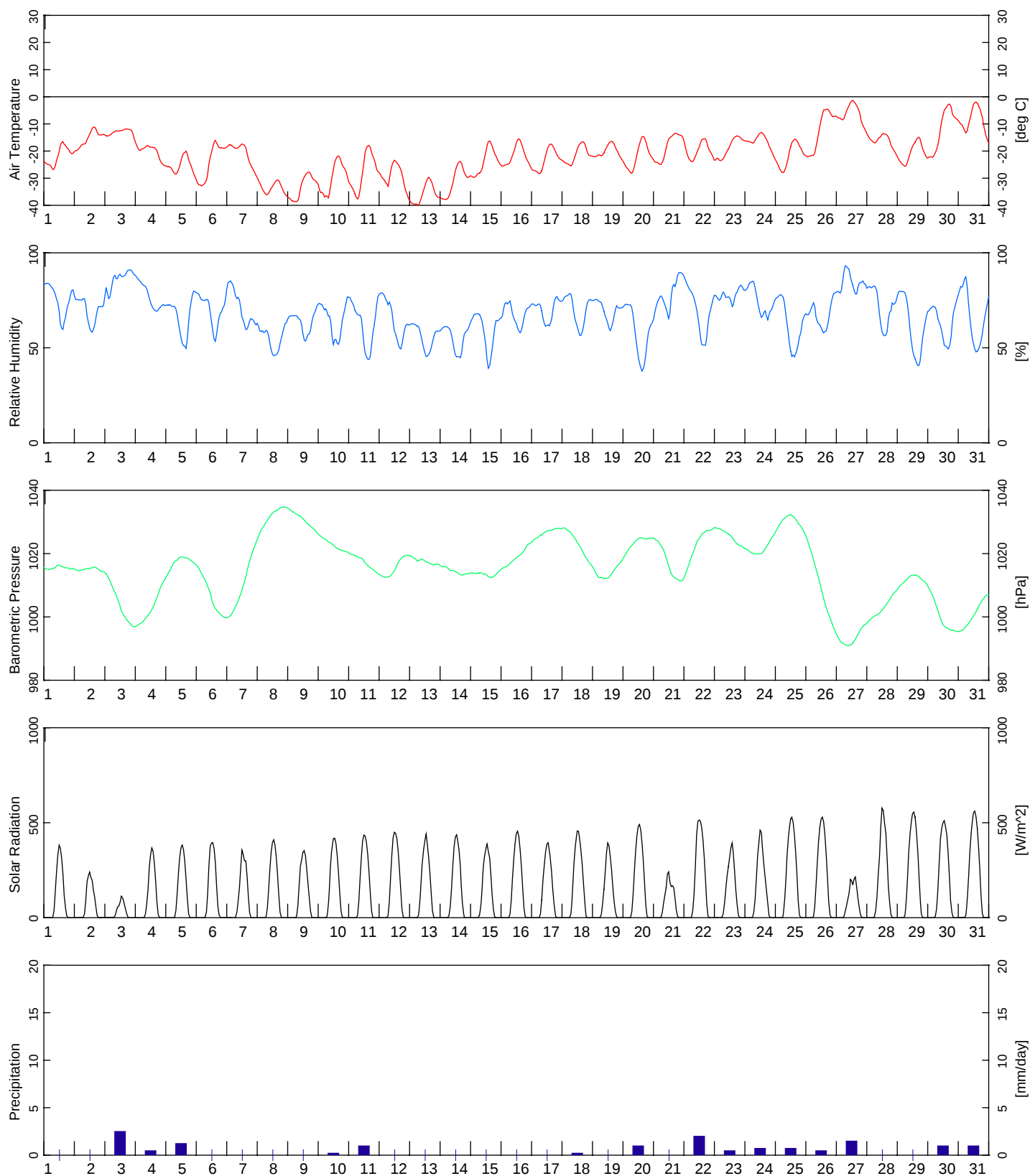
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Figure D-54



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**Tyhee Station
Weather Data
March 2009**

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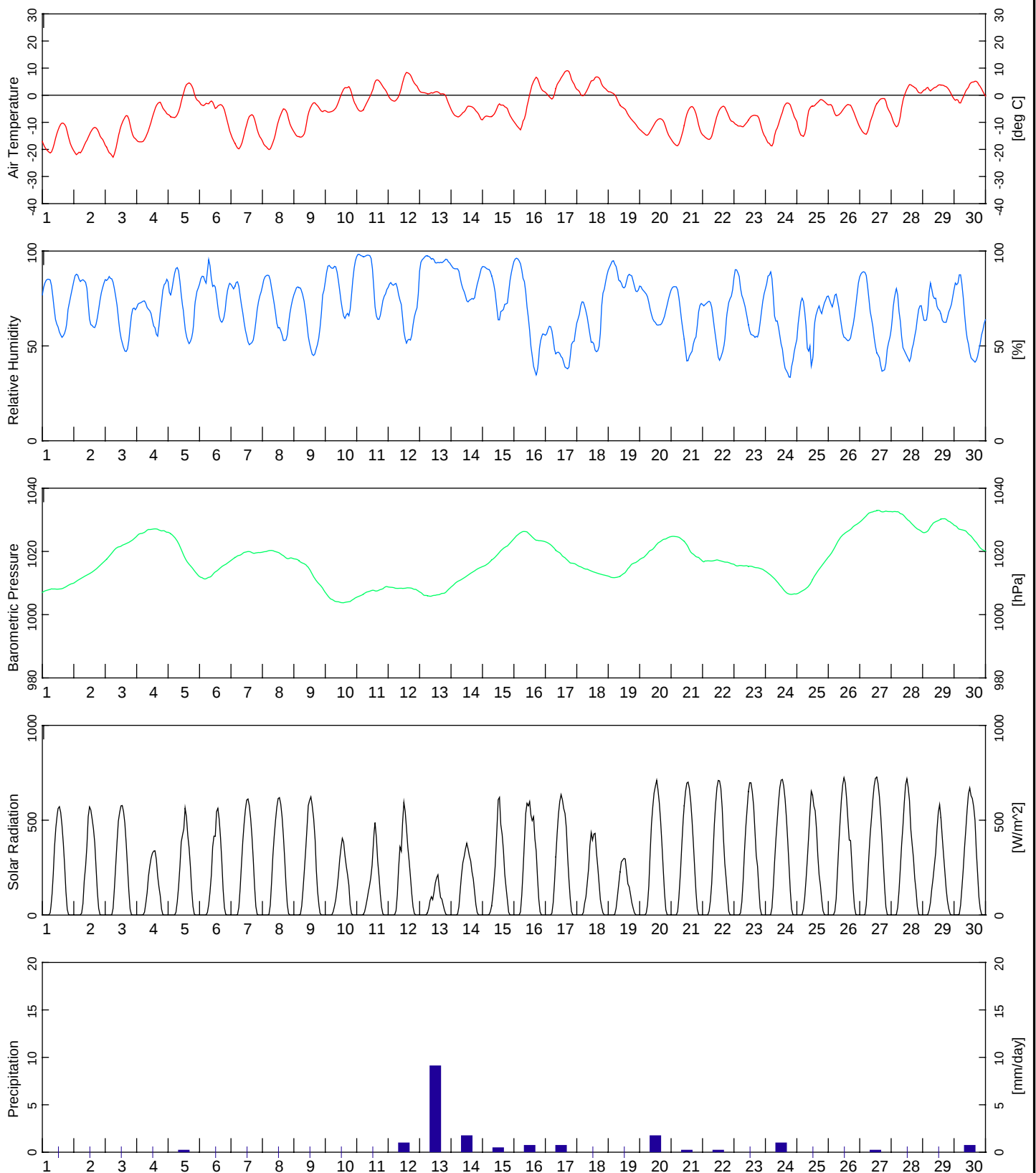
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Figure D-55



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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
April 2009**

PROJECT NO.
Y22101103

DWN
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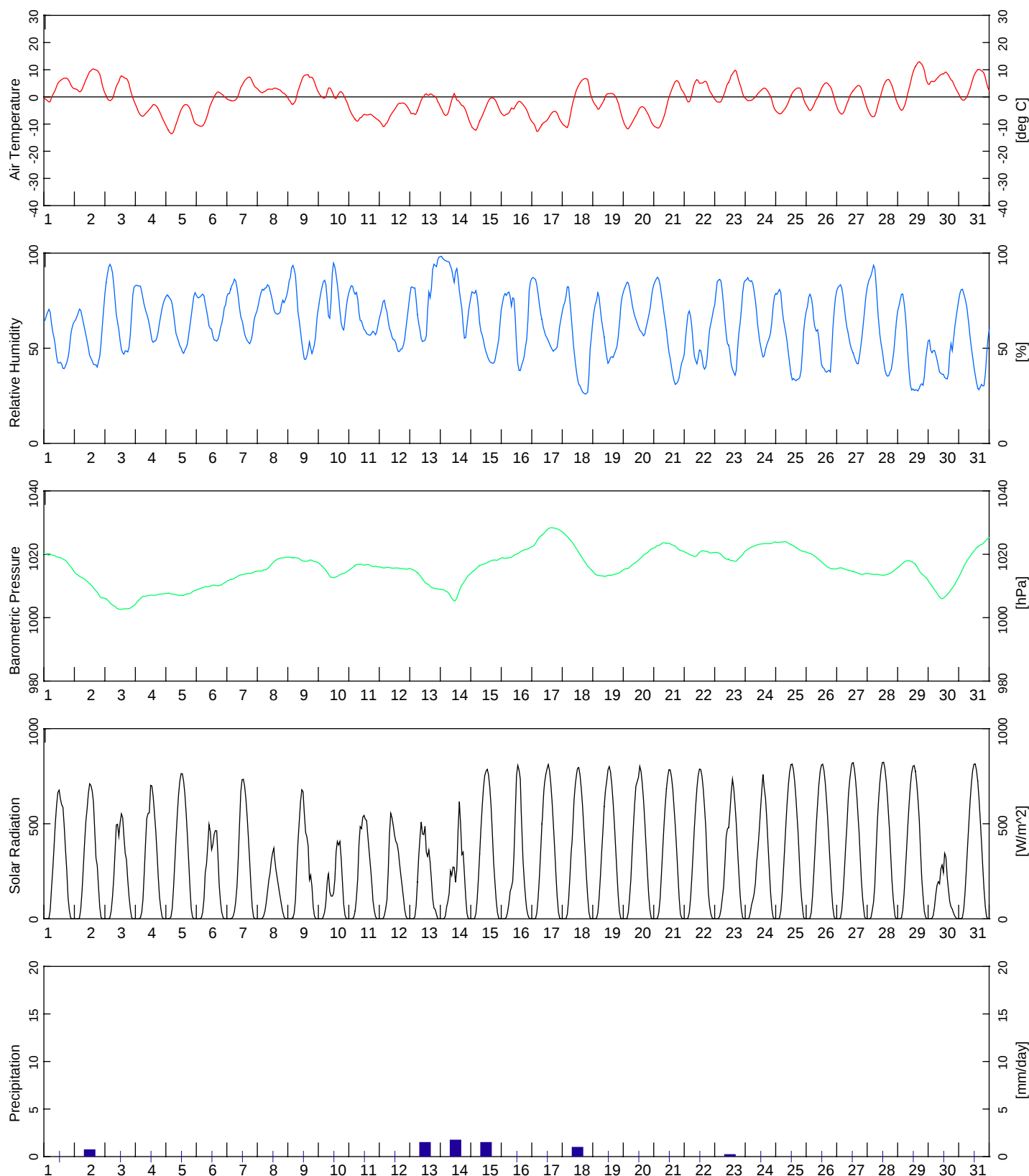
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**Tyhee Station
Weather Data
May 2009**

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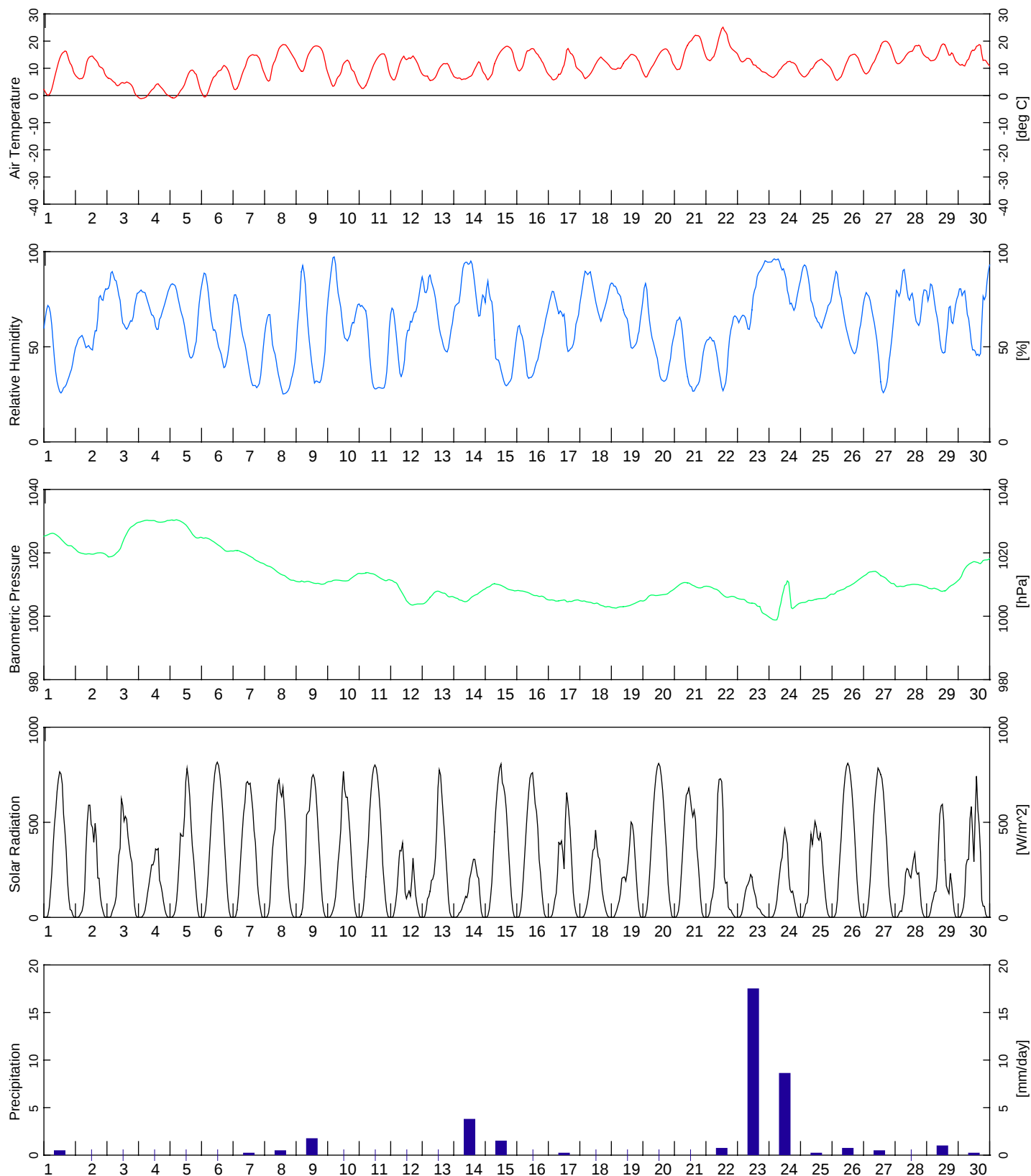
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Figure D-57



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Weather Data
June 2009**

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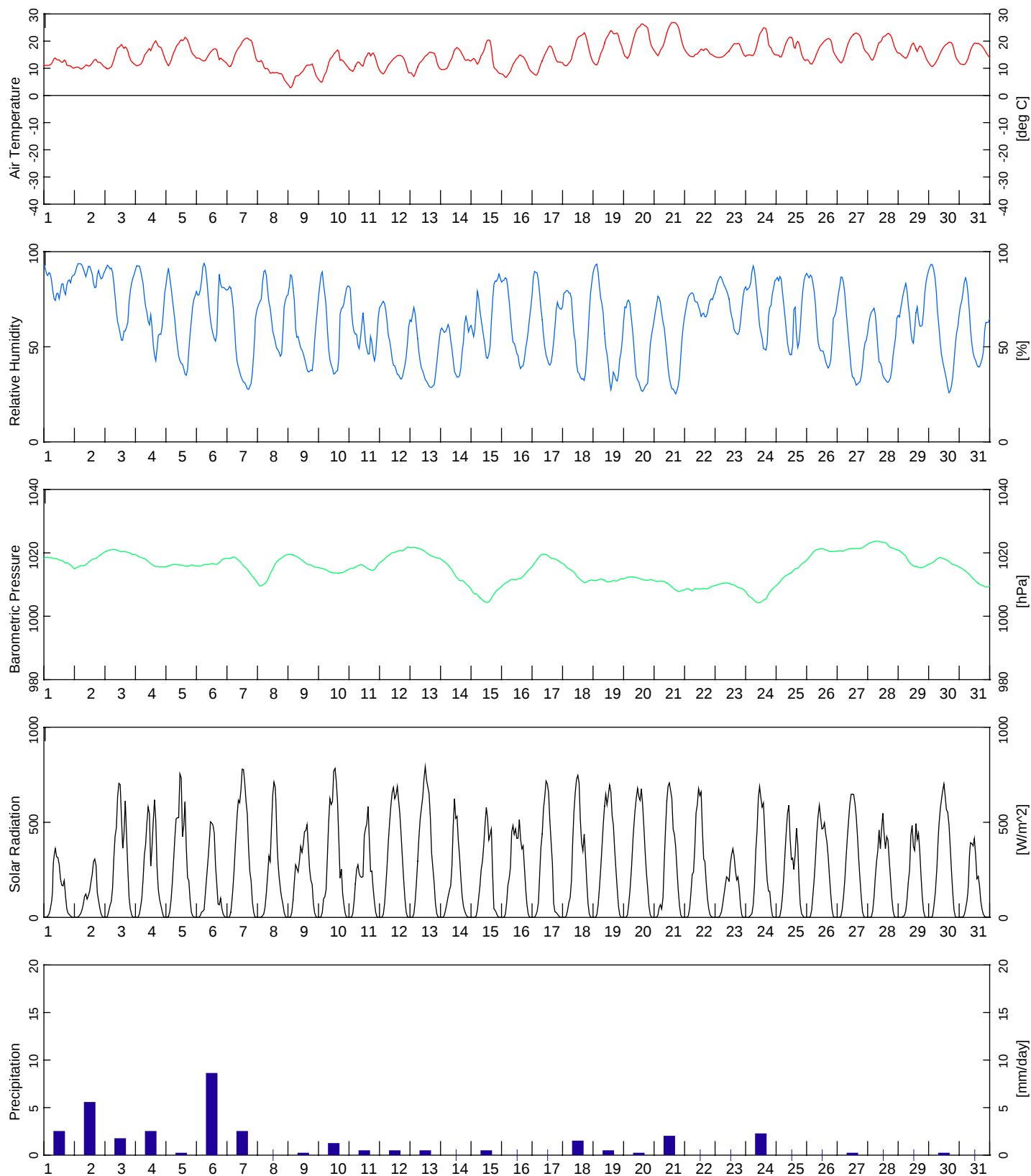
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Figure D-58



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**Tyhee Station
Weather Data
July 2009**

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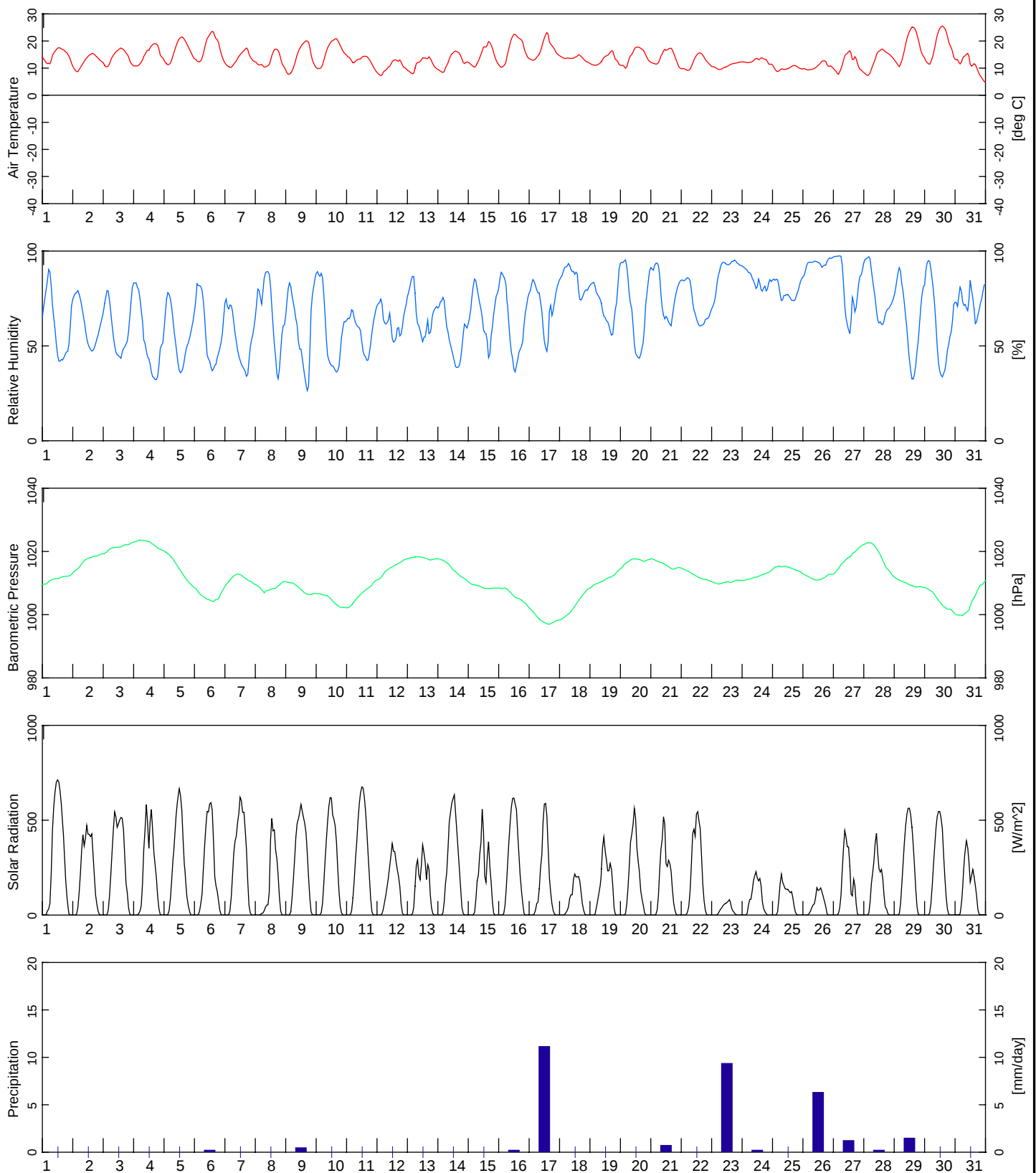
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Figure D-59



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Weather Data
August 2009**

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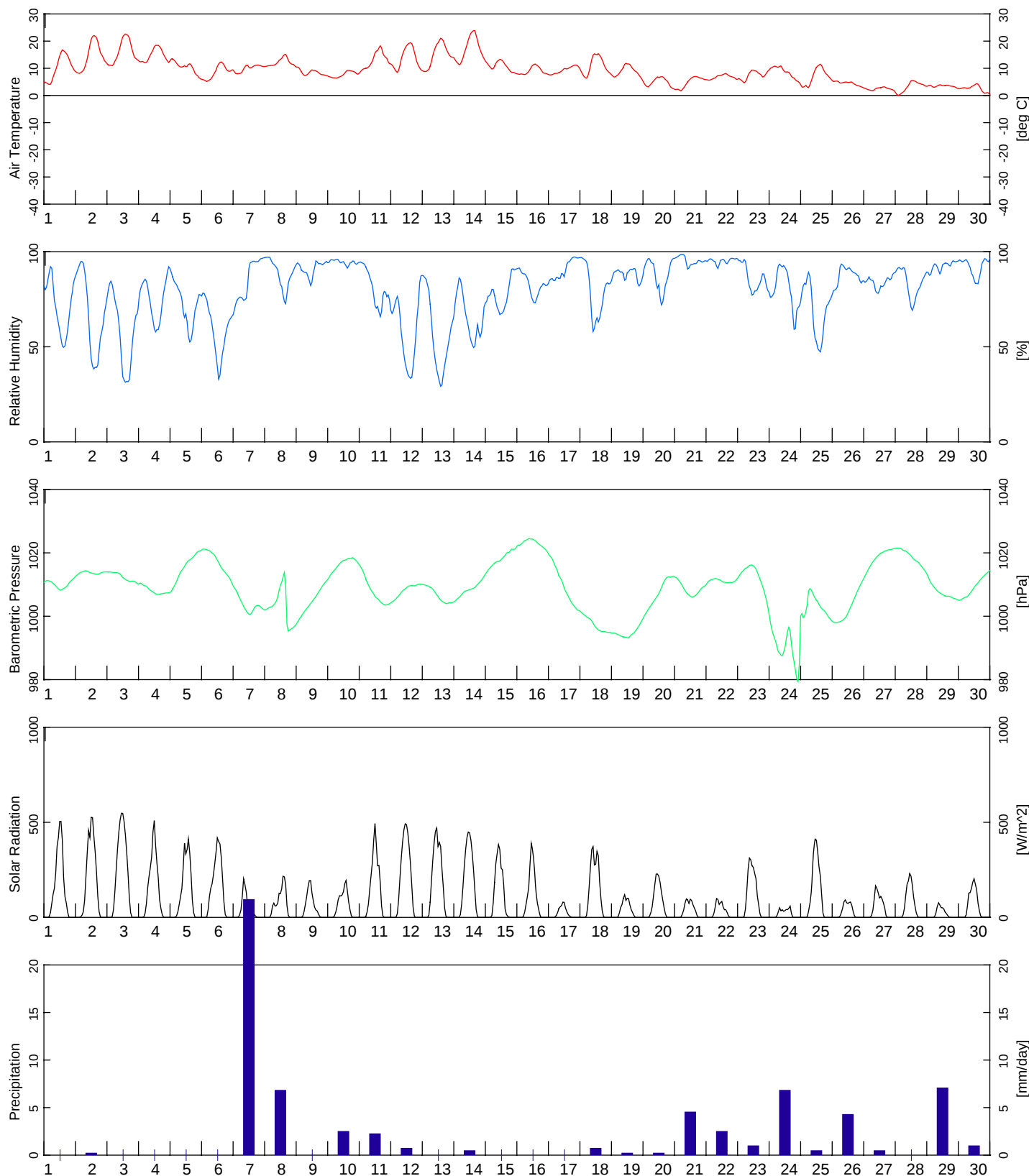
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Figure D-60



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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

**Tyhee Station
Weather Data
September 2009**

PROJECT NO.
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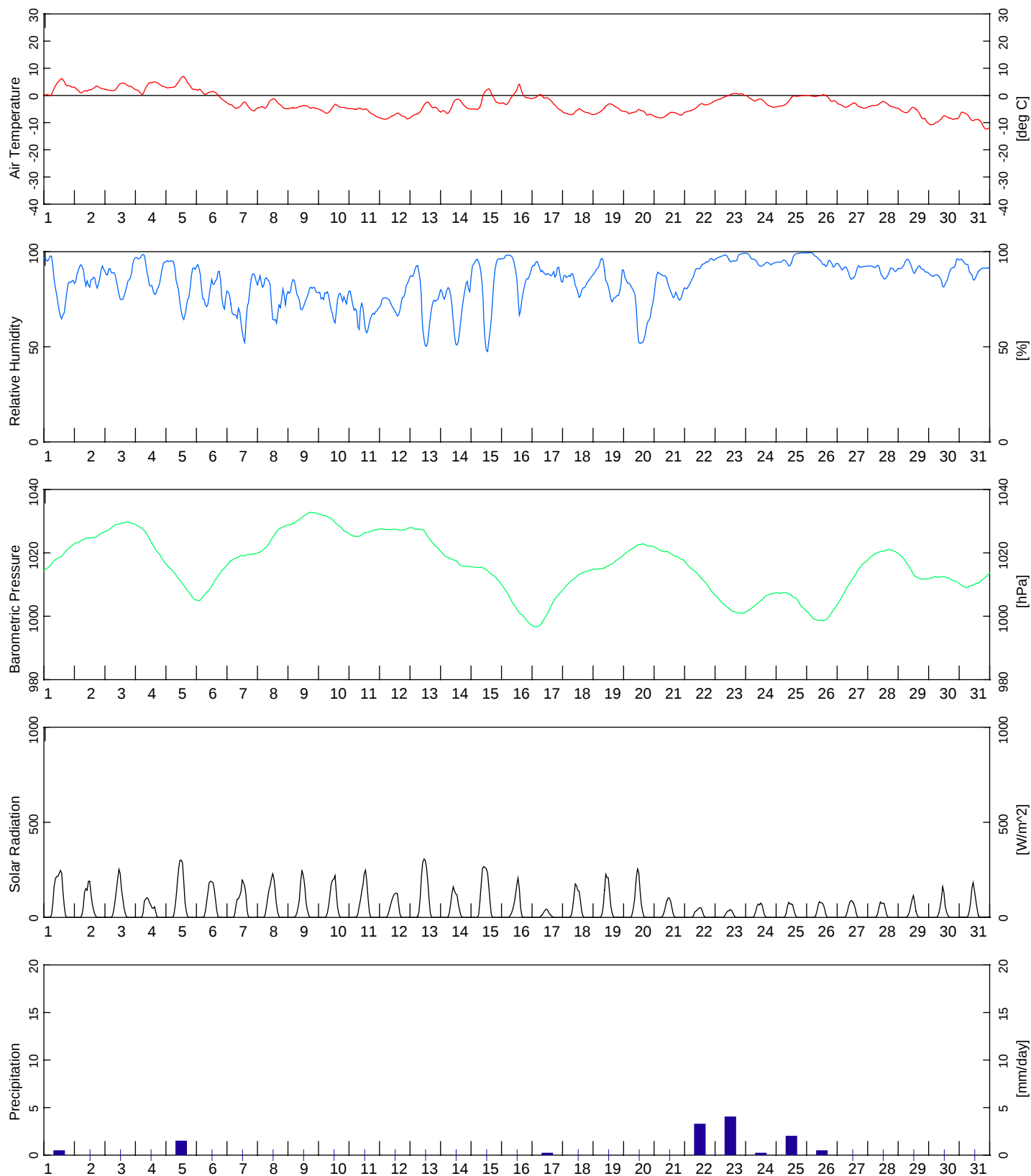
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**Tyhee Station
Weather Data
October 2009**

PROJECT NO.
Y22101103

DWN
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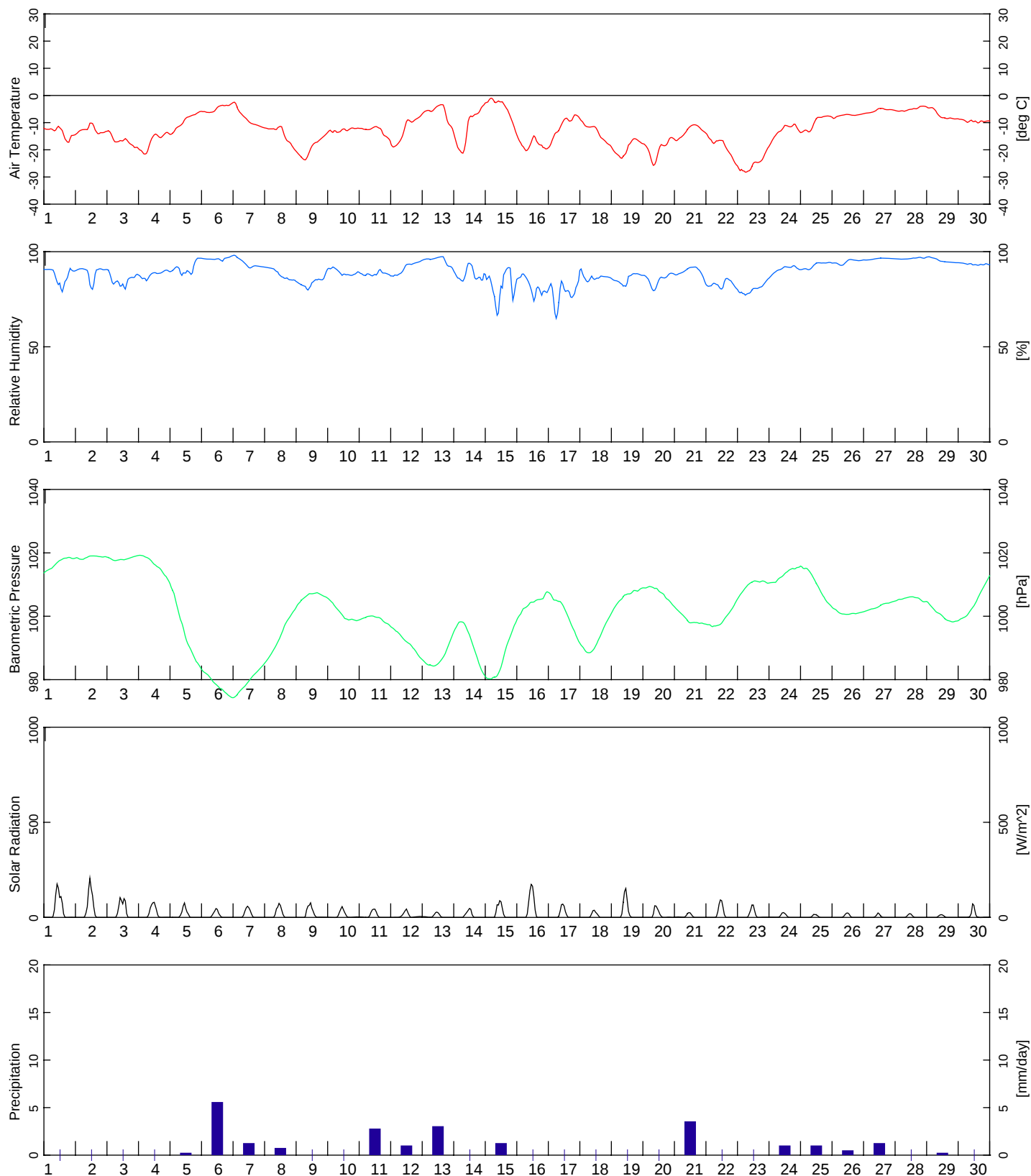
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Figure D-62



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Weather Data
November 2009**

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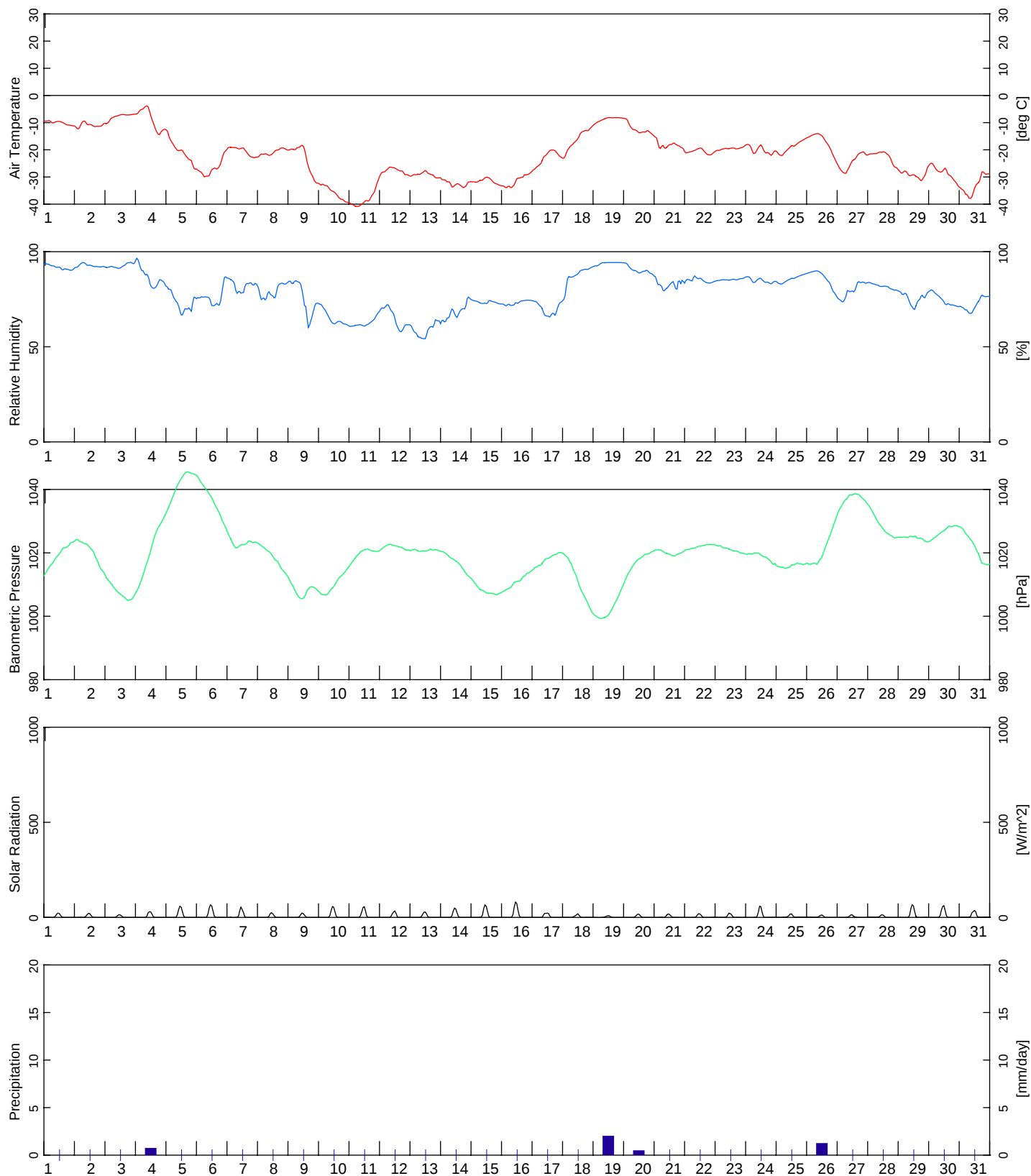
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Figure D-63



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YELLOWKNIFE GOLD PROJECT 2009 HYDROMETEOROLOGICAL REPORT

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Weather Data
December 2009**

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Figure D-64



APPENDIX

APPENDIX E DESCRIPTION OF DATA FILES ON THE REPORT CD



Description of the Data Files for the Yellowknife Gold Project 2009 Hydrometeorological Report

The data directory section of the Yellowknife Gold Project 2009 Hydrometeorological Report CD contains the meteorology and hydrology field data collected by Hay & Company Consultants over the period from September 28, 2004 to December 31, 2009. All the files are in space delineated format with the file extension “dat”. A flag of -9999 is used to indicate records with no data.

1.0 METEOROLOGICAL DATA

There are 14 meteorological station files. The station is located on the northeast end the Yellowknife Gold Project Airstrip.

1.1 HOURLY METEOROLOGICAL DATA

The 6 data files named “**2004_hr_lp_metdata.dat**” to “**2009_hr_lp_metdata.dat**” contains space delineated hourly meteorological data over the period from September 28, 2004 to December 31, and January 1 to December 31, for the years from 2005 to 2009. The data was collected at 15-minute intervals and was low pass filtered and sub-sampled at hourly intervals such that only hourly data is contained in this file. The file format is such that each data record represents one sample time period.

The 12 data columns identified from left to right are year, month, day, hour, minute, wind vector [u], wind vector [v], standard deviation of wind direction (degrees), air temperature [C°], relative humidity [%], barometric pressure at sea level [hPa], and incident solar radiation [W/m²].

1.2 DAILY METEOROLOGICAL DATA

The data file named “**2004-2009_Tyhee_daily_summary.dat**” contains the daily mean, maximum and minimum data saved at midnight for each day for 2007.

The 17 data columns identified from left to right are year, month, day, hour, minute, maximum wind speed [m/s], 3 columns for mean, maximum and minimum sea level equivalent barometric pressure [hPa], precipitation [mm/day of water], 3 columns for mean, maximum and minimum relative humidity [%], 3 columns for mean, maximum and minimum air temperature [°C] and the last column is incident solar radiation [W/m²].

1.3 15 MINUTE PRECIPITATION DATA

The 6 data files named “**2004_Tyhee_15_min_Precipitation.dat**” to “**2009_Tyhee_15_min_Precipitation.dat**” contains the 15 minute water equivalent precipitation data collected from the all-weather precipitation gauge installed at the Yellowknife Gold Project site for the period from September 28, 2004 to December 31, 2009.

The 6 data columns identified from left to right are year, month, day, hour, minute and water equivalent precipitation [mm/15 min].

1.4 DAILY PRECIPITATION DATA

The data file named **“2004-2009_Tyhee_daily_precip.txt”** contains the daily water equivalent precipitation data collected from the all-weather precipitation gauge installed at the Yellowknife Gold Project site for the period from September 28, 2004 to December 31, 2009.

The 6 data columns identified from left to right are year, month, day, hour, minute and water equivalent precipitation [mm/day].

2.0 HYDROLOGICAL DATA

This directory contains the four stream flow data file for the stations (Narrow, Winter, Round and Nicholas Lake Outlets) that were monitored over the 2005 to 2009 study period.

The Narrow Lake discharge data is contained in the file:

“2005-2009_Narrow_Lake_Outlet_Discharges.txt”

The Winter Lake discharge data is contained in the file:

“2005-2009_Winter_lake_discharges.txt”

The Round Lake discharge data is contained in the file:

“2005-2009_Round_lake_discharges.txt”

Each space delineated data file contains 6 data columns identified from left to right as year, month, day, hour, minute and the last column is outlet discharge in [L/s].

The Nicholas Lake Outlet hydrometric station recorded water temperatures as well as discharge data. This data is contained in the file **“2005-2009_Nicholas_Lake_Outlet_Discharges.txt”**.

This space delineated data file contains 7 data columns identified from left to right as year, month, day, hour, minute, creek temperature [°C], and outlet discharge [L/s].

APPENDIX

APPENDIX F GENERAL CONDITIONS

DESIGN REPORT – GENERAL CONDITIONS

This Design Report incorporates and is subject to these “General Conditions”.

1.0 USE OF REPORT AND OWNERSHIP

This Design Report pertains to a specific site, a specific development, and a specific scope of work. The Design Report may include plans, drawings, profiles and other support documents that collectively constitute the Design Report. The Report and all supporting documents are intended for the sole use of EBA’s Client. EBA does not accept any responsibility for the accuracy of any of the data, analyses or other contents of the Design Report when it is used or relied upon by any party other than EBA’s Client, unless authorized in writing by EBA. Any unauthorized use of the Design Report is at the sole risk of the user.

All reports, plans, and data generated by EBA during the performance of the work and other documents prepared by EBA are considered its professional work product and shall remain the copyright property of EBA.

2.0 ALTERNATIVE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA’s instruments of professional service), only the signed and/or sealed versions shall be considered final and legally binding. The original signed and/or sealed version archived by EBA shall be deemed to be the original for the Project.

Both electronic file and hard copy versions of EBA’s instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. EBA’s instruments of professional service will be used only and exactly as submitted by EBA.

Electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client’s current or future software and hardware systems.

3.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless so stipulated in the Design Report, EBA was not retained to investigate, address or consider, and has not investigated, addressed or considered any environmental or regulatory issues associated with the project specific design.

4.0 CALCULATIONS AND DESIGNS

EBA has undertaken design calculations and has prepared project specific designs in accordance with terms of reference that were previously set out in consultation with, and agreement of, EBA’s client. These designs have been prepared to a standard that is consistent with industry practice. Notwithstanding, if any error or omission is detected by EBA’s Client or any party that is authorized to use the Design Report, the error or omission should be immediately drawn to the attention of EBA.

5.0 GEOTECHNICAL CONDITIONS

A Geotechnical Report is commonly the basis upon which the specific project design has been completed. It is incumbent upon EBA’s Client, and any other authorized party, to be knowledgeable of the level of risk that has been incorporated into the project design, in consideration of the level of the geotechnical information that was reasonably acquired to facilitate completion of the design.

If a Geotechnical Report was prepared for the project by EBA, it will be included in the Design Report. The Geotechnical Report contains General Conditions that should be read in conjunction with these General Conditions for the Design Report.

TYHEE NWT CORP.



YELLOWKNIFE GOLD PROJECT 2010 HYDROMETEOROLOGICAL REPORT



REPORT

JANUARY 2011
ISSUED FOR USE
EBA FILE:Y22101170

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A TETRA TECH COMPANY

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YELLOWKNIFE GOLD PROJECT 2010 HYDROMETEOROLOGICAL REPORT



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EXECUTIVE SUMMARY

Foreword

Tyhee NWT Corp. is conducting baseline environmental studies on its Yellowknife Gold Project site as part of the development of a gold mine in the area. In 2004 EBA Engineering Consultants Ltd., a Tetra Tech Company, began the hydrology and meteorology baseline studies for the Yellowknife Gold Project.

This report is a summary of the meteorological and hydrological data collected on site during 2010 and is a continuation of the report submitted to Tyhee NWT Corp. in February of 2010 by EBA Engineering Consultants Ltd. entitled "Yellowknife Gold Project 2009 Hydrometeorological Report". This report contains all the hydrometeorological data collected at site since 2004. Only hourly meteorology data recorded in 2010 is presented in hard copy in Appendices B through D. Hourly data from all years is contained on the data disk accompanying this report.

A field survey in early June 2010 was conducted for the purpose of inspecting the hydrometric stations, reinstalling the recording instruments and measuring outlet discharges. The lake level monitoring instrumentation was also re-installed. The evaporation pan was reinstalled and maintenance of the meteorological station completed during the first site visit.

The following section summarizes various hydrological statistics. All of the values quoted are for the 2010 period of record from May 27 to September 20, 2010.

In general runoff values were low for 2010. This is attributed to two factors. Snow pack was 12% less than normal and warm air temperatures in March and April resulted in the bulk of the freshet flow passing the hydrometric station prior to the reinstallation of the instrumentation.

The maximum recorded discharges at Narrow, Winter, Round and Nicholas Lake Outlets were 61 ℓ/s , 37 ℓ/s , 21 ℓ/s and 18 ℓ/s , respectively. The peak discharges for Narrow and Winter Lake outlets were the result of a large precipitation event occurring July 17, 2010. The peak discharges for Round and Nicholas Lake were a result of the freshet.

The average daily total discharge for the Narrow Lake outlet was 1,842 m^3/day . The total Narrow, Winter and Round lake basin runoff was 22.9 mm.

The average daily total discharge for the Winter Lake outlet was 1,163 m^3/day . The total Winter and Round Lake basin runoff was 23.9 mm.

The average daily total discharge for the Round Lake basin was 486 m^3/day . The total Round Lake basin runoff was 45.7 mm.

The average daily total discharge for the Nicholas Lake basin was 918 m^3/day . The total Nicholas Lake basin runoff was 16.2 mm.

Instrumentation was installed to monitor the water level of Round, Winter, Narrow, Nicholas and Guaique Lakes. Maximum lake level changes during the summer of 2010 were 0.29 m, 0.14 m, 0.10 m, 0.26 m, and 0.26 m respectively.

The meteorological station installed at the Yellowknife Gold Property has continuously recorded the meteorological parameters of wind speed and direction, air temperature, relative humidity, incident solar radiation and precipitation since its installation on September 28, 2004 to the present. The period of record for the meteorological statistics presented below is from January 1 to December 31, 2010.

The predominant wind direction at this site is from the east. In 2010, typical maximum daily wind gusts were in the range of 7 to 9 m/s, however, wind gust speeds near 20.0 m/s were recorded. Average wind speeds were commonly in the range of 2 to 4 m/s.

Air temperatures were typically 10°C to 25°C during the summer with a maximum recorded temperature of 30.1°C on July 13, 2010. Typical winter temperatures ranged from -5°C to -40°C. The lowest recorded temperature for 2010 was -38.9°C, occurring on December 10, 2010.

Average daily relative humidity for 2010 was 73%, with instantaneous values ranging from 20% to 100%.

Average sea-level equivalent barometric pressure was 1012 hPa, varying from a maximum of 1041 hPa to a minimum of 977 hPa.

Average peak incident solar radiation during the summer was in the vicinity of 900 W/m² with maximums near 1200 W/m². During December and January peak daily values rarely exceeded 50 W/m².

The total precipitation recorded for 2010 was 283.7 mm. The largest daily event recorded in 2010 was 16.8 mm on July 27, 2010.

The average evaporation pan rate was 3.9 mm/day with a total of 423 mm over the period from June 1 to September 20, 2010.

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1.0 INTRODUCTION

Tyhee NWT Corp. has been conducting baseline environmental studies on its Yellowknife Gold Project site as part of the development of a gold mine in the area. In 2004, EBA, now a Tetra Tech Company, began hydrology and meteorology baseline studies for this project. This report is a summary of the meteorological and hydrological data collected at the site during 2010 and is a supplement to earlier reports, submitted to Tyhee NWT Corp. entitled “Initial Hydrological Survey for the Yellowknife Gold Project”, “Yellowknife Gold Project 2005 Hydrology and Meteorology Report”, “Yellowknife Gold Project 2006 Hydrology and Meteorology Report”, “Yellowknife Gold Project 2007 Hydrology and Meteorology Report”, “Yellowknife Gold Project 2008 Hydrometeorological Report”, “Yellowknife Gold Project 2009 Hydrometeorological Report”.

A field survey was conducted in early June 2010 to inspect the hydrometric station installations, reinstall the instrumentation and record discharges for Narrow, Winter, Round and Nicholas Lake outlets. During this site visit the lake level monitoring instruments were reinstalled at existing sites in Narrow, Winter, Round Nicholas and Giauque Lakes. Maintenance of the meteorological station instruments, downloading the weather data and reinstallation of the evaporation pan was also done during the site visit.

Figure 1.1 is a site location map showing a portion of a 1:50,000 scale topographic map of the area in which the sites are indicated. Both active and inactive sites are shown. Table 1.1 lists the GPS coordinates for each site. Four hydrometric sites, five lake level monitoring sites and the meteorological station were monitored during 2010 are listed below along with the purpose of each station.

- Site #1 – Narrow Lake Outlet, collection of creek discharge and stage data.
- Site #3 – Winter Lake Outlet, collection of creek discharge and stage data.
- Site #4 – Round Lake Outlet, collection of creek discharge and stage data.
- Site #6 – Nicholas Lake Outlet, collection of creek discharge, water temperatures and stage data.
- Site #7 – Tyhee Meteorological station, recording of various weather parameters.
- Site #8 – Winter Lake Level, collection of lake levels and water temperatures.
- Site #9 – Round Lake Level, collection of lake levels and water temperatures.
- Site #10 – Narrow Lake Level, collection of lake levels and water temperatures.
- Site #11 – Giauque Lake Level, collection of lake levels and water temperatures.
- Site #12 – Nicholas Lake Level, collection of lake levels and water temperatures.

Further detailed information on these sites has been provided in the site description documents included in Appendix A. Section 2 of this report presents the hydrological component of the study program, Section 3 discusses the meteorological component and Section 4 outlines the recommendations.

2.0 HYDROLOGY

2.1 Methods

To gain an understanding of the hydrological conditions of the Yellowknife Gold Project study area, hydrometric stations were installed at the outlets of Narrow, Winter, Round and Nicholas Lakes.

Parshall flumes were installed at Round, Winter and Narrow Lake outlets; during the summer of 2005. As in 2006, 2007, 2008, 2009 they were reactivated for the 2010 study. A Parshall flume is installed in a creek such that all creek flow passes through it. The flume has a unique design that enables the determination of creek discharge by measuring the depth of water in the upstream part of the flume and applying a factory calibration to determine the discharge. The creek stage upstream of the flume is measured by a pressure transducer and the data recorded by a logger every 15 minutes. A fixed value, representing the vertical distance from the upstream floor of the flume to the creek bed, was added to the depth of water in the flume, recorded by the data logger, to determine creek stages.

Flows were measured at the Nicholas Lake outlet by recording the creek stages to the data logger every 15 minutes. The data is used in combination with a stage-discharge relationship, determined in the previous years studies, and further refined in 2010, to calculate creek discharge. The hydrometric station originally installed in 2005, was reactivated for the 2010 study similar to the procedure in 2005, 2007, 2008 and 2009.

Note that discharges that occurred after spring thaw but before the hydrometric station instruments were re-installed, as well as discharges that occurred after the instrumentation was removed prior to the winter freeze, were not monitored by the hydrometric station. Therefore, the actual volume of flow through the station will be greater than the values stated in this report. The basin average runoff values will also be greater.

Lake level monitoring sites were installed in August of 2009 on Round, Winter, Narrow, Nicholas and Giauque lakes. Lake levels and temperatures were recorded by the data logger every 15 minutes over the period from May 27, 2010 to September 16, 2010.

2.2 Narrow Lake Outlet (Site #1)

Narrow Lake basin has maximum extents of 3.9 km by 1.5 km and a catchment area of 3.8 km². The elevation of Narrow Lake is approximately 282 m above mean sea level (asl) and the maximum elevation in the basin is approximately 350 m asl.

The outlet of Narrow Lake is located at the southwest end of the lake and consists of two creeks that enter a small pond about 100 m southwest of the lake, near the existing winter road. A single creek flows out of this pond. The Parshall Flume is located on this creek, in a well-defined channel, about 10 m downstream of the pond. Downstream of the station, there is no well-defined channel and the flow meanders generally southwest through muskeg and stunted growth of birch and conifers. Discharge from the Narrow Lake basin flows southwest to Morris Lake (el. 278 m), and eventually to the Yellowknife River.

An aerial view of the Narrow Lake outlet hydrometric station and photos of the 12-inch Parshall flume and staff gauge installed in the creek are located in the Narrow Lake Station site description in Appendix A.

2.2.1 Station History for 2010

The stage recorder was installed for the 2010 hydrological study on May 27 at 14:35 hours prior to the site visit conducted by EBA staff. The Parshall flume and bulkhead were inspected and no damage or leakage was observed at this time. Discharge data was collected and the data logger downloaded to ensure correct flume operation.

The instrumentation was removed for the season on September 20, 2010, at 09:50 hours.

A complete history of the Narrow Lake outlet hydrometric station, including installation notes, activation and deactivation dates, and repair work is located in the site description in Appendix A.

2.2.2 Stage Measurements

The 2010 freshet began in mid May, about a week prior to the installation of the automatic stage recorder. Narrow Lake outlet Parshall flume data were recorded every 15 minutes over the summer until the logger was removed, prior to the outlet freezing up for the winter. Creek stages varied from 0.19 to 0.40 m over the 116 day period of record for 2010.

The Narrow Lake outlet stage hydrograph for all years on record (2005 to 2010) is presented in Figure 2.1.

2.2.3 Narrow Lake Parshall Flume Calibration

The Parshall flume installed at Narrow Lake outlet has a throat width of 30.48 cm (12 inches) and a flow measurement range of 3 ℓ/s to 455 ℓ/s .

The Narrow Lake Parshall flume calibration formula, used to calculate discharge from the flume head is:

$$Q = 690.917 \times H^{1.522}$$

where: Q = outlet discharge (ℓ/s)

H = recorded water depth (flume head) (m)

2.2.4 Narrow Lake Outlet Discharge Hydrograph

The period of record for the 2010 Narrow Lake hydrology survey was from May 27 to September 20, 2010. The 2010 hydrograph is shown in Figure 2.2 as a solid brown line. The hydrographs from the previous five years are included on this same graph for the purposes of comparing Narrow Lake outlet discharges for each year on record. The 2004 data consist of a series of manual discharge measurements as this data pre-dates the installation of the stage logger.

For 2010 the maximum measured outlet discharge of 61 ℓ/s occurred on August 1. This peak flow was a result of precipitation occurring every day for 16 days prior to the peak flow on August 1, 2010. Three of these days had daily precipitation rates greater than 15 mm/day. The first of the large precipitation events started on July 17 on which 16 mm of rain fell. Figure 2.2 shows a corresponding increase in flow on that date.

It is not typical that peak flows occur in August. Usually the peak flows occur in May or early June as a result of the freshet. The 2010 hydrograph indicates low freshet flows. Based on the precipitation records

and estimated snowpack prior to the melt period it was estimated that the snowpack was 12% less than typical. The spring of 2010 was different from previous years in that there were three multi-day periods when the air temperatures were consistently above freezing for a large percentage of each day within the period. Referring to Appendix D site weather figures for April (D-68) and May (D-69) the periods of warm weather were April 5 to 8, April 13 to 22 and from April 26 to May 2, 2010. On many of these warm days air temperature were in excess of 10°C. From this temperature record and discussions with onsite Tyhee staff it is concluded that the 2010 freshet began in mid-April and the hydrometric instrumentation was installed after the bulk of the freshet flow had passed the station.

The minimum measured discharge of 5.9 ℓ/s occurred on July 17, 2010.

Based on anecdotal information the creek does not flow during the winter months from approximately mid October to mid May.

Based on the Narrow Lake outlet discharge hydrographs from 2004 to 2010, the following observations were made:

1. Based on field observations by EBA and anecdotal information from on site Tyhee staff it is estimated that the creek typically begins to flow in early to mid May, and freezes up in mid October.
2. Once the creek begins flowing, discharge increases rapidly, typically over a span of less than two weeks, to peak freshet flow, which typically occurs during the last week of May to the first week of June.
3. Peak freshet flows range from 50 ℓ/s to over 200 ℓ/s . Typical maximum freshet flow, based on the 6 years of observations, is estimated at 140 ℓ/s .
4. After the freshet, creek discharge reduces rapidly until the end of June, at which time typical discharges are on the order of 50 ℓ/s . At this time snowmelt is no longer the major factor in determining creek flows.
5. From July 1 to the end of August outlet flows gradually decrease from 50 ℓ/s to less than 20 ℓ/s . During this period the hydrograph shows evidence of large precipitation events affecting discharge.
6. From September 1 to the end of the record in late September, early October, flows typically increase slightly and are more variable in nature as increased precipitation events during this period become the dominant factor for creek discharge.

The following are comments specific to the 2010 hydrograph:

1. In 2010 it is estimated that the bulk of the freshet flows was not recorded as it occurred prior to the installation of the hydrometric instrumentation. It is estimated the freshet may have started as early as mid April.
2. From June 1 to July 16, 2010 Narrow Lake Outlet discharges ranged from 5 to 10 ℓ/s which was much lower than typical freshet flows of 10 to over 50 ℓ/s recorded in previous years.
3. As a result of 58 mm of precipitation occurring over 15 days beginning on July 17 the discharge rapidly increased from 6 ℓ/s in July 17 to over 60 ℓ/s on August 1, 2010.

4. From August 1, the date of the highest recorded flow for the year (60.8 ℓ/s), to the end of August, the discharge dropped to 20 ℓ/s which is typical of the discharges measured at the end of August for previous years.
5. During September the discharge remained relatively stable at about 19 ℓ/s to the end of the recorded data on September 20, 2010

The Narrow Lake hydrometric station data enables the calculation of total volume of water that has passed the gauging station over the recorded period. The period of record for 2010 was from 14:35 hours on May 27, 2010 to 09:50 hours on September 20, 2010. Over this 116-day period, a total of 213,300 m^3 passed through the hydrometric station. This flow consisted of discharges from the Narrow Lake drainage basin (3.8 km^2), the Winter Lake (4.3 km^2) and the Round Lake (1.2 km^2) drainage basins. Average Narrow Lake outlet discharge for the 2010 monitoring period was 19.2 ℓ/s .

The calculated average runoff for the combined Narrow, Winter and Round Lake basins is estimated at 22.9 mm for the period of record in 2010. This represents an average daily flow volume of 1,842 m^3 . A summary of the Narrow Lake outlet drainage basin observations for 2005 to 2010 is contained in Tables 2.1 to 2.3.

2.3 Winter Lake Outlet (Site #3)

Winter Lake basin is approximately 4.3 km by 1.4 km and has a catchment area of 4.3 km^2 . The elevation of Winter Lake is approximately 285 m asl and the maximum elevation in the basin is approximately 330 m asl.

The Winter Lake Outlet is located about 10 m south of the existing winter road between Winter and Narrow Lakes. The creek channel is typically 30 to 60 cm wide and 15 to 20 cm deep at the hydrometric station. The creek meanders southwest in a vegetated creek bed until about midway between Winter and Narrow Lakes, where it aligns with the existing winter road and flows to Narrow Lake along a poorly-defined diffuse route.

An aerial view of the Winter Lake outlet hydrometric station and photos of the 9-inch Parshall flume and staff gauge installed in the Winter Lake outlet creek can be found in the Winter Lake outlet hydrometric site description in Appendix A.

2.3.1 Station History for 2010

The stage recorder was installed for the 2010 hydrological study on May 27, at 13:16 hours prior to the initial site visit by EBA scientists for the year. During the site visit the Parshall flume and bulkhead were inspected and some minor repairs were necessary to prevent leakage through the bulkhead. No leakage was observed after the repairs. Stage discharge data was collected and the data logger downloaded to ensure correct operation.

The instrumentation was removed for the season on September 17, at 13:46 hours.

A complete history of the Winter Lake outlet hydrometric station, including installation notes, activation and deactivation dates, and repair work, can be found in the site description in Appendix A.

2.3.2 Stage Measurements

Creek stages just upstream of the 9-inch Parshall flume were recorded every 15 minutes by a pressure transducer and saved in the data logger over the 113-day period of record. The stages presented in Figure 2.3 approximate the maximum creek depth directly upstream of the Parshall flume, which, over the 2010 period of record, ranged between 0.22 and 0.37 m.

2.3.3 Winter Lake Parshall Flume Calibration

The Parshall flume installed at Winter Lake has a throat width of 22.9 cm (9 inches) and a flow measurement range of between 3 and 251 ℓ/s . The Winter Lake Parshall flume calibration formula, used to calculate discharge from the flume head is:

$$Q = 535.343 \times H^{1.53}$$

where Q = outlet discharge (ℓ/s)

H = recorded water depth (flume head) (m)

2.3.4 Winter Lake Outlet Discharge Hydrograph

The discharge record for the Winter Lake outlet began after the water level recorder was reinstalled into the Parshall flume on May 27, 2010. The 2010 discharge hydrograph is presented as a brown line in Figure 2.4, along with the hydrographs from the previous five years.

Based on the Winter Lake outlet hydrographs for the data collected from 2005 to 2010, the following general observations were made:

1. Based on field observations by EBA and anecdotal information from on site Tyhee staff it is estimated that the creek typically begins to flow in early to mid May, and freezes up in mid October.
2. Once the creek begins flowing, discharge increases rapidly to peak freshet flow, which occurs during late May or early June.
3. Measured freshet flows have ranged from less than 15 ℓ/s to 72 ℓ/s .
4. After peak freshet, the discharge decreases till the end of June, at which time discharges are less 20 ℓ/s . Snowmelt is no longer the major factor for determining the creek flow.
5. From July 1 to the end of August, the outlet flow typically decreases from 20 ℓ/s to less than 10 ℓ/s . During this period, hydrographs show a response to large precipitation events which temporarily increase discharge.
6. From September 1 to the end of the record in late September or early October, flows typically increase slightly and are more variable in nature, as precipitation events becomes the dominant control of creek discharge.

The following are comments specific to the 2010 hydrograph:

1. When compared to previously recorded years the 2010 freshet began as early as mid April prior to the installation of the hydrometric instruments.

2. The creek was flowing at a rate of 12 ℓ/s just prior to the May 27 installation of the hydrometric station instrumentation.
3. From May 27 to June 2, 2010 Winter Lake Outlet discharges increased from 12 to 18 ℓ/s .
4. From June 2 to July 16 the discharge reduced from 18 ℓ/s to 1.6 ℓ/s due to minimal precipitation occurring over this time period.
5. As a result of 58 mm of precipitation occurring over 15 days beginning on July 17 the discharge rapidly increased from 1.6 ℓ/s on July 17 to over 37 ℓ/s on August 1, 2010.
6. From August 1, the date of the highest recorded flow for the year (37.1 ℓ/s), to the end of August, the discharge dropped to 16 ℓ/s which is typical of the discharges measured at the end of August for previous years.
7. During September the discharge slowly reduced from 16 ℓ/s to 10 ℓ/s at the end of the recorded data on September 20, 2010.

Over the 113-day period of record, a total of 131,500 m^3 passed through the hydrometric station. This flow consists of inputs from the Winter Lake drainage basin (3.8 km^2) and the Round Lake (1.2 km^2) drainage basin.

The calculated runoff, for the combined Winter and Round Lake basin for the period of record in 2010 is 23.9 mm and the average flow was 1,163 m^3/day . The average discharge through the station during the 2010 period of record was 13.5 ℓ/s . Tables 2.4 to 2.6 provide a summary of the Winter Lake Outlet drainage basin observations for all years on record.

2.4 Round Lake Outlet (Site #4)

Round Lake basin is approximately 1.8 km by 0.8 km with a catchment area of 1.2 km^2 . The estimated elevation of Round Lake is 288 m asl and basin elevations extend up to approximately 330 m asl. Inflows to Round Lake consist only of Round Lake drainage basin runoff.

The outlet from Round Lake, which flows into Winter Lake, is situated on the northwest side of Round Lake. There is no distinct flow channel out of Round Lake, but rather a diffuse flow through the muskeg into a small marsh approximately 5 m downstream of the lake. The outlet creek flows southwest into Winter Lake, typically through the muskeg and willow. At one point, about 25 m southwest of the Round Lake outlet, the flow is contained in a single channel. This site was selected for the hydrometric station.

An aerial view of the Round Lake outlet hydrometric station and photos of the 6-inch Parshall flume installed in the Round Lake outlet creek are located in the Round Lake station site description in Appendix A.

2.4.1 Station History for 2010

The stage recorder was reinstalled for the 2010 hydrological study on May 27, at 13:18 hours.

On the afternoon of June 4, 2010 the Parshall flume and bulkhead were inspected for damage and leakage. Some seepage was noted, but was easily repaired by packing more mud and sandbags on upstream side of the bulkhead. Velocity measurements were collected to ensure correct calibration of the hydrometric station.

The water level recorder was removed for the season on September 17 at 09:48 hours.

A complete history of the Round Lake outlet hydrometric station, including installation notes, activation and deactivation dates, and repair work are located in the site description in Appendix A.

2.4.2 Stage Measurements

Round Lake Outlet stages were logged by the Parshall flume instrumentation every 15 minutes over a period of record of 113 days. Figure 2.5 summarizes the creek stages recorded over the study periods from 2005 to 2010. Creek stages varied from 0.29 to 0.42 m over the period of record for 2010.

2.4.3 Round Lake Parshall Flume Calibration

The Parshall flume installed at Round Lake has a throat width of 15.24 cm (6 inches) and a flow measurement range of between 2 and 110 ℓ/s .

The Round Lake Parshall flume calibration formula, used to calculate discharge from the flume head is:

$$Q = 381.206 \times H^{1.58}$$

where Q = outlet discharge (ℓ/s)

H = recorded water depth (flume head) (m)

2.4.4 Round Lake Outlet Discharge Hydrograph

The discharge record for the Round Lake outlet began when the water level recorder was installed in the Parshall flume on September 27, 2010. The discharges corresponding to water levels recorded by the sensor are presented in Figure 2.6. The brown line indicates the discharges measured by the Parshall flume for 2010.

Based on the Round Lake Outlet discharge hydrographs for 2005 to 2010, the following general observations were made:

1. The creek typically begins to flow in early to mid May.
2. Freshet flows have ranged from less than 10 ℓ/s to 20 ℓ/s . Typical freshet flows for this outlet creek are 15 ℓ/s .

3. After peak freshet flows, discharges typically decreases until the end of July, at which time they are at a seasonal minimum, on the order of 1 to 4 ℓ/s . Snowmelt is no longer the major factor in determining creek flow.
4. Through out August, flows typically remain less than 4 ℓ/s and are strongly influenced by precipitation events.
5. From September on, flows typically increase slightly and are more variable in nature, as precipitation events are the dominant control for creek discharge over this period.
6. Based on the air temperature data it is assumed that the outlet stops flowing sometime in October.

The following are comments specific to the 2010 hydrograph:

1. In 2010 the freshet was early and may have started as early as mid April.
2. The creek was flowing at a discharge of 21 ℓ/s at the time of the May 27 installation of the hydrometric station instrumentation.
3. From May 27 to June 22, 2010 Round Lake Outlet discharges were at the low end of typical freshet flows recorded in previous years. Over this time period the discharge dropped rapidly from 21 ℓ/s on May 27 to 4 ℓ/s on June 12.
4. From June 12 to July 16 the discharge slowly dropped from 4 ℓ/s to 2 ℓ/s due to very little precipitation falling over the same time period.
5. As a result of 58 mm of precipitation occurring over 15 days beginning on July 17 the discharge rapidly increased from 2 ℓ/s on July 17 to 6.8 ℓ/s on August 2, 2010.
6. From August 2, to the end of the monitoring period on September 17, the discharge remained relatively constant at 6 ℓ/s with slight variations due to precipitation events.

Over the 113 day period from May 27, 2010 to September 17, 2010, a total of 54,800 m^3 passed through the hydrometric station. The average runoff for the Round Lake basin is estimated at 45.7 mm and the average outflow is estimated at 486 m^3/day or 5.6 ℓ/s . Tables 2.7 to 2.9 provide a summary of the Round Lake outlet drainage basin observations from 2005 to 2010.

2.5 Nicholas Lake Outlet (Site #6)

The Nicholas Lake drainage basin is an irregularly shaped basin with a maximum extent of approximately 6 km by 2 km. The total basin area is 6.28 km^2 . Nicholas Lake is at an elevation of 325 m asl and elevations in the basin range up to about 370 m asl.

The Nicholas Lake outlet is located at the western end of the northwest arm of Nicholas Lake and conveys all flow leaving the Nicholas Lake drainage basin. At the lake outlet, there is a clearly defined channel about 30 cm deep and 1.5 m wide. Within 30 m of the lake outlet, the creek bed consists of large boulders and there is little evidence of surface flow. The flow travels through boulders for about 700 m prior to discharging into a small lake, and then flows west into Eclipse Lake (el. 311 m) before eventually reaching the Yellowknife River via numerous small lakes, ponds and bogs.

The hydrometric station was installed approximately 10 m downstream of the Nicholas Lake outlet. Stage discharge flow gauging techniques were utilized for this hydrometric station as the geometry of the bedrock creek bed remains constant over time.

An aerial view of the Nicholas Lake outlet hydrometric station and photos of the installed hydrometric station are located in the Nicholas Lake station site description in Appendix A.

2.5.1 Station History for 2010

The Nicholas Lake hydrometric station was reactivated for the 2010 hydrological study. The stage and temperature recorder and data logger were installed in the existing housing on May 28 at 09:54 hours.

On the morning of June 4, 2010 stage discharge measurements were collected, the data logger downloaded and site maintenance conducted.

The instrumentation was removed for the season on September 16, 2010 at 10:39 hours.

A complete history of the Nicholas Lake outlet hydrometric station, including installation notes, activation and deactivation dates, and repair work can be found in the site description in Appendix A.

2.5.2 Stage Measurements

Nicholas Lake outlet stage-discharge data were recorded on June 4. This data was appended to flow data collected between May 31, 2004 and June 4, 2010 and is summarized in Table 2.10. Figure 2.7 shows the stage hydrographs at the Nicholas Lake outlet recorded from 2005 to 2010. Creek stages varied from 0.18 to 0.48 m over the period of record for 2010.

Note that there was no hydrometric program for this station in 2006 as per the client's request.

2.5.3 Stage-Discharge Relationship

A stage-discharge relationship was developed using the stage data and the measured discharge data obtained during this year and the previous years studies. This relationship is presented in Figure 2.8. During the spring of 2009 the Nicholas lake outlet flows were high; double the normal for this period and therefore the stage discharge relationship required the addition of a 3rd order polynomial to correctly fit the recorded stage discharge data to these higher than normal flows.

The relationship that best fits the data set as of July 4, 2010 is:

$$Q = 5.49 + 10.74 x + 22.75 x^3 + 0.02 e^{(11.06x)}$$

where

Q = Nicholas Lake outlet discharge (ℓ/s)

x = depth of water over the pressure transducer (m).

The correlation coefficient (r^2) is 0.9865.

2.5.4 Nicholas Lake Outlet Discharge Hydrograph

The recorded stages were used in conjunction with the stage-discharge relationship to produce the 2010 discharge hydrograph, see Figure 2.9. Also included in this figure is the discharge data collected at the site by Norecol in 1989.

Based on the discharge hydrographs of the Nicholas Lake Outlet for 2004 to 2010, the following observations were made:

1. There is little change in the Nicholas Lake hydrograph over the last 20 years. The 1989 data set fits well with the data collected from 2004 to 2010.
2. Nicholas Lake outlet typically begins to flow in early May. Peak freshet flows typically occur during late May.
3. Measured peak freshet flow ranges from 20 ℓ/s to 60 ℓ/s . Typical peak freshet flows for this creek are estimated at 35 ℓ/s .
4. After peak freshet, discharge typically decreases until mid August, at which time they are near the seasonal minimum of 8 to 15 ℓ/s .
5. During the month of September, recorded flows remain in the range of 8 to 15 ℓ/s , and are more variable in nature as precipitation is the dominant control for discharge.

The following are comments specific to the 2010 hydrograph:

1. In 2010, the freshet was early and could have begun as early as mid April.
2. The creek was flowing prior to the May 28 installation of the hydrometric station instrumentation.
3. The date of the highest recorded discharge of 17.3 ℓ/s occurred on May 28, the day the instruments were reinstalled. The falling trend of the discharge hydrograph indicates that peak freshet discharges were higher than 17.3 ℓ/s recorded on the installation date.
4. From May 28 to July 16, 2010 Nicholas Lake Outlet discharges gradually decreased from 17.3 ℓ/s to 10.2 ℓ/s .
5. The 58 mm of precipitation measured at the camp airstrip occurring over a 15 day period beginning on July 17, which had created a large discharge increase at the Narrow, Winter and Round Lake Outlets had little to no effect on the Nicholas Lake outlet discharges.
6. From August 2, to the end of the monitoring period on September 16, the discharge continued to slowly decrease in flow from 10 ℓ/s to 7 ℓ/s with no variations in discharge due to precipitation events.

For the 111 day period from May 29 to September 29, a total of 101,700 m^3 passed through the hydrometric station. This flow consists only of runoff from the Nicholas Lake drainage basin.

Based on the outflow data, the average runoff for the Nicholas Lake basin over the recorded period in 2010 was 16.2 mm and the average flow was 918 m^3/day or 10.6 ℓ/s . Tables 2.11 and 2.14 provide a summary of the drainage basin observations for all four years of record.

2.5.5 Water Temperature Records

Nicholas Lake outlet water temperatures were recorded over the summers of 2005, 2007, 2008, 2009 and 2010. This was possible because the pressure/temperature transducers were located in the active flow area of the creek and therefore accurate water temperatures could be recorded. The entire record of creek temperature is presented in Figure 2.10 with the 2010 data indicated by the brown line. The water temperature records for the first three years are quite consistent; however it is clear from Figure 2.10 that the outlet water temperatures were much warmer (15°C) during the first two weeks of June 2010 than any of the other years. Conversely, the 2009 water temperatures in early June are 5°C cooler than usual. This shift in 2010 is further evidence that the spring melt occurred earlier than normal.

Water temperatures exhibit a diurnal temperature fluctuation of about 2°C over the entire period of record. Diurnal minimum water temperatures occur between 6:00 and 8:00 hours, with maximums occurring between 17:00 and 19:00 hours.

At the end of May the water temperature was typically less than 15°C. Water temperatures increased to 18 to 20°C in early July and remain constant until the second week in August when they begin to cool. By late September, water temperatures were typically less than 5°C to 8°C.

2.6 Lake Levels and Water Temperatures

To better understand the hydrology of the area and to facilitate the engineering and design of the process plant and tailings pond, lake level monitoring systems were installed in the above described lakes and Giauque Lake during August of 2009. The monitoring stations were re-activated for the 2010 hydrological program.

2.6.1 Lake Level and Water Temperature Instrumentation

The lake level and water temperature monitoring station is very similar to the instrumentation used in the various hydrometric stations. As with the hydrometric stations a PT2X pressure transducer/water temperature and data logger was utilized. The instrument was inserted to a 2.5 metre long, 5 cm diameter perforated heavy walled galvanized steel pipe mounted securely to a rock outcrop or large boulder situated such the lower portion of the pipe (housing) is submerged in the lake water below the estimated low water level for the lake. This instrument package measured lake levels and water temperatures and recorded the time stamped data to the logger at a frequency of 15 minutes over the entire installation period.

The 5 psig pressure transducer can measure water levels to an accuracy of ± 2 mm over a 3.3 metre range of lake levels. The unit is temperature compensated over the entire operation temperature range from 0 to 40°C. Lake level values represent the depth of water over the transducer sensing element. It was not necessary to relate the lake levels to a geodetic elevation as only relative changes in lake level are required for the project.

Temperature measurement accuracy is $\pm 0.2^\circ\text{C}$. The water temperature measurements are recorded at a depth below the surface of the lake equal to the lake level value. In other words at the same depth as the pressure transducer sensing element.

2.6.2 Narrow Lake Levels and Water Temperatures

Narrow Lake levels and water temperatures were recorded over two periods during the summers of 2009 and 2010 and the results are presented in Figure 2.11

The water level station was installed in August 2009 and first started logging lake levels on August 22, 2009. The 47 day record was terminated with the removal of the instrument on October 8, 2009. At the time of the installation the relative lake level was 0.434 m. Lake levels rose to 0.450 m on September 1 primarily as a result of two precipitation events, 9.4 mm on August 23 and 6.35 mm on August 26, 2009. By September 6 the level had returned to 0.434 m. The level again rose rapidly starting on September 7 due to a large precipitation event of 29.9 mm occurring on the same day. As a result of the 69.8 mm of rain that fell during September the level continued to rise to a maximum of 0.584 m on October 6.

Water temperature at the time of installation was 17.1°C. The water temperature slowly and consistently decreased till the time of instrumentation removal on October 8, 2009 when the temperature was 5.3°C.

The 2010 lake level and temperature monitoring period began on May 27, 2010 with the reinstallation of the hydrometric instrument. The 116 days of lake level and water temperature monitoring was concluded on September 20, 2010. At the time of the installation Narrow Lake level was 0.610 m. Lake levels rose to the maximum recorded level for the year of 0.631 m on June 5. This was not a result of precipitation as only one mm of rain fell over this period but represents the last of the snowpack melting. After June 5 the level dropped to 0.540 m on July 17. This was the lowest recorded lake level for the 2010 monitoring period. Lake levels rose rapidly beginning on July 17 as a result of 16.0 mm of rainfall that day. Following this precipitation event it rained every day for a total of 64.5 mm till August 2 which resulted in a lake level of 0.624 m. From this date on the lake levels dropped to 0.555 m on September 20 the date the transducer was removed.

Water temperature at the time of installation was 13.4°C. The water temperature warmed slowly through June and July 2010 till the maximum temperature of 21.8°C occurred on August 1. After this date the lake temperature began to cool till at the time of instrumentation removal the temperature was 9.7°C.

2.6.3 Winter Lake Levels and Water Temperatures

Winter Lake levels and water temperatures were recorded over two periods during the summers of 2009 and 2010 and the results are presented in Figure 2.12.

The water level station was installed in August 2009 and first started logging lake levels on August 21, 2009. The 48 day record was terminated with the removal of the instrument on October 8, 2009. At the time of the installation the relative lake level was 0.398 m. Lake levels rose to 0.405 m on August 31 primarily as a result of two precipitation events, 9.4 mm on August 23 and 6.35 mm on August 26, 2009. By September 6 the level had returned to 0.391 m. The level again rose rapidly on September 7 due to a large precipitation event of 29.9 mm occurring on the same day. As a result of the further 69.8 mm of rain that fell during September the level continued to rise to a maximum of 0.483 m on October 6.

Water temperature at the time of installation was 17.0°C. The water temperature slowly and consistently decreased till the instrumentation was removed on October 8, 2009 when the temperature was 3.3°C.

The 2010 lake level and temperature monitoring period began on May 27, 2010 with the reinstallation of the hydrometric instrument. The 113 days of lake level and water temperature monitoring was concluded on September 17, 2010. At the time of the installation Winter lake level was 0.493 m. The level dropped consistently to 0.347 m till July 17 which was the lowest recorded lake level for the 2010 monitoring period. Lake levels rose rapidly beginning on July 17 as a result of 16.0 mm of rainfall that day. Following this precipitation event it rained every day for a total of 64.5 mm till August 2 which resulted in a lake level of 0.51 m. From this date on the lake levels dropped to 0.458 m on September 17 the date the transducer was removed.

Water temperature at the time of installation was 15.4°C. The water temperature warmed slowly through June and July 2010 till the maximum temperature of 23.3°C occurred on July 15. After this date the lake temperature began to fall till at the time of the removal of the instrumentation the temperature was 9.1°C.

2.6.4 Round Lake Levels and Water Temperatures

Round Lake levels and water temperatures were recorded over two periods during the summers of 2009 and 2010 and the results are presented in Figure 2.13

The water level station was installed in August 2009 and first started logging lake levels on August 21, 2009. The 48 day record was terminated with the removal of the instrument on October 8, 2009. At the time of the installation the relative lake level was 0.168 m. Lake levels rose to 0.191 m on September 6 primarily as a result of two precipitation events, 9.4 mm on August 23 and 6.35 mm on August 26, 2009. The level rose rapidly starting on September 7 due to a large precipitation event of 29.9 mm occurring on the same day. As a result of the further 69.8 mm of rain that fell during September the level continued to rise to a maximum of 0.337 m on October 5.

Water temperature at the time of installation was 19.1°C. The water temperature slowly and consistently got cooler till at the time of the removal of the instrumentation on October 8, 2009 the temperature was 1.4°C.

The 2010 lake level and temperature monitoring period began on May 27, 2010 with the reinstallation of the hydrometric instrument. The 113 days of lake level and water temperature monitoring was concluded on September 17, 2010. At the time of the installation Round lake level was 0.430 m. The level dropped consistently to 0.143 m till July 17 which was the lowest recorded lake level for the 2010 monitoring period. Lake levels rose rapidly beginning on July 17 as a result of 16.0 mm of rainfall that day. Following this precipitation event it rained every day for a total of 64.5 mm till August 2 which resulted in a lake level of 0.286 m. From this date on the lake levels dropped to 0.204 m on September 17 the date the transducer was removed.

Water temperature at the time of installation was 15.4°C. The water temperature warmed slowly through June and July 2010 till the maximum temperature of 28.1°C occurred on July 14. After this date the lake temperature began to fall till at the time of the removal of the instrumentation the temperature was 4.91°C.

2.6.5 Nicholas Lake Levels and Water Temperatures

Nicholas Lake levels and water temperatures were recorded over two periods during the summers of 2009 and 2010 and the results are presented in Figure 2.14

The water level station was installed in August 2009 and first started logging lake levels on August 24, 2009. The 46 day record was terminated with the removal of the instrument on October 9, 2009. At the time of the installation the relative lake level was 0.674 m. Contrary to the Round, Winter and Narrow series of lakes, Nicholas Lake levels reduced continually from August 24 to 0.654 m by September 6 even though two precipitation events, 9.4 mm on August 23 and 6.35 mm on August 26, 2009 occurred over that time period. The lake level experienced a rapid rise on September 7 due to a large precipitation event of 29.9 mm occurring on the same day. As a result of further precipitation over the following three days lake levels continued to rise slowly to a peak 0.677 m on September 11. From September 11 to September 22 levels decreased even though a total of 3.3 mm of precipitation was recorded by the on site meteorological station over the same period. On September 22 the levels began to rise slowly to the highest lake level recorded in 2009, of 0.681 m. on October 3. Lake levels were 0.673 m at the time the instrumentation was removed for the season.

Water temperature at the time of installation was 14.6°C. The water temperature slowly decreased till at the time of the removal of the instrumentation on October 9, 2009 the temperature was 4.5°C.

The 2010 lake level and temperature monitoring period began on May 28, 2010 with the reinstallation of the hydrometric instrument. The 111 days of lake level and water temperature monitoring was concluded on September 16, 2010. At the time of the installation Nicholas lake level was 0.754 m. The level dropped more or less consistently over the period of record for 2010 to 0.492 m on September 16 the date the transducer was removed. Over this period the Nicholas lake levels exhibited minimal response to recorded major precipitation events which created large changes to the lake levels of Round, Winter and Narrow Lakes.

Water temperature at the time of installation was 8.9°C. The water temperature warmed slowly through June and July 2010 till the maximum temperature of 20.0°C occurred on July 29. After this date the lake temperature began to fall till at the time of the removal of the instrumentation the temperature was 6.8°C.

2.6.6 Giauque Lake Levels and Water Temperatures

Giauque Lake levels and water temperatures were recorded over two periods during the summers of 2009 and 2010 and the results are presented in Figure 2.15.

The water level station was installed in August 2009 and first started logging lake levels on August 22, 2009. The 47 day record was terminated with the removal of the instrument on October 8, 2009. At the time of the installation the relative lake level was 0.628 m. Lake levels fell to 0.549 m on September 6 with no observed effects as a result of two precipitation events, 9.4 mm on August 23 and 6.35 mm on August 26, 2009. The level rose rapidly starting on September 7 due to a large precipitation event of 29.9 mm occurring on the same day and continued to slowly rise over the next few days to a maximum of 0.574 m on September 11. From this point on to the time the transducer was removed for the season on October 8 the lake level dropped to 0.524 m, however a small response to the 8.6 mm of precipitation that occurred from September 29 to October 1, 2010 is observed.

Water temperature at the time of installation was 16.7°C. The water temperature slowly cooled till at the time of the removal of the instrumentation on October 8, 2009 the temperature was 2.6°C.

The 2010 lake level and temperature monitoring period began on May 27, 2010 with the reinstallation of the hydrometric instrument. The 113 days of lake level and water temperature monitoring was concluded

on September 17, 2010. At the time of the installation Giauque Lake level was 0.520 m. The level dropped consistently to 0.375 m till July 17. Lake levels rose rapidly beginning on July 17 as a result of 16.0 mm of rainfall that day. Following this precipitation event it rained every day for a total of 64.5 mm till August 2 which resulted in a lake level of 0.439 m. From this date on, the lake level dropped to 0.265 m on September 17 the date the transducer was removed.

Water temperature at the time of installation was 11.9°C. The water temperature warmed slowly through June and July 2010 till the maximum temperature of 22.4°C occurred on July 30. After this date the lake temperature began to fall till at the time of the removal of the instrumentation the temperature was 4.9°C.

3.0 METEOROLOGY

On September 28, 2004, a meteorological station was installed at a location approximately 50 m east of the north end of the airstrip. The NAD 27 GPS coordinates for the station are provided in Table 1.1 and in the station description in Appendix A.

The station measures wind speed and direction, air temperature, barometric pressure, relative humidity, incident solar radiation and water-equivalent precipitation. Meteorological data is logged at 15-minute intervals as an average of instantaneous measurements recorded every 5 seconds. A 24-hour daily summary is produced at the end of each day which includes the daily maximum, mean and minimum for each measured parameter. Data is retrieved from the logger with a laptop computer.

Evaporation is measured using an evaporation pan, installed 5 m from the meteorological station.

Meteorological data presented in this report has been collected over a period of 2285 days, beginning on September 28, 2004 and ending on December 31, 2010.

3.1 Meteorological Station Instrumentation

The weather station consists of a standard 10 m meteorological tower with instrumentation to measure the previously mentioned parameters, with the exception of evaporation. The meteorological station is powered by a 12 V DC battery and 20 watt solar panel. Data are recorded by a Campbell Scientific CR10X data logger.

Brief descriptions and specifications of the instruments installed on the weather station, a map showing the station location and a picture of the meteorological station showing the 10 m tower, evaporation pan and the all-weather precipitation gauge are contained in the site description for the meteorological station in Appendix A.

3.2 Wind

Wind data recorded by the station over the period of record has been summarized and discussed in three different formats, as described below.

3.2.1 Wind Speed

The average daily wind speed is calculated from 15-minute wind data. The maximum instantaneous gust wind speed for the day is recorded by the meteorological station. These data for 2010 are displayed in

Figure 3.1 with the maximum daily gust plotted in black and the average daily wind speed plotted in grey. Figure 3.2 displays wind speed summary data over the entire period of record.

Figure 3.1 shows that the mean daily maximum gust speed recorded in 2010 was approximately 9 m/s during the summer and 7 m/s during the winter. The maximum recorded wind gust in 2010 was 20.6 m/s on July 2. This is also the highest wind gust recorded over the entire record (Figure 3.2).

Average wind speeds during 2010 were 2.9 m/s, with the highest daily average of 7.3 m/s occurring on April 23. The highest daily average wind speed over the entire record was 9.2 m/s on September 23, 2008 (Figure 3.2).

Figure 3.2 illustrates a seasonal pattern with respect to wind speed with lower speeds occurring between November and March and higher speeds occurring between June and August. Maximum daily gusts are 3 m/s lower on average during the winter than during the summer.

Monthly averages for wind speeds and maximum daily gusts, based on data recorded over the entire period of record are summarized in Table 3.1. The monthly wind speeds contained in this table also illustrate the seasonal trend, with the lowest averages occurring during the winter months. Based on the period of record, the mean wind speed in December was 2.15 m/s while during May it was 3.34 m/s. Daily peak gusts also exhibit a seasonal pattern, with the highest average daily maximums occurring in August (9.24 m/s), and the lowest occurring in December (5.74 m/s).

3.2.2 Wind Speed and Direction Stick Plots

Hourly wind data for 2010 is contained in Figures B-65 through B-76 in Appendix B. Each figure consists of three panels.

The upper panel is a stick plot which displays the hourly wind vector. Direction is indicated by the angle of each hourly stick, with true north towards the top of the page. The wind speed is indicated by the length of the stick according to the scale in m/s, which is given at the left and right of the plot. The central panel indicates the hourly wind speed in m/s. This panel is useful as an indicator of windstorms or periods of calm. The lower panel shows the hourly wind direction.

Hourly wind data figures for previous months of the record appear chronologically in Figures B-1 through B-64 in Appendix B contained in the accompanying data DVD.

3.2.3 Wind Roses

A wind rose summarizes an entire period of recorded wind data on a single graph. The total duration of wind occurring within a specified speed range and range of compass directions is determined as a percentage of the total period of record. Wind speeds are grouped into ranges from: 0 to 1 m/s (calm); 1 to 3 m/s; 3 to 6 m/s etc.; in 3 m/s ranges to 18+ m/s. The wind direction is grouped into 16 compass direction bins each with a size of 22.5 degrees. These data are summarized in the wind speed and direction frequency distribution table, which is located in the lower right of the figure. The wind rose displays graphically the data contained within the table.

The wind rose for the 2005 to 2010 period of record is shown in Figure 3.3. The length of the line in a particular compass direction is indicative of the duration of winds coming from that direction over the period of record. The thickness and colour of each portion of the line represents the different categories

of wind speeds. Figure 3.3 shows that winds came predominantly from the east (12.25% frequency of occurrence) and the east-northeast (11.29%). Winds were least common from the southwest and west-southwest (2.24% and 2.07%, respectively).

The percentage of time the wind blows at a specific speed, irrespective of direction, can be determined by viewing the "Total %" row at the bottom of the frequency distribution table. Over the period of record, calm winds (less than 1 m/s) occurred 10.3% of the time. Wind speeds from all directions was between 1 and 3 m/s 46.7% of the time, between 3 and 6 m/s for 38.4%, between 6 and 9 m/s for 4.5% and between 9 and 12 m/s for 0.1% of the time. There were no extended periods when the wind speed was greater than 12 m/s.

The wind rose for 2010 is shown in Figure 3.4 and shows a similar pattern to the multi-year statistics presented in Figure 3.3. In 2010 winds came predominantly from the east (11.1% of the time) and the east-northeast (10.1%). Winds were least common from the southwest, west-southwest and south-southwest (2.8%, 2.6% and 2.6% respectively).

Over 2010 calm winds occurred 10.5% of the time, wind speeds between 1 and 3 m/s 49.5%, between 3 and 6 m/s for 36.0%, and between 6 and 9 m/s for 4.1% percent of the time. There were no extended periods when the wind speed was greater than 9 m/s.

Monthly wind rose figures for each month of 2010 are contained in Figures C-65 through C-76 in Appendix C.

Wind rose figures for previous months of the record are contained chronologically in Figures C-1 through C-64 in Appendix C on the accompanying data DVD.

An analysis of the monthly figures reveals a slight annual variability in wind behavior at the site, with more prominent easterly winds occurring in the spring and summer, in particular, in April and May. Calm periods occur more often in December and January (frequency of occurrence typically in the range of 15% to 25%) than during the rest of the year. This behavior is similar to the seasonal characteristics for wind speeds reported in Section 3.2.1. The similarity of monthly wind patterns observed from 2005 to 2010 indicates consistency in the wind regime at the site over the six years of recorded data.

3.3 Other Meteorological Parameters

Monthly meteorological data for 2010 plotted in Figures D-65 through D-76 in Appendix D display hourly observations of air temperature, solar radiation, relative humidity, barometric pressure, and water-equivalent precipitation recorded at the meteorological station.

Monthly meteorological wind data figures for previous months of the record appear chronologically in Figures D-1 through D-64 in Appendix D contained in the accompanying data DVD.

The summary plots shown in Figures 3.5 through 3.10 show the daily maximum, mean and minimum for the measured meteorological parameter of air temperature, relative humidity and barometric pressure. The parameters are described in detail in the following sections. Figures 3.11 and 3.12 presents the maximum daily solar incident radiation and Figure 3.13 and 3.14 are histograms of the daily precipitation.

3.3.1 Air Temperature

Air temperatures are summarized in terms of daily extreme and mean temperatures and is presented as hourly observations.

3.3.1.1 Daily Air Temperature Statistics

Daily maximum, minimum and mean air temperatures are archived by the meteorological station at midnight.

The data summarized in Figure 3.5 is for the period of January 1 to December 31, 2010 and shows the mean daily air temperatures as a thick red line bounded by thin black lines indicating the daily maximum and minimum temperatures. This figure shows the maximum recorded air temperature in 2010 was 30.1°C on July 13. The minimum recorded was -38.9°C on December 10.

Daily maximum, mean and minimum air temperatures are plotted for the entire period of record in Figure 3.6. This figure clearly illustrates the sinusoidal seasonal pattern to air temperature at the property. The summer period can be defined as the period where daily temperatures typically remain above 0°C, and runs from mid-May through late-September. Summer normals are typically in the range of 10°C to 20°C whereas winter normals are typically in the range of -20°C to -40°C.

Monthly average summaries in Table 3.1 show that the warmest month is July, with a mean temperature of 16.2°C and typical diurnal temperature extremes of 21.0°C and 11.7°C. The coldest month of the year is January with a mean daily temperature of -24.7°C, and typical extremes of -21.1°C and -28.8°C. The highest temperature recorded at the site was 31.3°C on August 10, 2008. The lowest temperature recorded was -45.1°C on January 29, 2008.

Generally, the daily variation is $\pm 5^\circ\text{C}$ from the mean daily air temperature, with a slightly larger variation during the summer months.

3.3.1.2 Hourly Air Temperature Observations

The air temperature recorded hourly over the entire period of record is indicated by the red line in the upper panel in the figures in Appendix D. These figures are useful for viewing temperature trends for a particular day or over a short period of time.

3.3.2 Relative Humidity

Relative humidity is summarized in terms of daily extremes and means and is also presented as hourly observations.

3.3.2.1 Daily Relative Humidity Statistics

Figure 3.7 shows the relative humidity data plotted for 2010. The thick blue line in the figure represents the mean relative humidity for the day. The maximums and minimums are indicated by black lines. Maximum, mean and minimum relative humidity is plotted for the entire period of record in Figure 3.8.

A sinusoidal seasonal pattern to mean relative humidity is evident. During the winter months, mean daily relative humidity typically fluctuates between 80% and 90%. During the summer months, mean relative humidity has a much larger variance, typically fluctuating between 45% and 80%. Table 3.1

shows that the lowest daily mean relative humidity levels occur in May, June and July (61.8%, 55.5% and 61.6%, respectively). The highest levels occur in October, November and December (85.3%, 87.4% and 81.5%, respectively).

The fluctuation in daily relative humidity is indicated by the envelope of daily maximums and minimums. Daily extremes also exhibit a seasonal variance, with a larger variance occurring during the summer. Over the summer period, daily maximum and minimum relative humidity typically varies $\pm 30\%$ from the mean. However, during the winter period, the typical diurnal variation of relative humidity is less than $\pm 10\%$. Over the period of record, the relative humidity varied from an extreme minimum of 10.7% on May 30, 2010 to a high of 100%, which occurred numerous times throughout the record.

3.3.2.2 Hourly Relative Humidity

Daily relative humidity for the entire period of record is indicated by the blue line in the second panel in the figures in Appendix D.

The data can be used to identify an increase in moisture in the air, relative to air temperature.

3.3.3 Barometric Pressure

Barometric pressure is summarized in terms of daily extremes, means and presented as hourly observations.

Barometric pressure has been corrected to represent the equivalent pressure at mean sea level. This is a standard meteorological convention used to enable direct comparison of meteorological station data regardless of the station elevation. To correct barometric pressures presented in this report to actual barometric pressures at site, it is necessary to reduce the stated pressure by 36 hPa. (hPa is the metric equivalent to a millibar and represents 0.1 kPa.)

3.3.3.1 Daily Barometric Pressure Statistics

Figure 3.9 shows the daily maximum, mean and minimum barometric pressures recorded in 2010. The thick green line in the figure represents the mean daily barometric pressure. Daily maximum and minimum barometric pressures are indicated by black lines.

The average barometric pressure for 2010 was 1012 hPa.; the lowest barometric pressure was 977 hPa on March 29 and the highest was 1041 hPa on January 30.

Figure 3.10 displays the daily mean and extremes over the entire period of record. Annually barometric pressure at the site typically varies from a low of 990 hPa to a high of 1030 hPa (sea-level-equivalent). The lowest pressure recorded over the entire period of record was 953 hPa on October 26, 2008 and the highest was 1046 hPa on December 5, 2009.

Figure 3.10 shows a slight seasonal variation in barometric pressure, with a wider day-to-day range of pressures occurring during the winter months. Typical variances during the summer are in the range of ± 3 hPa while during the winter they are (± 10 hPa). Table 3.1 shows that the months with the highest mean barometric pressure are February through May. The yearly mean is 1012 hPa.

3.3.3.2 Hourly Barometric Pressure

Hourly barometric pressure over the entire period of record is indicated by the green line in the third panel of the figures in Appendix D.

Hourly barometric pressure data can be used to estimate as to the type of weather conditions at the site at any given time. High pressure would tend to indicate clearer conditions while lower pressure would tend to indicate an intrusion of a moister air mass. The data can be helpful in inferring the movement of weather patterns over the site.

3.3.4 Incident Solar Radiation

Incident solar radiation is summarized in terms of daily maximums and presented as hourly observations. Monthly solar radiation at the site is also provided in Table 3.1 as an approximate percentage of the latitude-dependent theoretical maximum under clear skies.

3.3.4.1 Daily Incident Solar Radiation Statistics [same comment as section 3.3.2.1]

The daily maximum instantaneous incident solar radiation is archived at midnight. The minimum daily incident solar radiation should always be zero at 63° 11' N, because the sun is below the horizon for at least a short period each day throughout the year. Figure 3.11 shows the 2010 daily maximum incident solar radiation. Maximum incident solar radiation for the entire period of record is plotted in Figure 3.12.

Due to the latitude of the Yellowknife Gold Project site, there is an obvious sinusoidal pattern to the data set. During December, the sun is lowest in the sky, and incident solar radiation is at a minimum. Table 3.1 shows that the average daily maximum for December is 53 W/m². During December, daily variations in the maximum solar incident radiation are usually less than 30 W/m².

During the summer, incident solar radiation is at its highest, with daily peak values averaging 927 W/m² in July. The highest flux of solar radiation received at the site in 2010 was 1213 W/m², which occurred on July 1. The highest value recorded over the entire period was 1281 W/m² on June 19, 2007.

During the summer months, cloud cover can cause large variations from the value, dropping peak daily values below 400 W/m².

When compared to the cloud-free estimate of the theoretical solar radiation the percentage of received solar radiation provides some information on the annual and monthly cloud cover. Theoretical incident radiation at the site is calculated for each hour of the year as a function of latitude and longitude. The percentage is approximate only, as atmospheric dispersion is estimated at 20% and is held constant throughout the year. Based on a comparison of theoretical and recorded values at the site, March and April are the sunniest months of the year with less than 40% of solar insolation attenuated by the atmosphere. The lowest monthly percentages occur between October and January, when less than 36% of all incoming solar radiation is received at the surface. The annual average over the period of record was 48%.

3.3.4.2 Hourly Incident Solar Radiation

Hourly incident solar radiation for the entire period of record is indicated by the black line in the fourth panel in the figures in Appendix D.

In the absence of cloud cover, smoke or air pollution, daily peaks occur when the sun is at its highest point in the sky. At 113° 53' W, the sun's zenith occurs at 12:36 pm. Incident solar radiation drops to zero overnight.

Hourly insolation data is useful for determining the amount of daylight the site receives on a given day. Based on the observed data, the site receives approximately 20 hours of daylight at the summer solstice

and approximately four hours at the winter solstice. Hourly insolation data is also useful in determining periods of cloud cover on a given day.

3.3.5 Precipitation

Precipitation at the site can occur as either rain or snow. Generally, the precipitation is in the form of rain between June and August, and as snow from October to April. During May and September there is a possibility of either rain or snow or both. The type of precipitation that fell during a particular hour can be established by cross-referencing with the hourly air temperature using the data contained in Appendix D.

3.3.5.1 Recorded Precipitation

Precipitation is recorded at 15 minute intervals. Both rain and snow are recorded by the gauge as water-equivalent. The instrumentation for the continuous measurement of all forms of precipitation is outlined in Appendix A.

The 2010 summary of daily precipitation is presented in Figure 3.13 as a histogram and in tabular form as Table 3.8. A total of 258.1 mm of precipitation occurred in 2010. The maximum precipitation recorded in one day in 2010 was 16.8 mm on July 27. The largest single-day precipitation event of the entire monitoring period (34.5 mm) occurred on September 23, 2008. Figure 3.14 shows daily precipitation amounts over the entire period of record. Tabulated records for 2004 to 2010 are contained in Tables 3.2 to 3.8 inclusive. The amount of precipitation associated with a typical rain event is about 1 to 3 mm and generally lasts between 1 and 2 hours. Heavy precipitation days tend to occur more commonly during the summer months in the form of rain, but can also occasionally occur as snowfall during the winter months.

Daily precipitation data collected over the period of record has been summarized as monthly and annual averages in Table 3.1. Based on the 6 complete years of recorded data, the site receives, on average, 256 mm of precipitation annually. The most precipitation fell in July, August & September (43 mm, 46 mm & 35 mm per month, respectively). The least fell in March (8 mm for the month).

The bottom panel in the figures in Appendix D show the amount of daily precipitation recorded over the entire period of record.

3.4 Evaporation

On May 19, 2010 the evaporation pan was reinstalled near the meteorological station, and data was recorded from this date until September 16, 2010, when the pan was decommissioned due to the onset of freezing temperatures. The water level in the pan was typically measured daily at 07:00 hours using a point gauge, accurate to ± 0.5 mm. Daily evaporation was calculated by determining the change in the pan water level and subtracting the increase in the water depth due to precipitation for the same period. For days when the point gauge was read at times other than at 07:00 hours, a ratio of 24 hours to the time difference between the two consecutive readings was used to correct the evaporation to a 24 hour period.

The equivalent daily evaporation rate is shown as a thin black line in Figure 3.15. On days when the evaporation is less than zero, it is assumed that water was added to the pan by condensation. The pink line in Figure 3.15 is a seven-day running average of the daily evaporation rate.

Table 3.9 is a summary of the evaporation collection period for each year, and the number of days of data collected for each month.

Tables 3.10 and 3.11 summarize the daily pan evaporation rates and totals for each month the evaporation pan was operational for all years on record. Table 3.10 summarizes the average pan evaporation rates for the data collected from 2005 to 2010. The average site pan evaporation for the six years was 4.0 mm/day. There was very little change in the average evaporation for each of the six years. Average monthly pan evaporation rates are included in this table.

Table 3.11 is a summary of the total pan evaporation for all six years of record both on a monthly basis and the total for each year. The six-year average total pan evaporation for the summer (June to mid September) was 426 mm.

Research into evaporation pan rates has shown that lake evaporation rates are lower than pan evaporation rates by a factor of 0.6 to 0.8 (Chow, 1964).

4.0 RECOMMENDATIONS

It is recommended that the hydrology and meteorology programs be continued through 2011, so as to extend the period of record for both flows and weather parameters. Tyhee NWT Corp. has indicated that the mineral resource at Nicholas Lake will likely be developed in conjunction with the Ormsby resource; therefore, the Nicholas Lake hydrometric station should be reinstalled and activated for the 2011 hydrological field program.

Lake level data was collected during 2009 and 2010. It is recommended that the lake level studies be continued in 2011. As all the stations are still installed the increase in cost to the 2011 hydrometric field program would be minimal.

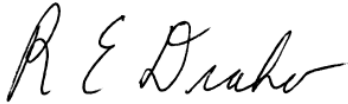
5.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of Tyhee NWT Corp. and their agents. EBA does not accept any responsibility for the accuracy of any of the data, the analysis or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than Tyhee NWT Corp., or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this report is subject to the terms and conditions stated in EBA's Services Agreement and in the General Conditions provided in Appendix F of this report.

6.0 CLOSURE

We trust this report meets your requirements. Should you have any questions or comments, please contact the undersigned at your convenience.

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Table 1.1: Hydrometric and Meteorological Station Coordinates

Site #	Site Name	Latitude			Longitude		
		deg	min	sec	deg	min	sec
1	Narrow Lake Outlet	63	9	16.4	113	57	7.3
2	Brien Lake Outlet	63	10	52.3	113	57	54.0
3	Winter Lake Outlet	63	10	3.8	113	55	38.5
4	Round Lake Outlet	63	10	30.3	113	54	27.2
5	Northeast Brien Lake	63	11	6.0	113	55	4.0
6	Nicholas Lake Outlet	63	15	20.1	113	46	4.4
7	Tyhee Meteorological Station	63	11	6.2	113	53	40.2
8	Winter Lake Levels	63	11	6.2	113	55	16.7
9	Round Lake Levels	63	10	27.0	113	53	56.7
10	Narrow Lake Levels	63	9	28.2	113	56	53.0
11	Giauque Lake Levels	63	10	42.7	113	53	3.9
12	Nicholas Lake Levels	63	15	18.8	113	46	0.5

Note: All coordinates are referenced to NAD 27

Table 2.1: Narrow Lake Outlet - Hydrometric Data - Periods of Record

Year	Days of Recorded Data for Each Month						Period of Record for Year		
	May (days)	June (days)	July (days)	August (days)	September (days)	October (days)	Length (days)	Start Date	End Date
2005	10	30	30	31	12		112	May 22/05 11:11	Sep 12/05 14:59
2006		22	31	31	19		102	Jun 09/06 09:42	Sep 19/06 14:12
2007	11	30	31	31	28		130	May 21/07 09:27	Sep 28/07 16:42
2008		27	31	31	25		114	Jun 04/08 08:14	Sep 26/08 11:44
2009		25	31	31	30	8	124	Jun 06/09 08:46	Oct 08/09 13:01
2010	4	30	31	31	19		116	May 27/10 14:35	Sep 20/10 09:50

Note: Shaded areas indicate incomplete months of data

Table 2.2: Narrow Lake Outlet - Mean Monthly Discharges

Year	May (L/s)	June (L/s)	July (L/s)	August (L/s)	September (L/s)	October (L/s)	*POR (L/s)
2005	173.6	156.4	44.3	21.6	27.9		77.4
2006		71.8	35.6	19.9	28.5		37.2
2007	113.5	58.6	11.9	4.8	0.6		26.8
2008		22.0	9.4	1.9	17.3		12.1
2009		76.5	55.0	10.9	21.1	49.6	39.7
2010	11.1	9.6	18.2	30.8	18.7		19.2

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data

Data is for the combined Round-Winter-Narrow Lake basin.

Table 2.3: Narrow Lake Basin - Runoff Estimates

Year	May (mm)	June (mm)	July (mm)	August (mm)	September (mm)	October (mm)	*POR (mm)
2005	15.4	43.6	12.3	6.2	3.0		80.5
2006		14.4	10.3	5.7	4.9		35.3
2007	11.2	16.3	3.4	1.4	0.2		32.5
2008		5.5	2.7	0.6	4.1		12.8
2009		17.5	15.8	3.1	5.9	3.5	45.8
2010	0.5	3.0	5.8	9.9	3.5		22.9

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data

Data is for the combined Round-Winter-Narrow Lake basin.

Table 2.4: Winter Lake Outlet - Hydrometric Data - Periods of Record

Year	Days of Recorded Data for Each Month						Period of Record for Year		
	May (days)	June (days)	July (days)	August (days)	September (days)	October (days)	Length (days)	Start Date	End Date
2005			17	31	11		60	Jul 14/05 14:26	Sep 12/05 10:26
2006		22	31	31	19		102	Jun 09/06 11:10	Sep 19/06 13:40
2007	13	30	31	31	28		132	May 19/07 11:04	Sep 28/07 15:49
2008	9	30	31	30	25		126	May 22/08 14:45	Sep 26/08 08:00
2009		25	31	31	30	8	125	Jun 05/09 12:31	Oct 08/09 13:16
2010	4	30	31	31	17		113	May 27/10 13:16	Sep 17/10 13:46

Note: Shaded areas indicate incomplete months of data

Table 2.5: Winter Lake Outlet - Mean Monthly Discharges

Year	May (L/s)	June (L/s)	July (L/s)	August (L/s)	September (L/s)	October (L/s)	*POR (L/s)
2005			20.1	13.6	16.5		16.0
2006		31.0	13.8	8.0	14.8		15.9
2007	60.3	33.7	4.1	0.3	0.0		14.4
2008	13.5	11.1	4.0	1.7	3.4		5.7
2009		48.2	33.3	3.2	7.6	19.2	21.9
2010	15.0	6.5	10.0	23.6	13.2		13.5

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data

Data is for the combined Round-Winter Lake basin.

Table 2.6: Winter Lake Basin - Runoff Estimates

Year	May (mm)	June (mm)	July (mm)	August (mm)	September (mm)	October (mm)	*POR (mm)
2005			5.5	6.6	3.0		15.1
2006		10.5	6.7	3.9	4.3		25.5
2007	11.9	15.9	2.0	0.2	0.0		29.9
2008	2.0	5.2	1.9	0.8	1.3		11.3
2009		19.3	16.2	1.6	3.6	2.3	42.9
2010	1.0	3.0	4.9	11.5	3.4		23.9

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data

Data is for the combined Round-Winter Lake basin.

Table 2.7: Round Lake Outlet - Hydrometric Data - Periods of Record

Year	Days of Recorded Data for Each Month						Period of Record for Year		
	May	June	July	August	September	October	Length	Start Date	End Date
	(days)	(days)	(days)	(days)	(days)	(days)	(days)		
2005			14	31	11		56	Jul 18/05 09:32	Sep 12/05 09:32
2006		21	31	31	30	3	116	Jun 09/06 16:29	Oct 03/06 14:44
2007	13	30	3				46	May 19/07 10:04	Jul 04/07 09:04
2008	9	26	0	31	25		93	May 22/08 14:30	Sep 26/08 07:42
2009		26	31	31	30	8	125	Jun 05/08 10:15	Oct 08/08 14:00
2010	4	30	31	31	16		113	May 27/10 13:18	Sep 17/10 13:46

Note: Shaded areas indicate incomplete months of data.

Table 2.8: Round Lake Outlet - Mean Monthly Discharges

Year	May	June	July	August	September	October	*POR
	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)
2005			7.0	2.5	3.0		3.7
2006		8.1	3.5	1.7	5.3	20.1	4.7
2007	9.5	6.0	0.2				6.6
2008	6.6	5.1	0.3	0.2	4.5		3.4
2009		15.6	9.5	2.7	4.3	8.4	7.7
2010	18.5	5.7	3.4	6.1	5.3		5.6

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data.

Table 2.9: Round Lake Basin - Runoff Estimates

Year	May	June	July	August	September	October	*POR
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
2005			6.9	5.5	2.5		14.8
2006		12.5	7.9	3.8	11.5	3.9	39.6
2007	8.6	13.0	0.0				21.7
2008	4.5	9.7	0.0	0.3	8.2		22.7
2009		28.7	21.2	6.0	9.4	4.6	67.4
2010	5.9	12.3	7.6	13.7	6.3		45.7

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data.

Table 2.10: Nicholas Lake Outlet - Summary of Discharge Measurements

Site#6 - Nicholas Lake Outlet			
Date/time	Staff Gauge Reading	Discharge	Comments
MDST	m	l/s	
2004			
May 19/04 16:00	Not installed	0.0	Ice filled creek bed
May 31/04 15:53	0.470	22.4	
May 31/04 16:39	0.470	21.0	
Jun 01/04 14:04	0.478	26.4	
Jun 01/04 14:26	0.478	22.0	
Jun 02/04 13:34	0.487	25.5	
Jun 02/04 13:57	0.487	30.3	
Sep 30/04 14:26	0.229	10.5	
Sep 30/04 14:52	0.228	10.4	
Oct 01/04 08:52	0.231	11.3	
Oct 01/04 09:02	0.231	11.2	
2005			
May 23/05 08:10	n/a	0.0	Ice filled creek bed
Aug 06/05 09:06	0.390	13.6	
Aug 06/05 09:28	0.390	14.8	
2007			
Jun 10/07 17:12	0.480	19.9	
Jun 10/07 17:32	0.480	22.8	
Jun 11/07 8:29	0.500	21.7	
Jun 11/07 8:39	0.500	24.7	
2008			
Jun 04/08 13:51	0.497	14.4	
Jun 04/08 14:04	0.497	13.0	
Jun 04/08 14:39	0.497	13.8	
Jun 04/08 14:50	0.497	14.5	
Aug 02/08 09:34	0.310	7.6	
Aug 02/08 09:53	0.310	7.3	
2009			
Jun 06/09 14:47	0.712	61.3	
Jun 06/09 15:16	0.712	60.5	
Aug 24/09 14:09	0.426	12.2	
Aug 24/09 14:32	0.426	12.6	
2010			
Jun 04/10 08:54	0.451	13.6	
Jun 04/10 09:32	0.452	15.2	

Table 2.11: Nicholas Lake Outlet - Hydrometric Data - Periods of Record

Year	Days of Recorded Data for Each Month						Period of Record for Year		
	May	June	July	August	September	October	Length	Start Date	End Date
	(days)	(days)	(days)	(days)	(days)	(days)	(days)		
2005			19	31	12		62	Jul 13/05 10:17	Sep 13/05 16:17
2006									
2007		20	31	31	29		112	Jun 10/07 15:51	Sep 30/07 09:06
2008	6	30	31	31	23		121	May 26/08 12:51	Sep 26/08 11:51
2009		24	31	31	30	9	125	Jun 06/09 13:03	Oct 09/09 12:33
2010	4	30	31	31	15		111	May 28/10 09:54	Sep 16/10 10:39

Note: Shaded areas indicate incomplete months of data which occur at the start and end of the POR

No hydrometric data was collected at this site during 2006

Table 2.12: Nicholas Lake Outlet - Mean Monthly Discharges

Year	May (L/s)	June (L/s)	July (L/s)	August (L/s)	September (L/s)	October (L/s)	*POR (L/s)
2005			18.2	14.2	13.7		15.30
2006							
2007		19.2	11.7	9.3	7.8		11.40
2008	15.2	12.5	9.9	8.3	8.2		10.05
2009		49.6	35.0	15.2	12.8	13.2	26.20
2010	17.0	12.9	10.3	9.2	7.8		10.6

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data which occur at the start and end of the POR

No hydrometric data was collected at this site during 2006

Table 2.13: Nicholas Lake Outlet - Mean Water Temperatures

Year	May (°C)	June (°C)	July (°C)	August (°C)	September (°C)	October (°C)	*POR (°C)
2005			16.7	14.4	11.5		14.5
2006							
2007		15.6	18.9	14.9	7.7		14.3
2008	7.4	13.6	18.5	17.4	9.0		14.6
2009		10.9	17.1	15.9	12.9	13.2	26.2
2010	14.3	16.3	19.1	17.2	12.9		15.0

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data which occur at the start and end of the POR

No hydrometric data was collected at this site during 2006

Table 2.14: Nicholas Lake Basin - Runoff Estimates

Year	May (mm)	June (mm)	July (mm)	August (mm)	September (mm)	October (mm)	*POR (mm)
2005			4.7	6.0	2.4		13.1
2006							
2007		5.4	5.0	4.0	3.1		17.5
2008	1.1	5.2	4.2	3.5	2.6		16.7
2009		16.7	14.9	6.5	5.3	1.5	45.0
2010	0.8	5.3	4.4	3.9	1.7		16.2

* POR Refers to period of recorded data for each year.

Note: Shaded areas indicate incomplete months of data which occur at the start and end of the POR

No hydrometric data was collected at this site during 2006

Table 3.1: Summary of Tyhee Station Monthly Average Meteorological Observations

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Wind													
† Average Wind Speed (m/s)	2.20	2.53	2.84	3.25	3.34	3.26	3.02	3.25	3.18	3.44	2.94	2.15	2.97
Average Daily Maximum Wind Gust (m/s)	6.29	6.56	7.34	8.22	8.45	9.17	9.24	9.24	8.35	8.77	7.57	5.74	7.91
Extreme Wind Gust (m/s)	15.29	15.19	13.86	17.7	18.78	17.48	20.62	16.03	17.8	18.56	17.15	13.52	20.62
Air Temperature													
Extreme Daily Maximum Temperature (°C)	0.2	0.4	7.0	16.7	27.0	30.1	30.1	31.3	24.7	15.8	5.3	-2.7	31.3
Average Daily Maximum (°C)	-21.1	-18.2	-10.8	1.3	8.8	18.0	21.0	17.7	9.4	0.7	-10.6	-18.7	-0.2
Average Daily Mean (°C)	-24.7	-22.5	-16.8	-4.5	3.5	12.9	16.2	13.3	6.1	-2.0	-13.7	-22.2	-4.5
Average Daily Minimum (°C)	-28.8	-26.7	-22.6	-10.2	-2.0	7.7	11.7	9.3	3.2	-4.5	-17.4	-25.9	-8.8
Extreme Daily Minimum Temperature (°C)	-45.1	-44.5	-40.5	-34.4	-13.7	-1.1	2.7	2.1	-7.2	-16.8	-38.3	-42.5	-45.1
Relative Humidity													
Average Daily Maximum (%)	83.6	84.3	84.3	87.0	85.0	80.6	85.7	89.5	93.0	94.8	92.0	85.7	94.8
Average Daily Mean (%)	79.1	78.0	70.5	68.2	61.8	55.5	61.6	68.8	78.5	85.3	87.4	81.5	73.0
Average Daily Minimum (%)	73.7	69.1	52.7	47.5	39.5	34.1	37.9	45.9	59.3	72.1	81.3	76.9	34.1
Barometric Pressure													
Average Daily Maximum (hPa)	1015.5	1020	1018.4	1017.3	1018.7	1013.6	1012	1013	1014.6	1012.9	1014.1	1017.9	1020
Average Daily Mean (hPa)	1013.3	1016.2	1014.4	1014.1	1015.6	1011.4	1009.9	1010.4	1011.3	1008.5	1010	1013.7	1012
Average Daily Minimum (hPa)	1008.9	1012.3	1010.4	1010.9	1012.6	1009	1007.7	1007.8	1007.6	1004	1005.6	1009.2	1004
Incident Solar Radiation													
Average Daily Total (W/m ²)	7	40	116	199	256	262	221	167	86	38	11	4	117
Average Daily Maximum (W/m ²)	53	224	483	693	837	912	927	745	508	270	92	38	482
Extreme Daily Maximum (W/m ²)	247	523	786	1187	1204	1281	1213	1093	924	650	309	165	1281
† Percentage Received of Theoretical	29%	54%	67%	65%	61%	55%	51%	48%	39%	36%	33%	35%	48%
Precipitation Totals													
Average Monthly Total (mm)	14.3	15.9	8.0	12.6	11.2	25.4	42.8	46.0	35.2	17.2	19.2	8.4	256.2
Average Daily Total (mm)	0.38	0.47	0.21	0.42	0.36	0.85	1.38	1.48	1.36	0.56	0.64	0.27	0.70
Extreme Daily Maximum (mm)	11.2	15.5	3.3	10.4	15.0	29.5	21.1	17.0	34.5	7.9	17.0	6.6	34.5
† Intensity - Extreme 15-Minute (mm)	3.05	15.49	3.30	3.56	1.52	3.56	6.86	10.67	3.56	3.30	5.33	2.03	15.49

Averages based on 24-hour summary data between September 29, 2004 and December 31, 2010

† Average wind speed, extreme maximum gust, extreme 15-minute precipitation calculated using 15-minute data

† Percent of theoretical maximum solar radiation is the percentage of the average monthly total recorded by the station of the total theoretical monthly solar input based on latitude excluding affects of attenuation by the atmosphere and is a indicator of average monthly cloud cover

Table 3.2: Yellowknife Gold Project Daily Precipitation for 2004

Date	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	May (mm)	Jun (mm)	Jul (mm)	Aug (mm)	Sep (mm)	Oct (mm)	Nov (mm)	Dec (mm)
1										0.76	0.25	-
2										1.52	4.32	-
3										1.27	0.76	-
4										-	3.30	-
5										-	-	-
6										3.56	-	-
7										1.02	0.25	-
8										1.02	-	-
9										2.79	0.25	-
10										1.02	-	-
11										-	0.51	-
12										-	0.51	-
13										1.27	0.25	0.76
14										-	1.27	4.32
15										-	4.32	0.76
16										-	-	0.76
17										-	-	-
18										-	-	0.25
19										-	0.25	2.29
20										-	0.25	-
21										0.25	-	-
22										0.25	-	-
23										1.78	-	1.78
24										2.03	0.25	2.29
25										-	-	0.51
26										-	-	-
27										5.33	-	0.25
28										1.27	-	-
29									4.32	-	-	-
30									1.02	1.27	-	-
31										0.25		-
Total									5.33	26.67	16.76	13.97

Total water equivalent precipitation measured over the period from
September 29, 2004 to December 31, 2004 was **62.74** mm

 indicates days with no precipitation data

Table 3.3: Yellowknife Gold Project Daily Precipitation for 2005

Date	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	May (mm)	Jun (mm)	Jul (mm)	Aug (mm)	Sep (mm)	Oct (mm)	Nov (mm)	Dec (mm)
1	0.25	0.25	-	0.25	-	0.76	-	-	2.79	0.51	0.25	-
2	0.25	1.52	0.25	-	-	0.51	-	1.52	1.27	-	-	-
3	-	-	-	1.27	-	-	1.02	1.78	2.79	-	0.51	-
4	1.02	-	-	-	-	-	-	0.25	0.76	1.02	-	-
5	11.18	0.25	2.79	1.52	-	-	-	-	1.02	-	-	-
6	-	0.51	-	0.51	-	-	-	0.51	-	-	3.81	-
7	-	2.79	1.78	-	-	1.02	4.32	-	-	-	0.25	-
8	-	-	1.02	-	-	-	1.02	-	-	-	3.05	-
9	-	4.06	0.51	2.29	-	-	1.52	0.51	-	-	0.76	2.03
10	-	0.25	-	2.54	-	0.25	-	0.51	-	3.81	1.02	-
11	-	1.52	-	-	-	0.508	0.76	0.51	7.62	0.25	-	-
12	-	0.25	-	-	-	0.51	0.25	0.25	0.25	0.51	-	-
13	-	0.25	0.51	-	-	-	-	-	0.76	-	0.51	0.25
14	-	-	0.51	2.03	-	11.94	-	0.51	-	-	4.32	-
15	-	1.02	-	-	-	3.81	-	1.27	-	-	-	-
16	-	-	-	-	-	-	21.08	-	9.65	3.30	-	0.25
17	-	-	1.02	-	-	0.51	2.03	0.51	0.25	2.29	-	0.76
18	-	1.27	-	-	-	1.27	-	-	-	-	-	1.52
19	1.02	1.27	0.25	0.76	0.51	0.51	-	-	0.25	0.76	0.76	-
20	1.02	0.25	-	0.25	1.02	2.03	-	-	-	1.52	0.76	-
21	-	0.25	-	0.51	-	0.51	-	11.68	1.02	-	-	0.76
22	0.25	0.25	-	1.02	0.25	-	-	-	9.14	0.76	7.62	1.02
23	0.25	0.51	-	0.51	-	0.51	-	-	-	1.02	-	0.51
24	0.25	2.79	1.78	1.52	-	-	-	0.25	0.51	-	-	0.51
25	0.76	-	-	-	0.76	-	-	0.25	6.86	-	-	0.76
26	3.56	0.25	-	-	-	-	-	0.25	0.25	-	-	0.51
27	1.78	-	-	-	0.25	0.25	0.76	-	-	-	-	-
28	-	1.78	-	-	0.76	-	2.29	12.95	1.52	-	-	-
29	-		-	-	1.27	0.51	-	8.38	2.79	-	-	-
30	-		-	-	0.25	-	13.21	0.51	-	-	-	0.76
31	5.84		-		1.27		2.79	-		-		-
Total	27.44	21.34	10.41	14.99	6.35	25.40	51.05	42.41	49.53	15.75	23.62	9.65

Total water equivalent precipitation measured over the period from
January 1, 2005 to December 31, 2005 was **297.94** mm

Table 3.4: Yellowknife Gold Project Daily Precipitation for 2006

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Date	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1	1.02	1.02	-	0.76	-	1.02	1.78	-	0.25	-	-	-
2	0.51	1.02	-	-	-	-	1.02	-	1.27	0.51	-	-
3	-	4.57	-	0.51	-	-	1.52	0.51	0.76	-	-	-
4	-	-	-	-	-	4.06	-	-	-	-	0.76	0.25
5	-	-	-	-	-	-	1.27	-	-	-	0.25	-
6	-	-	-	-	-	0.76	-	-	2.29	-	-	-
7	-	-	-	0.76	0.25	0.76	-	1.27	-	-	-	2.29
8	-	1.78	-	-	-	1.27	-	1.02	-	0.51	10.67	-
9	-	1.27	-	2.03	3.05	1.52	-	0.76	0.76	-	0.25	-
10	-	1.02	-	-	1.02	1.27	-	0.76	-	-	-	0.25
11	-	-	-	0.25	0.76	0.51	-	1.27	-	-	-	-
12	-	-	-	0.51	-	-	9.91	0.51	-	-	-	-
13	-	-	-	0.76	-	0.25	3.05	2.79	-	-	-	-
14	-	-	-	-	-	1.02	1.02	15.49	-	-	-	-
15	-	-	-	10.41	-	-	1.02	0.25	-	-	-	-
16	-	-	-	-	-	-	1.52	1.02	-	-	2.54	-
17	-	-	-	-	-	-	-	-	-	-	17.02	-
18	-	-	-	-	-	-	-	17.02	-	-	-	-
19	-	-	-	0.25	-	-	-	3.81	-	-	0.25	-
20	-	-	-	-	-	-	1.02	0.25	-	-	-	-
21	-	-	-	-	4.83	-	0.51	-	-	-	-	0.51
22	0.51	-	-	-	4.32	-	-	0.51	-	-	-	-
23	-	-	-	-	0.76	-	-	15.49	0.76	-	-	-
24	-	-	-	0.76	1.02	-	2.03	7.37	0.51	0.51	-	-
25	0.76	-	-	-	-	-	1.27	1.02	-	3.56	-	0.25
26	1.52	-	-	-	2.29	-	0.51	-	-	0.51	-	-
27	-	-	-	-	2.29	0.25	-	-	0.25	0.76	-	-
28	0.25	-	0.51	-	-	-	-	2.54	1.52	-	-	-
29	0.76		2.79	-	1.02	-	-	-	2.03	-	-	-
30	0.25		-	-	1.27	29.46	0.51	-	0.76	3.30	-	-
31	0.51		1.52		0.51		-	0.76		-		-
Total	6.10	10.67	4.83	17.01	23.37	42.16	27.94	74.42	11.18	9.65	31.75	3.56

Total water equivalent precipitation measured over the period from
January 1, 2006 to December 31, 2006 was **262.63** mm

Table 3.5: Yellowknife Gold Project Daily Precipitation for 2007

Date	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	May (mm)	Jun (mm)	Jul (mm)	Aug (mm)	Sep (mm)	Oct (mm)	Nov (mm)	Dec (mm)
1	-	-	1.00	-	-	-	0.25	1.27	-	-	-	-
2	-	-	0.60	-	-	-	-	0.76	0.25	2.03	-	-
3	-	-	0.60	-	-	-	-	0.25	0.25	-	0.25	-
4	0.20	-	-	-	-	-	-	-	-	-	-	-
5	0.20	-	-	-	-	-	-	-	-	3.81	-	-
6	5.20	-	-	-	-	-	-	-	-	1.78	-	-
7	-	-	1.80	-	0.25	-	-	-	-	-	-	-
8	-	-	0.20	0.25	-	-	-	-	-	3.56	-	-
9	-	-	1.60	0.25	0.25	-	-	0.25	-	0.51	-	-
10	0.20	-	1.40	-	-	-	-	-	0.25	1.02	-	-
11	-	-	-	-	1.02	0.51	-	1.52	-	1.02	1.02	-
12	0.20	0.20	1.80	-	3.30	0.76	2.54	1.78	-	-	1.02	-
13	-	-	-	3.56	0.25	-	-	-	-	-	0.25	-
14	-	0.40	0.40	-	0.51	-	0.25	0.51	-	0.25	0.51	0.51
15	1.20	-	-	-	-	-	-	-	-	-	0.25	0.25
16	1.20	-	-	-	1.27	0.25	-	0.25	-	-	-	6.60
17	-	-	-	-	-	-	-	0.51	-	-	3.05	-
18	-	0.60	-	-	-	-	-	0.51	-	-	-	4.06
19	-	1.40	-	-	1.02	-	-	-	-	-	0.51	-
20	0.20	4.00	-	0.25	-	-	-	13.97	-	-	1.27	-
21	-	-	0.80	-	-	-	0.25	3.56	0.51	1.78	1.27	-
22	-	-	-	-	-	-	2.54	0.51	-	0.25	-	-
23	-	1.00	-	-	0.76	1.27	1.02	-	-	-	-	-
24	1.80	1.00	0.25	-	0.51	-	0.25	0.51	2.03	-	-	-
25	9.40	-	-	-	0.51	-	0.25	-	0.51	0.25	-	-
26	-	1.20	-	-	0.25	-	0.51	-	0.76	0.25	-	-
27	-	0.40	0.25	-	-	-	6.86	-	0.51	2.54	-	-
28	-	0.40	1.02	1.02	-	-	2.29	-	-	-	-	-
29	1.80	-	-	2.54	-	-	0.51	0.25	2.03	-	-	-
30	-	-	-	0.76	-	-	-	-	-	1.27	-	-
31	-	-	-	-	-	-	12.95	-	-	2.03	-	-
Total	21.60	10.60	11.72	8.64	9.91	2.79	30.48	26.42	7.11	22.35	9.40	11.43
			* 1.52									

- 1) Total water equivalent precipitation measured over the period from January 1, 2007 to December 31, 2007 was **172.44** mm
- 2) The all weather precipitation gauge was unserviceable for period of January 1 to March 22, 2007. No site precipitation data was recorded during this period.
- 3) Daily precipitation totals for this period are provided by Environment Canada as recorded at the Yellowknife Airport. This data is indicated by the lightly shaded cells.

Table 3.6: Yellowknife Gold Project Daily Precipitation for 2008

Date	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	May (mm)	Jun (mm)	Jul (mm)	Aug (mm)	Sep (mm)	Oct (mm)	Nov (mm)	Dec (mm)
1	-	-	-	0.51	-	7.87	2.03	5.59	1.02	-	6.86	-
2	1.52	-	-	-	-	1.27	0.25	5.84	0.51	-	-	-
3	-	-	-	-	-	-	10.41	1.27	3.05	0.25	-	-
4	0.25	-	-	-	-	-	1.78	1.02	1.02	0.51	0.25	-
5	1.52	0.76	-	-	-	0.25	-	0.51	-	0.25	-	-
6	1.27	0.76	-	-	-	0.76	-	0.51	0.51	7.87	0.76	-
7	-	15.49	1.02	-	-	-	-	0.51	1.27	-	1.27	-
8	-	-	0.51	1.02	-	0.25	-	0.25	0.25	1.02	-	-
9	-	-	-	-	-	-	0.25	0.51	-	-	0.25	-
10	-	-	0.51	1.27	-	-	0.25	-	1.27	-	1.78	-
11	-	-	-	-	-	0.25	3.56	5.33	1.52	0.51	-	-
12	-	-	-	0.76	-	5.33	2.54	-	1.02	-	1.02	-
13	3.81	-	-	-	-	0.25	0.76	14.22	2.03	-	-	-
14	-	-	-	-	-	-	0.25	13.97	0.25	-	0.25	-
15	-	-	-	-	-	0.25	2.54	0.25	3.56	-	1.02	-
16	-	-	-	1.02	0.25	1.27	-	-	0.51	-	0.76	4.57
17	-	-	-	1.78	-	0.76	-	-	2.79	-	-	-
18	-	-	-	-	-	1.27	-	-	1.78	-	-	-
19	-	-	-	-	-	0.76	0.25	-	0.25	-	-	-
20	-	-	-	-	-	-	1.02	-	0.51	-	-	-
21	0.76	-	-	1.02	-	0.25	1.02	-	1.02	-	-	-
22	0.51	-	1.78	-	-	-	1.52	-	13.21	-	2.03	-
23	0.76	-	0.25	-	0.51	-	0.25	-	34.54	-	-	-
24	0.25	-	0.25	-	0.51	-	-	2.79	6.86	-	1.52	-
25	-	-	0.51	-	-	0.25	0.25	2.29	6.60	-	-	-
26	-	-	-	0.76	1.02	-	-	1.02	0.51	0.25	1.78	-
27	-	-	-	-	-	1.02	0.25	-	0.25	-	-	-
28	-	-	-	-	-	0.51	-	-	0.76	-	-	-
29	-	-	-	2.54	-	1.02	-	-	0.51	-	-	-
30	-		-	-	-	-	-	5.33	-	2.29	-	-
31	-		-		-		-	3.81		-		-
Total	10.67	17.01	4.83	10.67	2.29	23.62	29.21	65.02	87.37	12.95	19.56	4.57

Total water equivalent precipitation measured over the period from
January 1, 2008 to December 31, 2008 was **287.76 mm**

Table 3.7: Yellowknife Gold Project Daily Precipitation for 2009

Date	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	May (mm)	Jun (mm)	Jul (mm)	Aug (mm)	Sep (mm)	Oct (mm)	Nov (mm)	Dec (mm)
1	-	-	-	-	-	0.51	2.54	-	-	0.51	-	-
2	-	-	-	-	0.76	-	5.59	-	0.25	-	-	-
3	-	2.79	2.54	-	-	-	1.78	-	-	-	-	-
4	-	14.22	0.51	-	-	-	2.54	-	-	-	-	0.76
5	-	-	1.27	0.25	-	-	0.25	-	-	1.52	0.25	-
6	1.52	-	-	-	-	-	8.64	0.25	-	-	5.59	-
7	3.30	-	-	-	-	0.25	2.54	-	26.92	-	1.27	-
8	-	-	-	-	-	0.51	-	-	6.86	-	0.76	-
9	-	-	-	-	-	1.78	0.25	0.51	-	-	-	-
10	-	-	0.25	-	-	-	1.27	-	2.54	-	-	-
11	-	-	1.02	-	-	-	0.51	-	2.29	-	2.79	-
12	-	-	-	1.02	-	-	0.51	-	0.76	-	1.02	-
13	-	-	-	9.14	1.52	-	0.51	-	-	-	3.05	-
14	-	-	-	1.78	1.78	3.81	-	-	0.51	-	-	-
15	-	-	-	0.51	1.52	1.52	0.51	-	-	-	1.27	-
16	-	-	-	0.76	-	-	-	0.25	-	-	-	-
17	-	-	-	0.76	-	0.25	-	11.18	-	0.25	-	-
18	-	-	0.25	-	1.02	-	1.52	-	0.76	-	-	-
19	6.10	-	-	-	-	-	0.51	-	0.25	-	-	2.03
20	-	-	1.02	1.78	-	-	0.25	-	0.25	-	-	0.51
21	-	-	-	0.25	-	-	2.03	0.76	4.57	-	3.56	-
22	-	-	2.03	0.25	-	0.76	-	-	2.54	3.30	-	-
23	-	-	0.51	-	0.25	17.53	-	9.40	1.02	4.06	-	-
24	-	-	0.76	1.02	-	8.64	2.29	0.25	6.86	0.25	1.02	-
25	-	-	0.76	-	-	0.25	-	-	0.51	2.03	1.02	-
26	-	-	0.51	-	-	0.76	-	6.35	4.32	0.51	0.51	1.27
27	-	-	1.52	0.25	-	0.51	0.25	1.27	0.51	-	1.27	-
28	-	-	-	-	-	-	-	0.25	-	-	-	-
29	-	-	-	-	-	1.02	-	1.52	7.11	-	0.25	-
30	-		1.02	0.76	-	0.25	0.25	-	1.02	-	-	-
31	-		1.02		-		-	-		-		-
Total	10.92	17.01	14.99	18.54	6.86	38.36	34.55	32.01	69.84	12.45	23.62	4.57

Total water equivalent precipitation measured over the period from
January 1, 2009 to December 31, 2009 was **283.7** mm

Table 3.8: Yellowknife Gold Project Daily Precipitation for 2010

Date	Jan (mm)	Feb (mm)	Mar (mm)	Apr (mm)	May (mm)	Jun (mm)	Jul (mm)	Aug (mm)	Sep (mm)	Oct (mm)	Nov (mm)	Dec (mm)
1	-	-	-	-	-	-	0.25	2.79	-	0.51	1.27	2.54
2	-	-	-	0.51	-	-	1.02	-	0.25	-	0.51	-
3	-	13.46	-	1.52	-	-	-	0.25	-	-	-	-
4	-	-	-	0.51	-	-	-	-	1.52	-	-	-
5	-	-	-	0.25	0.25	-	-	0.25	-	6.86	1.27	-
6	-	-	-	0.51	-	-	0.25	0.25	0.25	1.02	-	-
7	-	-	-	-	-	-	0.76	-	0.51	-	-	-
8	3.05	-	-	-	-	-	0.76	3.81	2.29	1.27	-	0.25
9	0.51	-	-	-	-	-	-	5.59	-	0.51	2.54	-
10	-	-	-	-	-	-	1.78	0.51	-	1.02	0.25	-
11	3.81	-	-	-	-	-	-	10.92	-	0.51	0.51	-
12	2.79	-	-	-	-	-	0.51	1.52	-	0.51	-	-
13	0.76	-	-	0.25	-	-	-	0.76	0.25	-	0.25	1.78
14	0.25	-	-	-	-	0.25	-	0.51	-	3.30	0.76	0.25
15	1.52	-	-	0.51	-	-	-	-	-	0.51	0.25	3.81
16	1.52	-	-	-	-	-	0.25	-	-	0.25	-	-
17	0.76	-	-	-	14.99	0.51	16.00	0.25	0.76	-	-	1.78
18	0.76	-	-	-	-	-	1.78	-	-	1.02	-	0.25
19	-	-	-	-	0.25	1.02	3.81	-	-	2.03	0.25	-
20	2.29	-	-	-	-	2.29	1.02	-	0.51	-	-	-
21	0.51	-	-	-	-	-	14.73	-	1.52	0.51	-	-
22	0.25	-	-	-	0.25	0.51	1.27	-	0.25	-	0.25	-
23	-	-	-	-	-	-	0.25	3.81	0.25	-	-	-
24	-	-	-	-	0.25	0.76	6.10	1.78	2.29	0.25	-	-
25	-	-	-	-	1.02	3.81	3.30	1.02	5.33	-	-	0.51
26	0.25	-	-	-	0.25	0.25	0.51	0.76	-	-	-	-
27	-	-	-	-	0.25	-	16.76	0.25	1.27	0.25	-	-
28	-	-	-	0.76	-	0.51	0.76	0.25	1.52	-	-	-
29	-		-	0.51	0.51	9.40	2.03	0.25	0.76	0.25	-	-
30	-		-	0.25	-	1.02	2.54	0.25	0.76	-	1.78	-
31	-		-		0.25		6.86	-		0.25		-
Total	19.05	13.46	-	5.59	18.29	20.32	83.30	35.81	20.32	20.83	9.91	11.18

Total water equivalent precipitation measured over the period from
January 1, 2010 to December 31, 2010 was **258.1** mm

Table 3.9: Tyhee Station Pan Evaporation - Period of Record

Year	Days of Recorded Data for Each Month				*Period of Record for Year		
	June	July	August	September	Length	Start Date	End Date
	(days)	(days)	(days)	(days)	(days)		
2005	30	31	31	13	105	Jun 01/05	Sep 13/05
2006	22	31	31	21	102	Jun 09/06	Sep 21/06
2007	29	31	31	15	105	Jun 02/07	Sep 15/07
2008	30	31	31	16	107	Jun 01/08	Sep 16/08
2009	26	31	31	28	115	Jun 05/09	Sep 28/09
2010	30	31	31	16	108	Jun 01/10	Sep 16/10

Shaded areas indicate incomplete months of data which occur at the start and end of the POR

Table 3.10: Monthly Pan Evaporation Rates

Year	June	July	August	September	*POR
	(mm/day)	(mm/day)	(mm/day)	(mm/day)	(mm/day)
2005	4.5	3.5	3.6	1.6	3.80
2006	7.3	5.1	3.6	2.1	4.40
2007	6.0	5.2	2.7	1.7	4.10
2008	4.6	5.3	2.9	0.9	3.80
2009	3.6	5.8	5.0	1.6	4.10
2010	5.9	3.5	3.5	1.9	3.92

* POR Refers to period of recorded data for each year.

Shaded areas indicate incomplete months of data which occur at the start and end of the POR

Table 3.11: Monthly Pan Evaporation Totals

Year	June	July	August	September	*POR
	(mm)	(mm)	(mm)	(mm)	(mm)
2005	136.4	91.2	96.0	19.1	377.5
2006	138.4	156.7	112.6	43.2	450.9
2007	157.4	160.9	82.8	22.3	423.5
2008	137.9	164.9	90.7	12.9	406.6
2009	97.0	180.5	150.9	43.7	472.1
2010	175.0	108.0	108.8	31.0	422.7

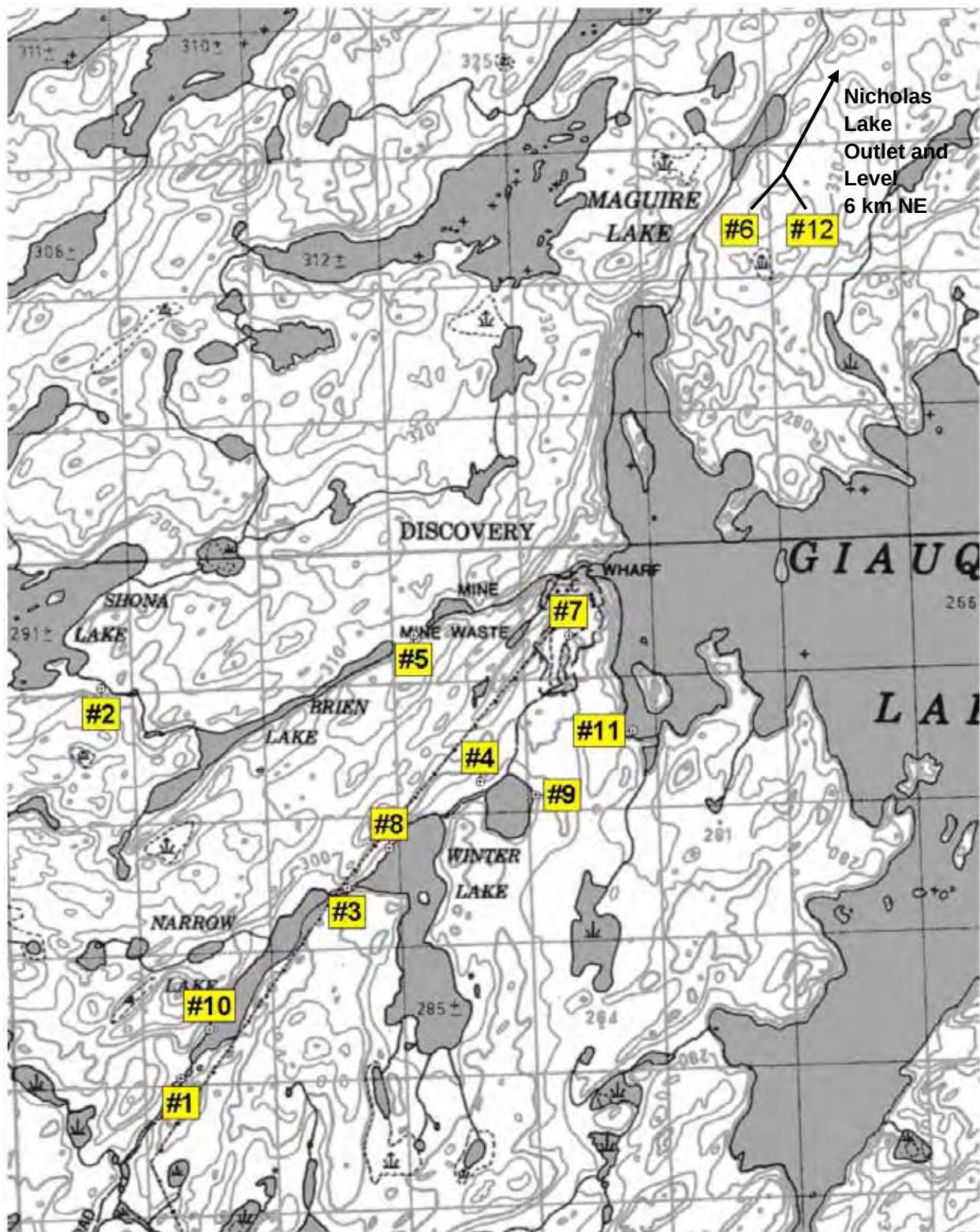
* POR Refers to period of recorded data for each year.

Shaded areas indicate incomplete months of data which occur at the start and end of the POR

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NOTES:

Hydrometric Stations

#1 - Narrow Lake Outlet
 #2 - Brien Lake Outlet
 #3 - Winter Lake Outlet
 #4 - Round Lake Outlet
 #5 - Northeast Brien Lake
 #6 - Nicholas Lake Outlet
 #7 - Meteorological Station

Lake Level Stations

#8 - Winter Lake Level
 #9 - Round Lake Level
 #10 - Narrow Lake Level
 #11 - Giauque Lake Level
 #12 - Nicholas Lake Level

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Hydrometeorological Site Location map

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DATE

January 2011

CKD

TM

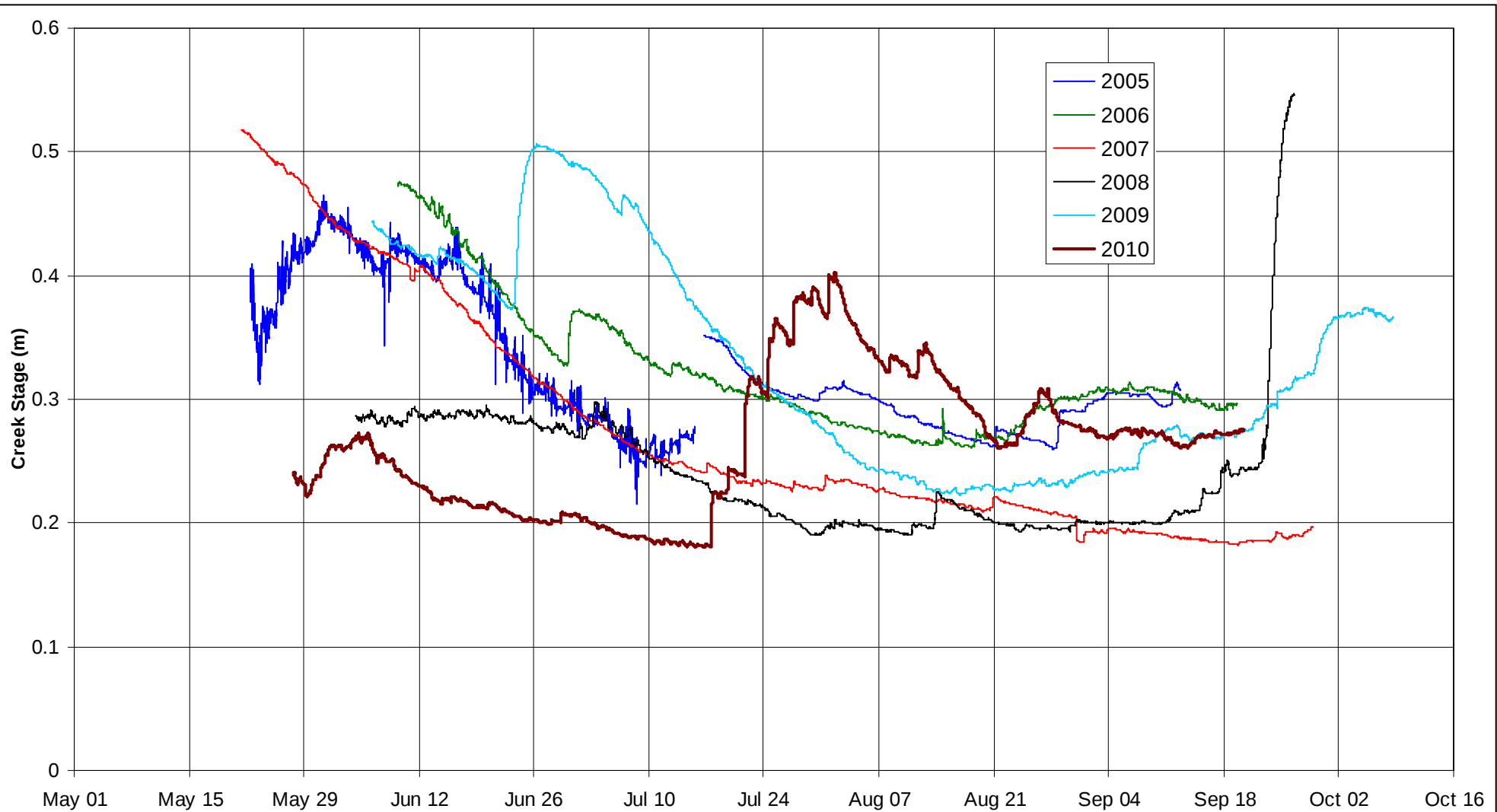
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Figure 1.1



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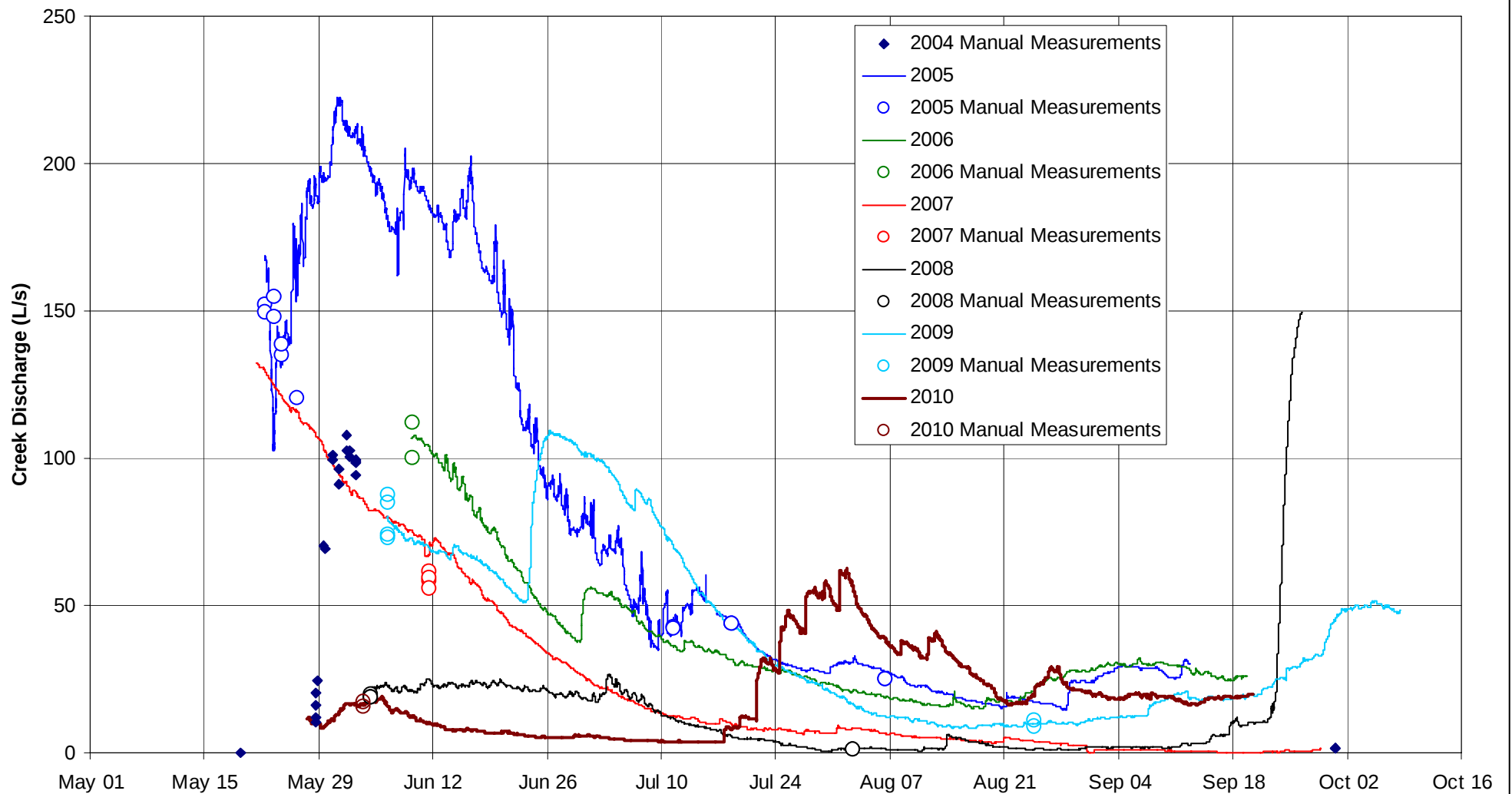
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Narrow Lake Outlet Stage
Hydrographs 2005 to 2010

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Figure 2.1

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Narrow Lake Outlet Discharge Hydrographs 2004 to 2010

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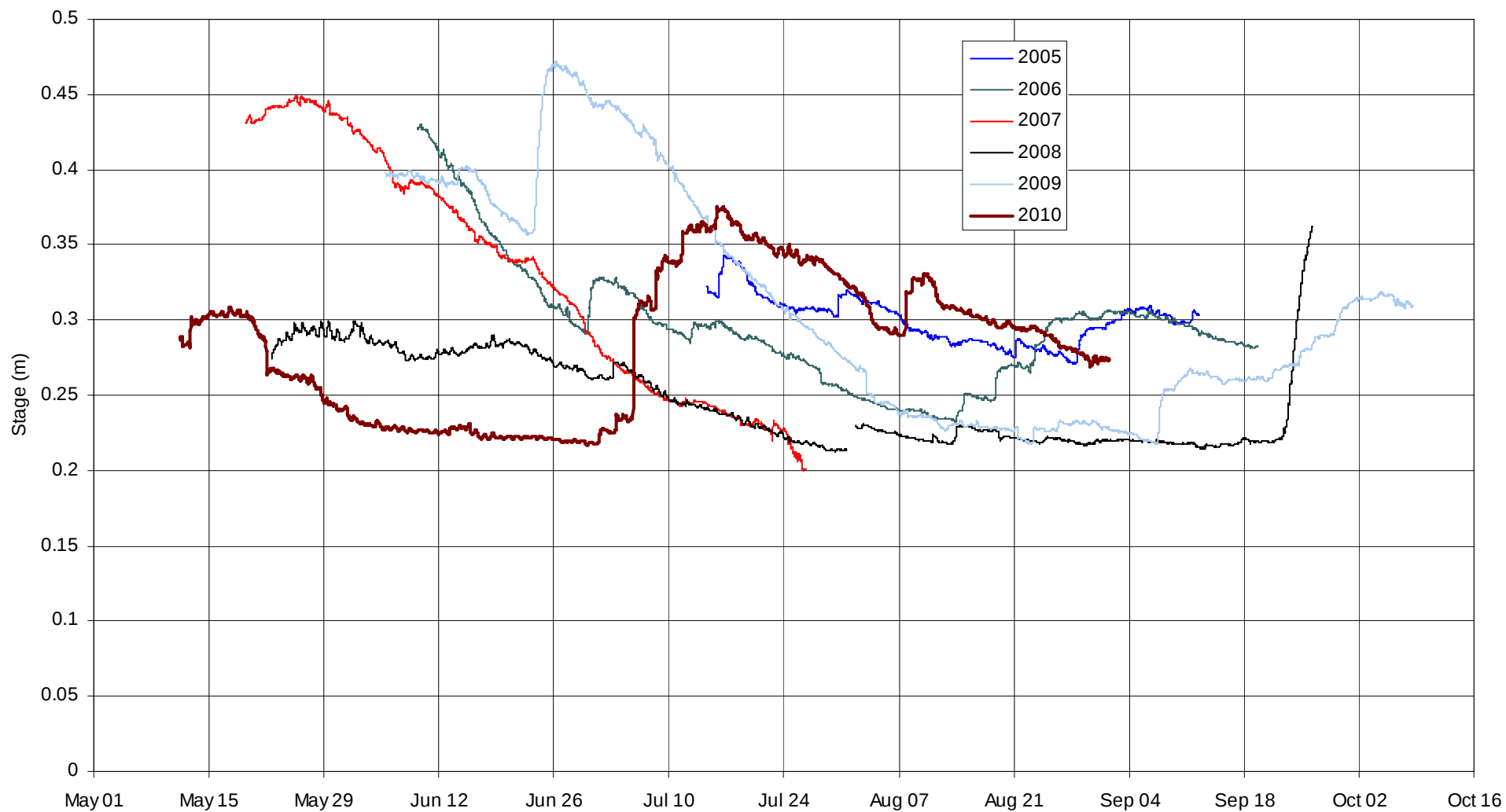
RED JAS JAS 0

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Figure 2.2

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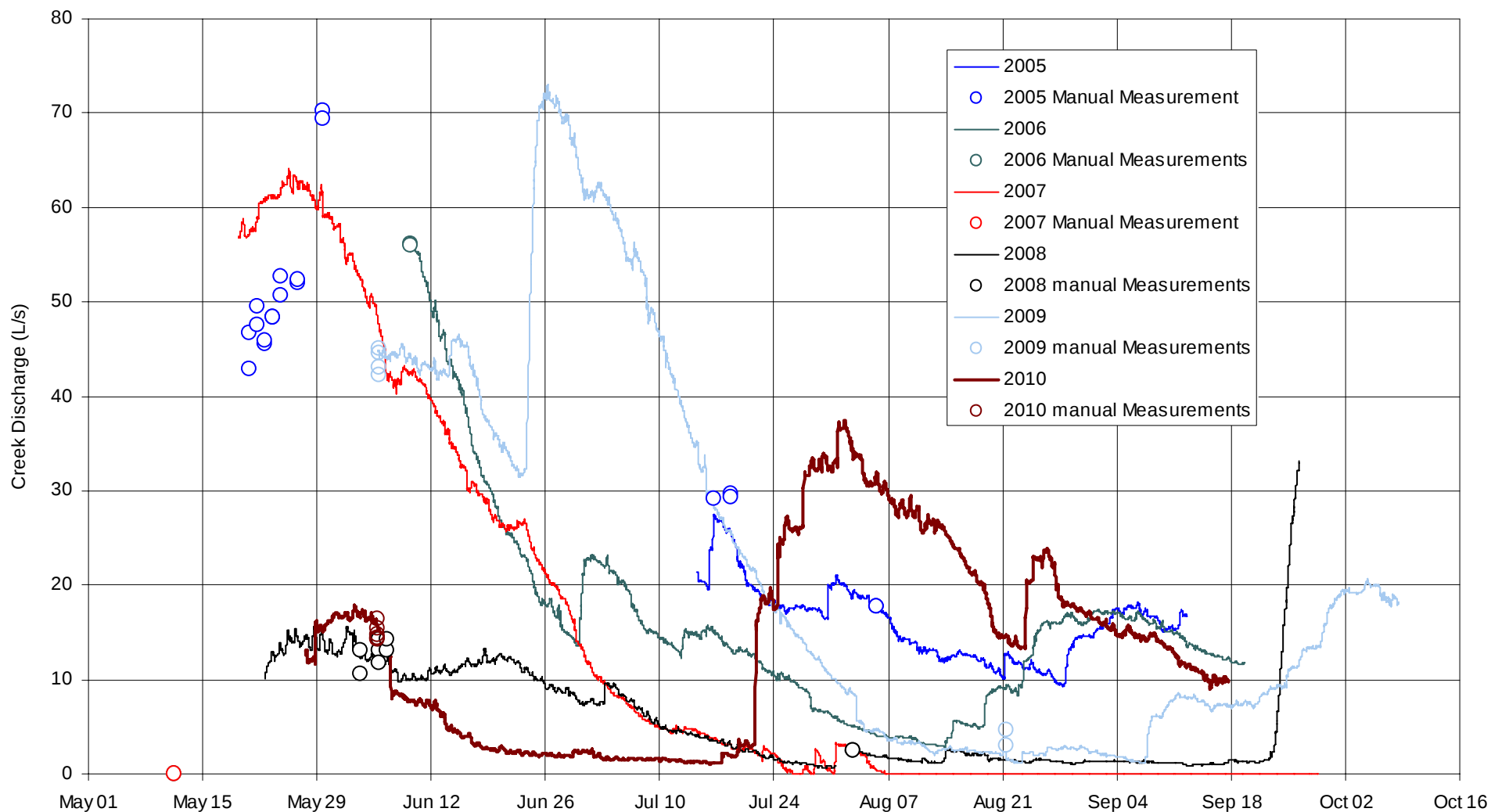


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Winter Lake Outlet Stage Hydrographs 2005 to 2010

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Figure 2.3



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Winter Lake Outlet Discharge Hydrographs 2005 to 2010

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APVD

JAS

REV

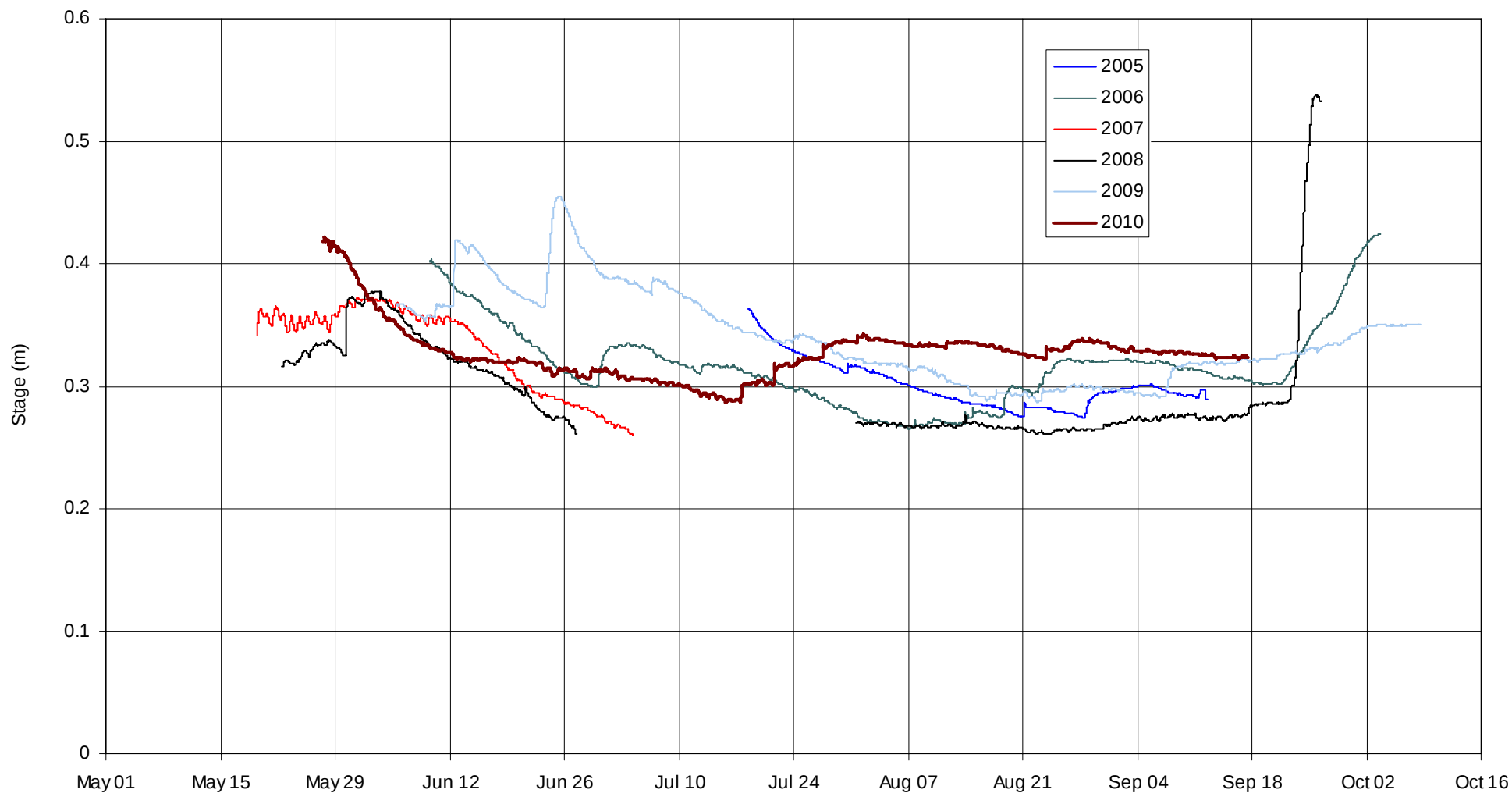
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Figure 2.4

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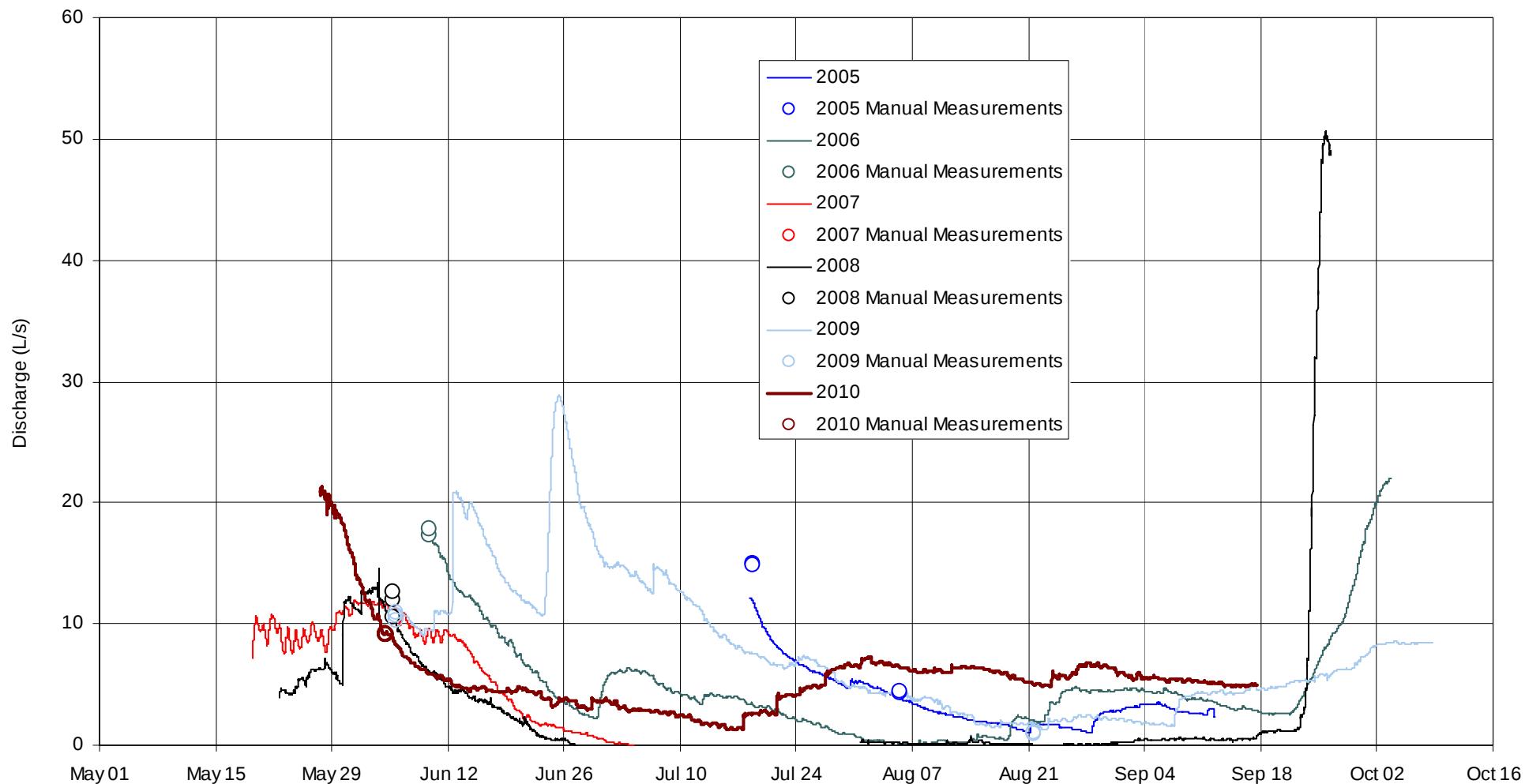


YELLOWKNIFE GOLD PROJECT 2010 HYDROMETEOROLOGICAL REPORT

Round Lake Outlet Stage Hydrographs 2005 to 2010

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Figure 2.5



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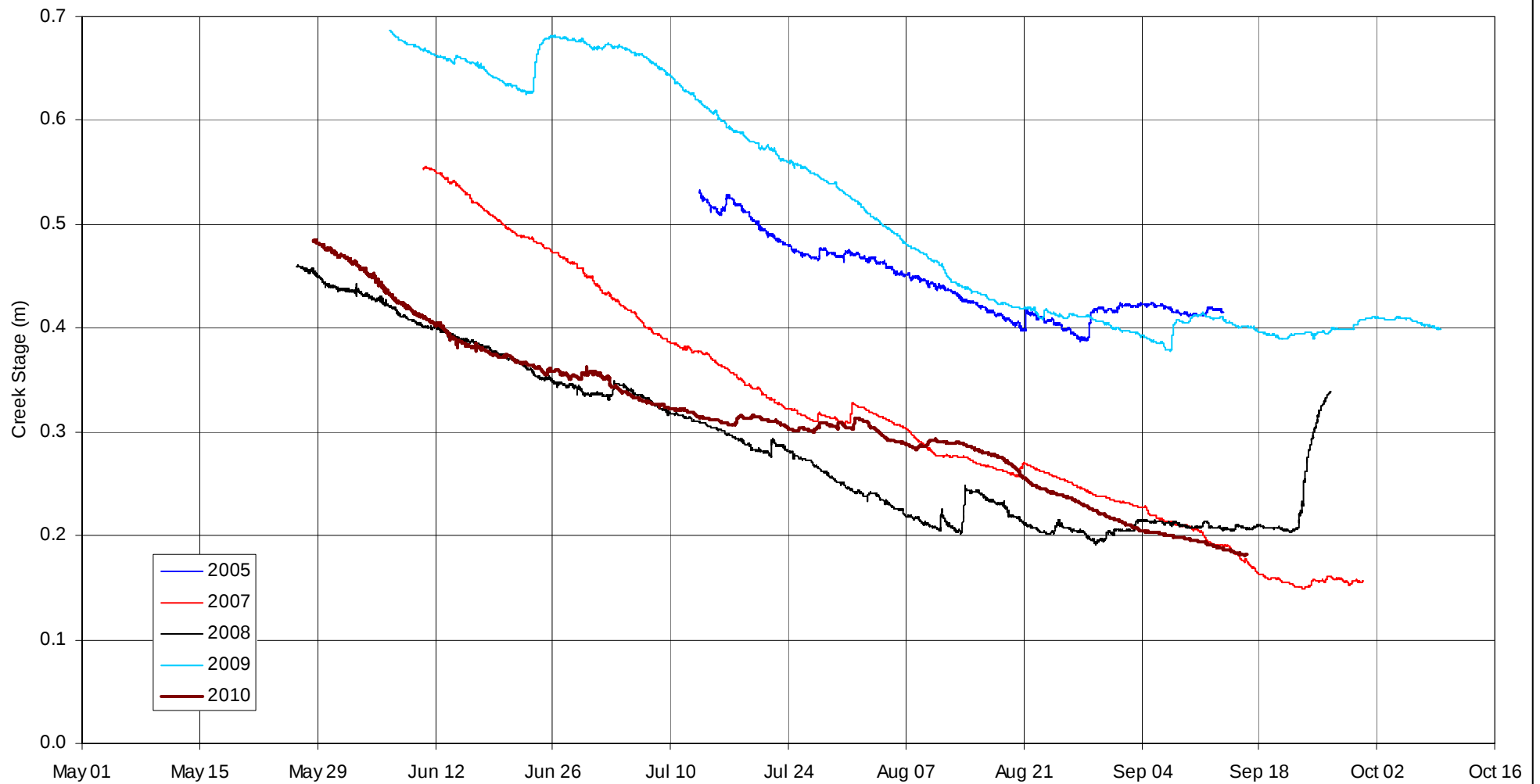


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Round Lake Outlet Discharge Hydrographs 2005 to 2010

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Figure 2.6



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Nicholas Lake Outlet Stage Hydrographs 2005 to 2010

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Figure 2.7