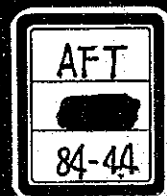


ETHNOGRAPHIC MAPPING
FOR
FEASIBILITY STUDY
ON
INTEGRATED IRRIGATION AND SOUTH PORT SAID
AGRICULTURAL DEVELOPMENT PROJECT
IN
ARAB REPUBLIC OF EGYPT
→ CONCEPTS AND CONCEPTUAL SKETCHES

NOVEMBER, 1983

JAPAN INTERNATIONAL COOPERATION AGENCY



Topographic Mapping
for
Feasibility Study
on
North Hussinia and South Port Said
Agricultural Development Project
in
Arab Republic of Egypt

- observation and computation sheets -

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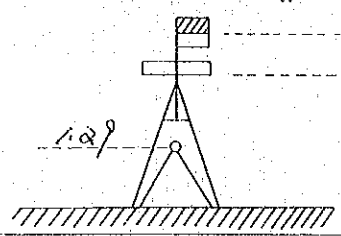
=====

Sheets of observed horizontal & vertical angle & distance	1
Sheets of observed levelling	56
Sheets of computed geodetic net	145
Sheets of computed levelling	185
Sheets of observed tide	192
Attachment	199

Sheets of observed horizontal &
vertical angle & distance

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: *NO. 104*
 Date: *'83. 5. 12*
 Ins. No.
 Weather: *Fine*

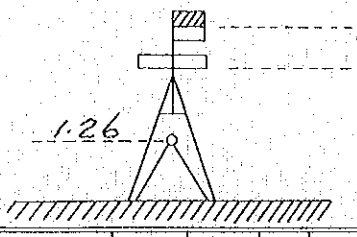
Observer: *K. MISHIMA*
 Booker: *H. ADACHI*
 Checked:

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
<i>NO. 105</i>	<i>r</i>	<i>0</i>	<i>1</i>	<i>11:07</i>	<i>0</i>	<i>26</i>	<i>14</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>
<i>NO. 103</i>	<i>l</i>		<i>2</i>		<i>182</i>	<i>40</i>	<i>11</i>	<i>182</i>	<i>13</i>	<i>57</i>	<i>118-4 ✓</i>
	<i>l</i>		<i>2</i>		<i>2</i>	<i>40</i>	<i>24</i>	<i>182</i>	<i>14</i>	<i>1</i>	<i>✓</i>
			<i>1</i>		<i>180</i>	<i>26</i>	<i>23</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>
	<i>l</i>	<i>90</i>			<i>270</i>	<i>22</i>	<i>45</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>
					<i>92</i>	<i>26</i>	<i>21</i>	<i>182</i>	<i>13</i>	<i>46</i>	<i>104+12 ✓</i>
	<i>r</i>				<i>272</i>	<i>26</i>	<i>24</i>	<i>182</i>	<i>13</i>	<i>58</i>	<i>✓</i>
				<i>11:13</i>	<i>90</i>	<i>22</i>	<i>26</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>
					<i>NO 105</i>			<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>
					<i>NO 103</i>			<i>182</i>	<i>13</i>	<i>56</i>	<i>✓</i>

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks
<i>NO. 105</i>	<i>r</i>	<i>⊕←</i>	<i>90</i>	<i>01</i>	<i>29</i>	<i>r-l=22=</i>	<i>180</i>	<i>2</i>	<i>47 ✓</i>
	<i>l</i>		<i>269</i>	<i>58</i>	<i>42</i>	<i>90±α=2=</i>	<i>90</i>	<i>1</i>	<i>24 ✓</i>
			<i>260</i>	<i>0</i>	<i>11</i>	<i>(NO. 105) α=</i>	<i>- 0</i>	<i>1</i>	<i>24 ✓</i>
<i>NO. 103</i>	<i>l</i>	<i>⊕←</i>	<i>270</i>	<i>0</i>	<i>14</i>	<i>r-l=22=</i>	<i>179</i>	<i>59</i>	<i>23 ✓</i>
	<i>r</i>		<i>89</i>	<i>59</i>	<i>47</i>	<i>90±α=2=</i>	<i>180</i>	<i>0</i>	<i>27 ✓</i>
			<i>260</i>	<i>0</i>	<i>1</i>	<i>(NO. 103) α=</i>	<i>89</i>	<i>59</i>	<i>47 ✓</i>
						<i>r-l=22=</i>	<i>90</i>	<i>0</i>	<i>14 ✓</i>
						<i>90±α=2=</i>	<i>+ 0</i>	<i>0</i>	<i>14 ✓</i>
						<i>α=</i>			

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: *NO 103*
 Date: *83-5-12*
 Ins. No.
 Weather: *Fine*

Observer: *K. MISHIMA*
 Booker: *H. ADACHI*
 Checked:

Station	Face	Circle	No	Time	H. Reading	Reduced. Read'g	Remarks
<i>NO. 104</i>	<i>r</i>	<i>0</i>	<i>1</i>	<i>12:27</i>	<i>0 28 27</i>	<i>0 0 0</i>	<i>✓</i>
<i>NO. 102</i>			<i>2</i>		<i>169 31 06</i>	<i>169 2 39</i>	<i>✓ 78 ± 10</i>
	<i>l</i>		<i>2</i>		<i>249 31 07</i>	<i>169 2 39</i>	<i>✓</i>
			<i>1</i>		<i>180 28 28</i>	<i>0 0 0</i>	<i>✓</i>
	<i>l</i>	<i>90</i>			<i>270 48 14</i>	<i>0 0 0</i>	<i>✓</i>
					<i>79 50 54</i>	<i>169 2 40</i>	<i>✓ 70 - 10</i>
	<i>r</i>				<i>259 50 41</i>	<i>169 2 30</i>	<i>✓</i>
				<i>12:32</i>	<i>90 48 11</i>	<i>0 0 0</i>	<i>✓</i>
					<i>NO 104</i>	<i>0 0 0</i>	<i>✓</i>
					<i>NO 102</i>	<i>169 2 37</i>	<i>✓</i>

Station	Face	Target	V. Reading	Reduced. Read'g	Remarks
<i>NO 104</i>	<i>r</i>	<i>7←</i>	<i>90 02 10</i>	<i>r-l=2Z= 180 4 11</i>	<i>✓</i>
	<i>l</i>		<i>269 57 59</i>	<i>90 ± α = Z = 90 2 6</i>	<i>✓</i>
			<i>360 0 9</i>	<i>NO 104) α = - 0 2 6</i>	<i>✓</i>
<i>NO. 102</i>	<i>l</i>	<i>7←</i>	<i>269 56 15</i>	<i>r-l=2Z= 180 7 42</i>	<i>✓</i>
	<i>r</i>		<i>90 03 57</i>	<i>90 ± α = Z = 779 53 18</i>	<i>✓</i>
			<i>360 0 12</i>	<i>NO 102) α = 89 56 59</i>	<i>✓</i>
				<i>* 0 3 51</i>	<i>✓</i>
				<i>r-l=2Z=</i>	
				<i>90 ± α = Z =</i>	
				<i>α =</i>	

GEODIMETER STN.	REFLECTOR STN.	MEAN MET.		GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t ₁ ° C	t ₂ ° C	No.	Ht.	No.				
No 106	No 105	1.001	92.0					8-5-11	12:15	2544.854	
								-	:	.852	
								-	:	.857	
								-	12:17	.854	
								-	:		
								-	:	2544.856 ✓	
								-	:		
								-	:		
								-	:		
								-	:		
								-	:		

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣV	

$$M.S.E = \pm \sqrt{\frac{\sum VV}{n(n-1)}} \text{ mm}$$

$$= \pm$$

LINES: 10

File Page No. _____

ABSTRACT
OF
DISTANCE
MEASURING
GEODIMETER
(Model)

Survey K - MISHIMA

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter _____ m

Reflector _____ m

Remarks _____



GEODIMETER STN.	REFLECTOR STN.	MEAN MET.		GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	11° C	12° C	No.	Ht.	No.				
No 102	No 103	1080	29.0					88-5-12	14:04	1351	.077
								-	:		.082
								-	:		.077
								-	14:13		.077
								-	:	1351	.078 ✓
								-	:		
								-	:		
								-	:		
								-	:		
								-	:		

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣVV	

$$M.S.E = \pm \sqrt{\frac{\Sigma VV}{n(n-1)}} \text{ mm}$$

$$= \pm$$

LINES: **13**

File Page No.

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model)

Survey

Job No.

Abstracted by

Checked by

Zero Correction

Geodimeter m

Reflector m

Remarks



File Page No.

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model)

Survey _____

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter m

Reflector m

Remarks

GEODIMETER STN.	REFLECTOR STN.	MEAN MET.			GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t ₁ °C	t ₂ °C	No.	Ht.	No.	Ht.				
NO. 120	NO. 101	10.20	22.0						83-5-12	16:10	1906.207	
									-	:	.208	
									-	:	.209	
									-	16:12	.210	
									-	:	1906.208	
									-	:		
									-	:		
									-	:		
									-	:		
									-	:		
									-	:		

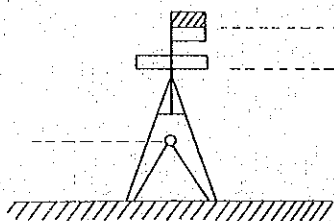
$$M.S.E = \pm \sqrt{\frac{\sum VV}{n(n-1)}} \text{ mm} = \pm$$

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣV	



HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: NO. 112

Observer: K. MISHIMA

Date: 83-5-14

Booker: H. ADACHI

Ins. No.

Checked:

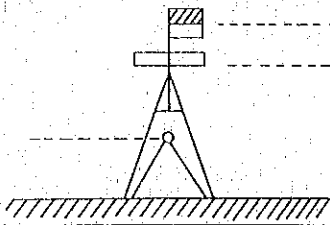
Weather: FINE

Station	Face	Circle	No	Time	H, Reading	Reduced. Read'g	Remarks
NO 112	r	0	1	12:13	0 17 27	0 0 0	✓
NO 111			2		181 55 27	181 38 0	122-2 ✓
	l		2		1 55 26	181 38 2	✓
			1		180 17 24	0 0 0	✓
	l	90	1		270 22 23	0 0 0	✓
			2		92 10 19	181 27 56	106 / 476 - 6 ✓
	r		2		272 10 1	181 27 50	✓
			1	12:19	90 22 11	0 0 0	✓
					NO 112	0 0 0	✓
					NO 111	181 27 57	✓

Station	Face	Target	V. Reading	Reduced. Read'g	Remarks
NO 112	r	甲←	90 1 29	r-l=2Z= 180 2 49	✓
	l		269 58 40	90±α=Z= 90 1 24	✓
			360 0 9	12/13) α= - 0 1 24	✓
NO 111	l	甲←	269 55 24	r-l=2Z= 180 10 16	常数差大の為下欄再測
	r		90 5 2	90±α=Z= 90 5 8	✓
		甲←	360 0 26	NO. 111 α= - 0 5 8	✓
NO. 111	r	甲←	90 5 17	r-l=2Z= 180 10 16	✗
	l		269 55 1	90±α=Z=	
			360 0 18	α=	

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: NO. 110

Observer: K. MISHIMA

Date: 83-5-14

Booker: H. ADACHI

Ins. No.

Checked:

Weather: FINE & WINDY

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
					°	'	"	°	'	"	
NO. 111	r	0	1	18:34	0	37	54	0	0	0	✓
NO. 109	l		2		138	48	49	138	10	55	108 + 2 ✓
			2		318	48	54	138	10	53	✓
			1		180	38	1	0	0	0	✓
	l	90	1		270	34	42	0	0	0	✓
			2		48	45	25	138	10	53	196 - 10 ✓
	r		2		228	45	25	138	10	48	✓
			1	18:38	90	34	42	0	0	0	✓
					NO 111	0	0	0	0	0	✓
					NO 109	138	10	51			✓

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks	
			°	'	"	°	'	"		
NO. 111	r	⊕←	90	2	53	r-l=2Z=	180	5	35	✓
	l		269	57	18	90±α=Z=	90	2	48	✓
			360	0	11	NO. 111 α=	- 0	2	48	✓
NO. 109	l	⊕←	269	56	29	r-l=2Z=	180	7	10	✓
	r		90	3	39	90±α=Z=	90	3	35	✓
			360	0	8	NO. 09 α=	- 0	3	35	✓
						r-l=2Z=				
						90±α=Z=				
						α=				

File Page No.

ABSTRACT
OF
DISTANCE
MEASURING
GEODIMETER
(Model)

Survey _____

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter _____ m

Reflector _____ m

Remarks

GEODIMETER STN.	REFLECTOR STN.	MEAN MET.			GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t ₁ ° C	t ₂ ° C	No.	Ht.	No.	Ht.				
NO. 111	NO. 112	994	26.0						83-5-14	14:01	1286 .679	
									-	:	.675	
									-	:	.680	
									-	14:03	.675	
									-	:	1286 .677	
									-	:	.	
									-	:	.	
									-	:	.	
									-	:	.	
									-	:	.	
									-	:	.	

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣVV	

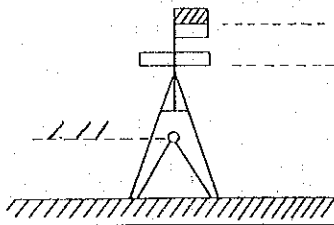
$$M.S.E = \pm \sqrt{\frac{\sum VV}{n(n-1)}} \text{ mm}$$

$$= \pm$$



HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: *No. 113*

Observer: *K-MISHIMA*

Date: *'83-5-15*

Booker: *T-MIURA*

Ins. No.

Checked:

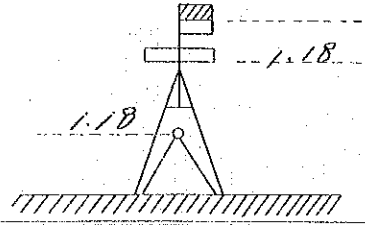
Weather: *Fine*

Station	Face	Circle	No	Time	H. Reading	Reduced. Read'g	Remarks
<i>No. 112</i>	<i>r</i>	<i>0</i>	<i>1</i>	<i>2:17</i>	<i>0 19 38</i>	<i>0 0 0</i>	<i>✓</i>
<i>No. 114</i>			<i>2</i>		<i>168 35 31</i>	<i>168 15 53</i>	<i>192+14 ✓</i>
	<i>l</i>		<i>2</i>		<i>348 35 20</i>	<i>168 15 39</i>	<i>✓</i>
			<i>1</i>		<i>180 19 41</i>	<i>0 0 0</i>	<i>✓</i>
	<i>l</i>	<i>90</i>	<i>1</i>		<i>270 30 17</i>	<i>0 0 0</i>	<i>✓</i>
			<i>2</i>		<i>78 46 08</i>	<i>168 15 51</i>	<i>1101-1 ✓</i>
	<i>r</i>		<i>2</i>		<i>258 46 00</i>	<i>168 15 50</i>	<i>✓</i>
			<i>1</i>	<i>10:22</i>	<i>90 30 10</i>	<i>0 0 0</i>	<i>✓</i>
					<i>No. 112</i>	<i>0 0 0</i>	<i>✓</i>
					<i>No. 114</i>	<i>168 15 48</i>	<i>✓</i>

Station	Face	Target	V. Reading	Reduced. Read'g	Remarks
<i>No. 112</i>	<i>r</i>	<i>r←</i>	<i>90 00 37</i>	<i>r-l=22= 120 01 08</i>	<i>✓</i>
	<i>l</i>		<i>269 59 29</i>	<i>90±α=Z= 90 00 34</i>	<i>✓</i>
			<i>360 00 06</i>	<i>(112) α= - 0 00 34</i>	<i>✓</i>
<i>No. 114</i>	<i>l</i>	<i>r←</i>	<i>269 58 49</i>	<i>r-l=22= 120 02 21</i>	<i>✓</i>
	<i>r</i>		<i>90 01 10</i>	<i>90±α=Z= 90 01 10</i>	<i>✓</i>
			<i>359 59 59</i>	<i>(114) α= - 0 01 10</i>	<i>✓</i>
				<i>r-l=22=</i>	
				<i>90±α=Z=</i>	
				<i>α=</i>	

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: *NO 107*

Observer: *H. ADACHI*

Date: *80-5-16*

Booker: *Y. KUWAHATA*

Ins. No.

Checked:

Weather: *FINE*

Station	Face	Circle	No	Time	H, Reading	Reduced. Read'g	Remarks
<i>Δ C58</i>	<i>8</i>	<i>0</i>	<i>1</i>	<i>14.45</i>	<i>0 1 19</i>	<i>0 0 0</i>	
<i>NO 106</i>			<i>2</i>		<i>179 58 41</i>	<i>179 57 22</i>	<i>49-5'</i>
	<i>0</i>		<i>2</i>		<i>359 58 45</i>	<i>179 57 27</i>	
			<i>1</i>		<i>180 1 18</i>	<i>0 0 0</i>	
	<i>8</i>	<i>90</i>	<i>1</i>		<i>270 11 47</i>	<i>0 0 0</i>	
			<i>2</i>		<i>90 9 17</i>	<i>179 57 20</i>	<i>57-3'</i>
	<i>8</i>		<i>2</i>		<i>270 9 12</i>	<i>179 57 27</i>	
			<i>1</i>	<i>14.50</i>	<i>90 11 45</i>	<i>0 0 0</i>	
					<i>Δ C58</i>	<i>0 0 0</i>	
					<i>NO 106</i>	<i>179 57 26</i>	

Station	Face	Target	V. Reading	Reduced. Read'g	Remarks
<i>Δ C58</i>	<i>8</i>	<i>4x</i>	<i>89 58 33</i>	<i>r-l=2Z=</i>	<i>179 56 27</i>
	<i>0</i>		<i>270 2 6</i>	<i>90±α=Z=</i>	<i>89 58 14</i>
			<i>360 0 39</i>	<i>(Δ 58) α=</i>	<i>0 1 46</i>
<i>NO 106</i>	<i>1</i>	<i>4x</i>	<i>269 58 25</i>	<i>r-l=2Z=</i>	<i>180 3 20</i>
	<i>8</i>		<i>90 1 45</i>	<i>90±α=Z=</i>	<i>90 1 45</i>
			<i>360 0 20</i>	<i>NO 106 α=</i>	<i>-0 1 45</i>
				<i>r-l=2Z=</i>	
				<i>90±α=Z=</i>	
				<i>α=</i>	

File Page No.

ABSTRACT
OF
DISTANCE
MEASURING
GEODIMETER
(Model)

Survey *K-MISHIMA*

Job No.

Abstracted by

Checked by

Zero Correction

Geodimeter m

Reflector m

Remarks

GEODIMETER STN.	REFLECTOR STN.	MEAN MET.		GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	1° C	12° C	No.	Ht.	No.				
A.C. 58	H.O. 107	PPZ PBB	ND ND					'83-5-16	15:10	5401.090	
										.085	
										5401.085	
									15:14	.074	
										5401.088	
A.C. 58	H.O. 108	PPZ	ND					'83-5-16	15:26	5061.084	
										.076	
										5061.088	
										.076	
									15:21	5061.091	

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣVV	

$$M.S.E = \pm \sqrt{\frac{\sum VV}{n(n-1)}} \text{ mm}$$

= ±



GEODIMETER STN.	REFLECTOR STN.	MEAN MET.			GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t ¹ ° C	t ² ° C	No.	Ht.	No.	Ht.				
114	113	752	29					8-5-15		2044.269		
										269		
										2044.269		
										270		
										2044.269		
114	115	750	29					8-5-15	11:56	4089.067		
										070		
										4089.067		
										069		
									12:00	070		
										4089.070		

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣV	

$$M.S.E = \pm \sqrt{\frac{\Sigma VV}{n(n-1)}} \text{ mm}$$

$$= \pm$$

LINES: 33

File Page No.

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model)

Survey K-MISHIMA

Job No.

Abstracted by

Checked by

Zero Correction

Geodimeter m

Reflector m

Remarks



GEODIMETER STN.	REFLECTOR STN.	MEAN MET.			GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t ¹ ° C	t ² ° C	No.	Ht.	No.	Ht.				
110	112	985	80					80-5-15	14:06	1645.715		
										1645.720		
										1645.731		
									14:08	1645.733		
										1645.720		

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣV	

$$M.S.E = \pm \sqrt{\frac{\sum VV}{n(n-1)}} \text{ mm}$$

$$= \pm$$

LINES: **34**

File Page No.

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model)

Survey K MISHIMA

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter _____ m

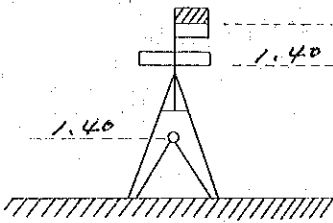
Reflector _____ m

Remarks



HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: *NO. 117*

Observer: *Y. KUWAHATA*

Date: *5. 18.*

Booker: *K. TAKAMATSU*

Ins. No.

Checked:

Weather: *Fine*

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
<i>No. 118</i>	<i>r</i>	<i>0°</i>	<i>1</i>	<i>17:10</i>	<i>0</i>	<i>01</i>	<i>01</i>	<i>0</i>	<i>0</i>	<i>0</i>	
<i>No. 117-1</i>			<i>2</i>		<i>18</i>	<i>15</i>	<i>18</i>	<i>18</i>	<i>14</i>	<i>17</i>	<i>31+31</i>
	<i>l</i>		<i>2</i>		<i>198</i>	<i>15</i>	<i>15</i>	<i>18</i>	<i>14</i>	<i>14</i>	
			<i>1</i>		<i>180</i>	<i>01</i>	<i>02</i>	<i>0</i>	<i>0</i>	<i>0</i>	
	<i>l</i>	<i>90°</i>	<i>1</i>		<i>270</i>	<i>13</i>	<i>15</i>	<i>0</i>	<i>0</i>	<i>0</i>	
			<i>2</i>		<i>288</i>	<i>27</i>	<i>37</i>	<i>18</i>	<i>14</i>	<i>22</i>	<i>39-5</i>
	<i>r</i>		<i>2</i>		<i>108</i>	<i>27</i>	<i>28</i>	<i>18</i>	<i>14</i>	<i>17</i>	
			<i>1</i>	<i>17:17</i>	<i>90</i>	<i>13</i>	<i>11</i>	<i>0</i>	<i>0</i>	<i>0</i>	
					<i>No. 118</i>		<i>0° 0' 0"</i>				
					<i>No. 117-1</i>		<i>18° 16' 18"</i>				

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks	
<i>No. 118</i>	<i>r</i>	<i>Pr</i>	<i>90</i>	<i>04</i>	<i>34</i>	<i>r-l=2L=</i>	<i>180</i>	<i>8</i>	<i>29</i>	
	<i>l</i>		<i>269</i>	<i>56</i>	<i>05</i>	<i>90±α=Z=</i>	<i>90</i>	<i>4</i>	<i>14</i>	
			<i>360</i>	<i>0</i>	<i>39</i>	<i>46.118 α=</i>	<i>- 0</i>	<i>4</i>	<i>14</i>	
<i>No. 117-1</i>	<i>l</i>	<i>Pr</i>	<i>269</i>	<i>43</i>	<i>0</i>	<i>r-l=2L=</i>	<i>180</i>	<i>34</i>	<i>29</i>	
	<i>r</i>		<i>90</i>	<i>17</i>	<i>29</i>	<i>90±α=Z=</i>	<i>90</i>	<i>17</i>	<i>14</i>	
			<i>360</i>	<i>0</i>	<i>39</i>	<i>No. 117-1 α=</i>	<i>- 0</i>	<i>17</i>	<i>14</i>	
						<i>r-l=2L=</i>				
						<i>90±α=Z=</i>				
						<i>α=</i>				

GEODIMETER STN.	REFLECTOR STN.	P mbs.	MEAN MET.		GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
			11° C	12° C	No.	Ht.	No.	Ht.				
NO. 101	119 NO. 101	1008	20						5-18-83		5242.240 ^m	
											239	
											5242.239	
											236	
											6242.238 ^m	✓

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣVV	

$$M.S.E = \pm \sqrt{\frac{\sum VV}{n(n-1)}} \text{ mm}$$

$$= \pm$$

LINES: **41**

File Page No. _____

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model _____)

Survey _____

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter _____ m

Reflector _____ m

Remarks _____



PACIFIC AERO SURVEY CO., LTD.

GEODIMETER STN.	REFLECTOR STN.	MEAN MET.			GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t ₁ ° C	t ₂ ° C	No.	Ht.	No.	Ht.				
No. 119	No. 118	768 mm Hg	20°C						17-5-83	10:45	6828.621	
											622	
											6828.639	
										19:10	630	
											6828.628	

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣVV	

$$M.S.E = \pm \sqrt{\frac{\Sigma VV}{n(n-1)}} \text{ mm}$$

= ±

LINES: 43

File Page No. _____

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model)

Survey _____

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter _____ m

Reflector _____ m

Remarks _____



GEODIMETER STN.	REFLECTOR STN.	MEAN MET.		GEODIMETER		REFLECTOR		Date	Time	REDUCED SLOPE DISTANCE	OBS. SHEET No.
		P mbs.	t1° C	t2° C	No.	Ht.	No.				
No. 117	No. 118	100.2	23					-	:	44767.688	
								-	:	706	
								-	:	44767.696	
								-	:	698	
								-	:	44767.697	
								-	:		
								-	:		
								-	:		
								-	:		
								-	:		

SHEET No.	SLOPE DISTANCE	V	VV
Mean		ΣVV	

$$M.S.E = \pm \sqrt{\frac{\Sigma VV}{n(n-1)}} \text{ mm}$$

= ±

LINES: 44

File Page No.

ABSTRACT OF DISTANCE MEASURING GEODIMETER (Model)

Survey _____

Job No. _____

Abstracted by _____

Checked by _____

Zero Correction

Geodimeter m .

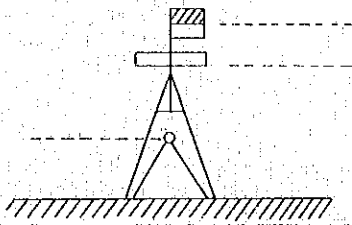
Reflector m .

Remarks



HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument HI meters Signal HI.



Station: $\Delta C-68$

Observer: H. ADACHI

Date: 31-5-'23

Booker: K. MISHIMA

Ins. No.

Checked:

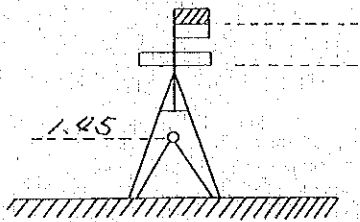
Weather: Fine

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
No. 107	r	0	1	9:11	0	13	37	0	0	0	✓
$\Delta 1798$			2		88	56	23	88	42	46	195-3 ✓
	l		2		268	56	34	88	42	49	✓
			1		180	13	45	0	0	0	✓
	l		1		270	32	13	0	0	0	✓
			2		359	14	54	88	42	41	186+4 ✓
	r		2		179	14	42	88	42	45	✓
			1	9:16	90	31	57	0	0	0	✓
(距離) 30° 749 mb											
$\Delta C-68$					4983 ^m	210					
						208					
					4983 ^m	209					
$\Delta 1798$						212					
					4983 ^m	210					
							No. 107	0	0	0	✓
							$\Delta 1798$	88	42	45	✓

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks	
$\Delta 1798$	l	∇	270	00	19	$r-l=22=$	179	59	26	✓
	r		89	59	42	$90 \pm \alpha = 2 =$	89	59	42	✓
			360	00	01	$(\Delta 1798) \alpha =$	+ 0	0	18	✓
No. 107	r		89	58	23	$r-l=22=$	179	56	27	✓
	l		270	01	56	$90 \pm \alpha = 2 =$	89	58	16	✓
			360	0	19	$\alpha =$	+ 0	1	46	✓
						$r-l=22=$				
						$90 \pm \alpha = 2 =$				
						$\alpha =$				

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: Δ 1798

Observer: KUWAHATA

Date: 31-5-'83

Booker: T-MIURA

Ins. No.

Checked:

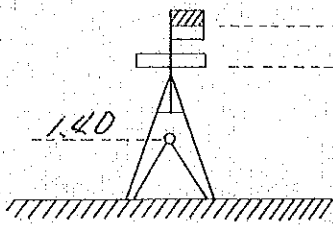
Weather: Fine

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
Δ C58 1798	r	0	1	10:02	0	0	58	0	0	0	
Δ 1795			2		182	14	21	182	13	22	05+11
	l		2		2	14	25	182	13	12	
			1		180	01	13	0	0	0	
	l	90	1		270	13	30	0	0	0	
			2		92	26	49	182	13	19	27-11
	r		2		272	26	43	182	13	08	
			1		90	13	35	0	0	0	
	r	0	1		0	02	35	0	0	0	
			2		182	16	39	182	13	04	11-3
	l		2		2	16	45	182	13	07	
			1	10:12	180	02	38	0	0	0	
(距離) 10°C 749 mb											
Δ 1798					3972.647						
					.65+						
Δ 1795					3972.644			Δ 585			0 0 0
					.649			Δ 1795			182 13 10
					3972.647						
					3972.647 m						

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks
Δ C58 1798	l		270	0	43	r-l=2Z=	179	58	32
	r		89	59	15	90±α=Z=	89	59	16
			359	59	58	(C585) α=	+ 0	00	44
Δ 1795	r		87	58	52	r-l=2Z=	179	57	58
	l		270	00	54	90±α=Z=	89	58	59
			359	59	46	1795 α=	+ 0	01	01
						r-l=2Z=			
						90±α=Z=			
						α=			

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: $\Delta 1795$

Observer: *KUWAHATA*

Date: *01-5-'83*

Booker: *T-MIURA*

Ins. No.

Checked:

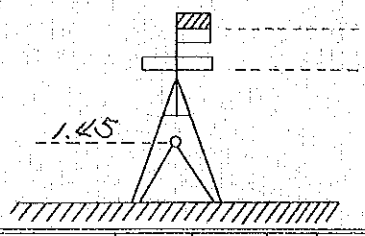
Weather: *Fine*

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
$\Delta 1798$	<i>T</i>	<i>D</i>	<i>1</i>	<i>11:09</i>	<i>0</i>	<i>01</i>	<i>19</i>	<i>0</i>	<i>0</i>	<i>0</i>	
<i>NO. 121</i>			<i>2</i>		<i>101</i>	<i>50</i>	<i>07</i>	<i>101</i>	<i>48</i>	<i>48</i>	<i>94+2</i>
	<i>l</i>		<i>2</i>		<i>281</i>	<i>50</i>	<i>03</i>	<i>101</i>	<i>48</i>	<i>46</i>	
			<i>1</i>		<i>180</i>	<i>01</i>	<i>17</i>	<i>0</i>	<i>0</i>	<i>0</i>	
	<i>l</i>	<i>90</i>	<i>1</i>		<i>270</i>	<i>12</i>	<i>00</i>	<i>0</i>	<i>0</i>	<i>0</i>	
			<i>2</i>		<i>12</i>	<i>00</i>	<i>44</i>	<i>101</i>	<i>48</i>	<i>44</i>	<i>96+08</i>
	<i>T</i>		<i>2</i>		<i>192</i>	<i>00</i>	<i>40</i>	<i>101</i>	<i>48</i>	<i>52</i>	
			<i>1</i>	<i>11:15</i>	<i>90</i>	<i>11</i>	<i>48</i>	<i>0</i>	<i>0</i>	<i>0</i>	
<i>(距離) 03°C 742 mb</i>											
<i>NO. 121</i>											
					<i>448.834</i>						
					<i>824</i>						
$\Delta 1795$					<i>448.803</i>						
					<i>806</i>						
					<i>448.834</i>						
					<i>448.834 m</i>						
					$\Delta 1798$			<i>0</i>	<i>0</i>	<i>0</i>	
					<i>NO. 121</i>			<i>101</i>	<i>48</i>	<i>48</i>	

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks	
$\Delta 1798$	<i>T</i>	$\varphi \leftarrow$	<i>90</i>	<i>03</i>	<i>47</i>	$r-l=2Z=$	<i>180</i>	<i>07</i>	<i>54</i>	
	<i>l</i>		<i>269</i>	<i>55</i>	<i>53</i>	$90 \pm \alpha = Z =$	<i>90</i>	<i>03</i>	<i>57</i>	
			<i>359</i>	<i>59</i>	<i>40</i>	$\Delta 1798 \alpha =$	<i>- 0</i>	<i>03</i>	<i>57</i>	
<i>NO. 121</i>	<i>l</i>	$\varphi \leftarrow$	<i>269</i>	<i>53</i>	<i>25</i>	$r-l=2Z=$	<i>180</i>	<i>12</i>	<i>50</i>	
	<i>T</i>		<i>90</i>	<i>06</i>	<i>15</i>	$90 \pm \alpha = Z =$	<i>90</i>	<i>06</i>	<i>25</i>	
			<i>359</i>	<i>59</i>	<i>40</i>	$\Delta 121 \alpha =$	<i>- 0</i>	<i>06</i>	<i>25</i>	
						$r-l=2Z=$				
						$90 \pm \alpha = Z =$				
						$\alpha =$				

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



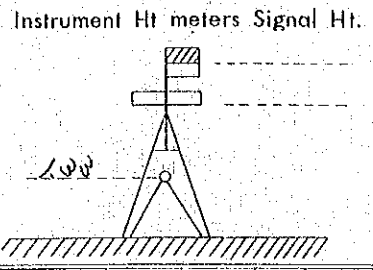
Station: ~~A 61~~ No. 121
 Date: 31-5-83
 Ins. No.
 Weather: Fine

Observer: KUWAHATA
 Booker: T-MIURA
 Checked:

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
Δ 1795	r	D	1	14:25	0	01	31	0	0	0	
Δ 61			2		168	48	52	168	47	22	41+W
	l		2		248	48	58	168	47	19	
			1		180	01	39	0	0	0	
	l	90	1		270	11	55	0	0	0	
			2		78	59	29	168	47	34	55-13
	r		2		258	59	02	168	47	21	
			1		90	11	41	0	0	0	
	r	90	1		90	11	37	0	0	0	
			2		258	59	24	168	47	47	59+W5
	l		2		78	59	08	168	47	12	
			1	14:31	270	11	56	0	0	0	
(距離) 望遠鏡 742 mb No. 121 2855.040 ↓ 041 ↓ 2855.052 Δ 1795 0 0 0 Δ 61 048 Δ 61 168 47 22 2855.045 m ✓											

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks
Δ 1795	l		270	03	16	r-l=2L=	179	53	08
	r		89	56	24	90±α=Z=	89	56	34
			259	59	40	(1795) α=	+ 0	03	26
Δ 61	r		89	58	19	r-l=2L=	179	57	08
	l		270	01	11	90±α=Z=	89	58	34
			259	59	30	61 α=	+ 0	01	26
						r-l=2L=			
						90±α=Z=			
						α=			

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS



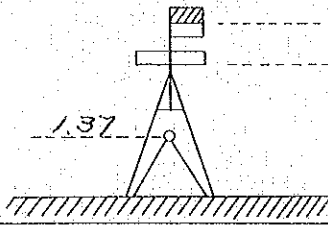
Station: <i>110.122</i>	Observer: <i>KUWAHATA</i>
Date: <i>1-6-'83</i>	Booker: <i>T. MIURA</i>
Ins. No.	Checked:
Weather: <i>Fine</i>	

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks	
					°	'	"	°	'	"		
<i>Δ 61</i> <i>110.123</i>	<i>r</i>	<i>0</i>	<i>1</i>	<i>10:32</i>	<i>0</i>	<i>01</i>	<i>12</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>	
					<i>185</i>	<i>15</i>	<i>50</i>	<i>185</i>	<i>14</i>	<i>38</i>		<i>199-23</i>
					<i>5</i>	<i>16</i>	<i>25</i>	<i>185</i>	<i>15</i>	<i>01</i>		<i>✓</i>
	<i>l</i>	<i>90</i>	<i>1</i>	<i>2</i>	<i>180</i>	<i>01</i>	<i>24</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>	
					<i>270</i>	<i>12</i>	<i>36</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>	
					<i>95</i>	<i>27</i>	<i>42</i>	<i>185</i>	<i>15</i>	<i>06</i>	<i>189-43</i>	
	<i>r</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>275</i>	<i>27</i>	<i>28</i>	<i>185</i>	<i>14</i>	<i>20</i>	<i>✓</i>	
					<i>90</i>	<i>12</i>	<i>05</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>	
					<i>90</i>	<i>12</i>	<i>33</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>	
	<i>l</i>	<i>2</i>	<i>2</i>	<i>1</i>	<i>275</i>	<i>27</i>	<i>32</i>	<i>185</i>	<i>14</i>	<i>59</i>	<i>121-3</i>	
					<i>95</i>	<i>27</i>	<i>42</i>	<i>185</i>	<i>15</i>	<i>02</i>	<i>✓</i>	
					<i>270</i>	<i>12</i>	<i>40</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>	
<i>l</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>180</i>	<i>02</i>	<i>31</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>✓</i>		
				<i>5</i>	<i>17</i>	<i>29</i>	<i>185</i>	<i>14</i>	<i>58</i>	<i>123+7</i>		
				<i>185</i>	<i>17</i>	<i>25</i>	<i>185</i>	<i>15</i>	<i>05</i>	<i>✓</i>		
<i>r</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>10:45</i>	<i>0</i>	<i>02</i>	<i>20</i>	<i>0</i>	<i>0</i>	<i>✓</i>		
				<i>Δ 61</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3574.113</i>		
				<i>110.123</i>	<i>185</i>	<i>15</i>	<i>01</i>	<i>109</i>				

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks	
			°	'	"	°	'	"		
<i>Δ 61</i>	<i>r</i>	<i>7←</i>	<i>89</i>	<i>59</i>	<i>16</i>	<i>r-l=22=</i>	<i>179</i>	<i>58</i>	<i>16</i>	<i>✓</i>
	<i>l</i>		<i>270</i>	<i>00</i>	<i>58</i>	<i>90±α=Z=</i>	<i>89</i>	<i>59</i>	<i>08</i>	<i>110.123</i>
<i>110.123</i>	<i>l</i>	<i>7←</i>	<i>360</i>	<i>00</i>	<i>12</i>	<i>(No. 61) α=</i>	<i>+ 0</i>	<i>0</i>	<i>52</i>	<i>2853.984</i>
	<i>l</i>	<i>7←</i>	<i>270</i>	<i>00</i>	<i>19</i>	<i>r-l=22=</i>	<i>179</i>	<i>59</i>	<i>14</i>	<i>985</i>
	<i>r</i>		<i>89</i>	<i>59</i>	<i>00</i>	<i>90±α=Z=</i>	<i>89</i>	<i>59</i>	<i>07</i>	<i>2853.985</i>
			<i>059</i>	<i>59</i>	<i>52</i>	<i>(110.123) α=</i>	<i>+ 0</i>	<i>0</i>	<i>23</i>	<i>989</i>
					<i>r-l=22=</i>					<i>2853.986 m</i>
					<i>90±α=Z=</i>					
					<i>α=</i>					

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: *NO. 123*

Observer: *KUWAHATA*

Date: *1-6-'83*

Booker: *T. MIURA*

Ins. No.

Checked:

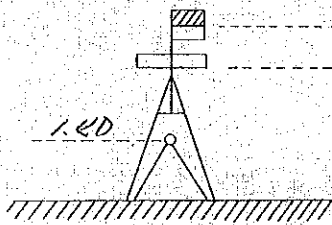
Weather: *Fine*

Station	Face	Circle	No	Time	H. Reading	Reduced. Read'g	Remarks
<i>NO. 123</i>	<i>r</i>	<i>D</i>	<i>1</i>	<i>11:26</i>	<i>0 01 21</i>	<i>0 0 0</i>	
<i>NO. 124</i>			<i>2</i>		<i>172 16 15</i>	<i>172 14 54</i>	<i>111-3 ✓</i>
	<i>l</i>		<i>2</i>		<i>152 16 20</i>	<i>172 14 57</i>	
			<i>1</i>		<i>180 01 23</i>	<i>0 0 0</i>	
	<i>l</i>	<i>PD</i>	<i>1</i>		<i>270 11 59</i>	<i>0 0 0</i>	
			<i>2</i>		<i>82 26 42</i>	<i>172 14 43</i>	<i>94+8 ✓</i>
	<i>r</i>		<i>2</i>		<i>262 26 42</i>	<i>172 14 51</i>	
			<i>1</i>		<i>PD 11 41</i>	<i>0 0 0</i>	
					<i>NO. 123</i>	<i>0 0 0</i>	
					<i>NO. 124</i>	<i>172 14 51</i>	

Station	Face	Target	V. Reading	Reduced. Read'g	Remarks
<i>NO. 123</i>	<i>r</i>	<i>7←</i>	<i>PD 03 56</i>	<i>r-l=2Z= 180 07 48</i>	
	<i>l</i>		<i>269 56 18</i>	<i>90±α=Z= 90 03 49</i>	
			<i>260 00 14</i>	<i>(NO. 123) α= - 0 03 29</i>	
<i>NO. 124</i>	<i>l</i>	<i>7←</i>	<i>269 55 46</i>	<i>r-l=2Z= 180 08 27</i>	
	<i>r</i>		<i>PD 04 13</i>	<i>90±α=Z= 90 04 14</i>	
			<i>259 59 59</i>	<i>(NO. 124) α= - 0 04 14</i>	
				<i>r-l=2Z=</i>	
				<i>90±α=Z=</i>	
				<i>α=</i>	

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Hi meters Signal Hi.



Station: *NO. 124*

Observer: *KUWAHATA*

Date: *1-6-'83*

Booker: *T-MIURA*

Ins. No.

Checked:

Weather: *Fine*

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
<i>NO. 123</i>	<i>r</i>	<i>0</i>	<i>1</i>	<i>12:36</i>	<i>0</i>	<i>01</i>	<i>09</i>	<i>0</i>	<i>0</i>	<i>0</i>	
<i>NO. 125</i>			<i>2</i>		<i>183</i>	<i>49</i>	<i>50</i>	<i>183</i>	<i>48</i>	<i>41</i>	<i>187+15 ✓</i>
	<i>l</i>		<i>2</i>		<i>3</i>	<i>49</i>	<i>39</i>	<i>183</i>	<i>48</i>	<i>26</i>	
			<i>1</i>		<i>180</i>	<i>01</i>	<i>13</i>	<i>0</i>	<i>0</i>	<i>0</i>	
	<i>l</i>	<i>90</i>	<i>1</i>		<i>270</i>	<i>12</i>	<i>14</i>	<i>0</i>	<i>0</i>	<i>0</i>	
			<i>2</i>		<i>94</i>	<i>0</i>	<i>52</i>	<i>183</i>	<i>48</i>	<i>38</i>	<i>103-33 ✓</i>
	<i>r</i>		<i>2</i>		<i>274</i>	<i>0</i>	<i>48</i>	<i>183</i>	<i>48</i>	<i>05</i>	
			<i>1</i>		<i>90</i>	<i>12</i>	<i>43</i>	<i>0</i>	<i>0</i>	<i>0</i>	

観測差大なる為再測、別紙参照。事

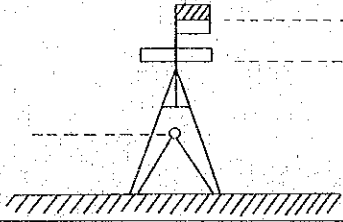
(距離) 27°C
 753mmHg

NO. 123
3644.833
840
3644.818
819
3644.823
820

Station	Face	Target	V. Reading	Reduced. Read'g			Remarks
				$r-l=27=$			<i>NO. 125</i>
				$90 \pm \alpha = 2 =$			<i>3941.480</i>
				$() \alpha =$			<i>480</i>
				$r-l=27=$			<i>3941.475</i>
				$90 \pm \alpha = 2 =$			<i>472</i>
				$\alpha =$			<i>3941.477 m ✓</i>
				$r-l=27=$			
				$90 \pm \alpha = 2 =$			
				$\alpha =$			

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht. meters Signal Ht.



Station: No. 125

Observer: K. Kobayashi

Date: 2, June, '23

Booker: K. Takamatsu

Ins. No.

Checked:

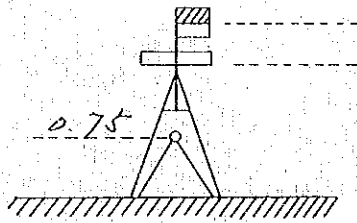
Weather: Fine

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks		
					'	"	'''	'	"	'''			
Δ 595 No. 124	r	0		10 ^h 10	0	3	41	0	0	0			
	l				267	40	22	267	33	41	82 ± 0 ✓		
					87	40	26	267	23	41			
					180	6	45	0	0	0			
	l	90				270	6	46	0	0	0		
						177	40	28	267	33	42	80 ± 0 ✓	
357						40	15	267	33	42			
r				10 ^h 16	90	6	33	0	0	2			
					Δ 595			0			0	0	
					No. 124			267			33	42	

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks		
			'	"	'''	'	"	'''			
Δ 595	r		90	4	00	r-l=2Z=	180	9	2		
	l		269	55	58	90 ± α = Z =	90	4	31		
			059	59	50	(059) α =	90	4	31		
No. 124	l		269	52	15	r-l=2Z=	180	15	02		
	r		90	7	47	90 ± α = Z =	90	7	46		
			260	0	2	No. 124 α =	-	0	7	46	
							r-l=2Z=				
							90 ± α = Z =				
						α =					

HORIZONTAL & VERTICAL ANGLE OBSERVATIONS

Instrument Ht meters Signal Ht.



Station: Δ 595

Observer: K. MISHIMA

Date: 2-6-'83

Booker: K KOIKE

Ins. No.

Checked:

Weather: Fine

Station	Face	Circle	No	Time	H. Reading			Reduced. Read'g			Remarks
No. 120	Y	0	1	10:25	0	31	22	0	0	0	
No. 125			2		120	23	59	129	52	47	84-10
	l		2		310	24	08	129	52	47	
			1		180	31	21	0	0	0	
	l	90	1		270	14	23	0	0	0	
			2		40	07	08	129	52	45	86-4
	Y		2		220	07	06	129	52	41	
			1	10:33	90	14	25	0	0	0	
(距離)					25°C 756 mb						
Δ 595					6619.310						
					315						
					6619.296						
No. 125					309						
					6619.308						
					No. 120 0 0 0						
					No. 125 129 52 42						

Station	Face	Target	V. Reading			Reduced. Read'g			Remarks	
No. 125	Y		90	02	04	$r-l=22=$	180	3	58	
	l		269	58	06	$90 \pm \alpha = 2 =$	90	1	59	
			360	0	10	$No. 125 \alpha =$	-0	1	59	
No. 120	l		269	44	04	$r-l=22=$				
	Y		90	16	28	$90 \pm \alpha = 2 =$	常數差大の為再測			
			360	0	22	$\alpha =$				
No. 120	Y		90	16	10	$r-l=22=$	180	32	20	
	l		269	43	50	$90 \pm \alpha = 2 =$	90	16	10	
			360	0	0	$No. 120 \alpha =$	-0	16	10	

