SURVEY REPORT
ANNETTE ISLAND
PHOTOGRAMMETRIC GROUND CONTROL

Prepared for:

Federal Aviation Administration
222 West 7th Avenue, #14
Anchorage, AK 99513-7987

Prepared by:

R & M Engineering, Inc.
P.O. Box 34278
Juneau, AK 99803

June 6, 2000

R & M Project No. 001730Jnu/002733Ktn

R&M

R&M ENGINEERING-KETCHIKAN, INC.
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June 7, 2000

Mr. Carl Gysler
Federal Aviation Administration
222 West 7th Avenue, #14
Anchorage, AK 99513-7987

Re: Annette Island Photo Control
R & M Project No. 001730 JUN
R & M Project No. 002733 KTN

Dear Sir:

Attached are two (2) copies of our photo control survey report. The report is self-explanatory. The report with the original aerial photographs should be given to AeroMap U.S. They need to work with the markings thereon. Because of the photographs age, we field I.D. additional control points to substitute for requested photo ground points.

It was our pleasure to do this project. If there are questions, please do not hesitate to contact us at your convenience.

Sincerely,

R & M ENGINEERING, INC.

Malcolm A. Menzies, P.E., L.S.

Attachments

xc Ray Bloom

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Survey Report
Annette Island
Photogrammetric Ground Control
R & M Project No. 001730

INTRODUCTION

Per the project requirements issued by Carl Gysler of FAA, R & M performed a ground control survey of 1988 aerial photography of Annette Island, from Metlakatla to Point Davidson in a north/south direction and from Nichols Passage to Tamgas Harbor in and east/west direction. The principal work was performed during the week of May 22 through May 27, 2000. Work was accomplished by GPS methods using both Static and Kidimatic Survey Procedures.

A problem was found with the Static GPS surveys. We returned to Annette Island on June 3rd to correct that problem.

HORIZONTAL CONTROL; Horizontal Control stations of the United States Coast and Geodetic Survey (presently National Ocean Survey) in and around Annette Island were used as a basis of coordinates. A project problem was the loss or destruction of most historic USC&GS control monumentation in and around Metlakatla. From previous work in and around Metlakatla, R & M had conducted control surveys and established monumentation, which served as supplemental points to original USC&GS station monuments. In addition, the U.S.C.G. had placed two GPS stations on Annette Island.

The control stations used for this project included, but were not limited to;

- USC&GS Stations, YELLOW, CAS, ECC RAD 58 and SPUR.
- US Coast Guard Stations "ANNE A" and "ANNE B"
- Corp of Engineers Station "S. END W. BW (1981)"

The horizontal coordinate points submitted are NAD 83 terms.

VERTICAL CONTROL;

The base Vertical Control point utilized was USC&GS Tidal Bench Mark, "Tidal 13". This point was also a GPS Vertical Station by NOAA. In other areas, we utilized tidal observation as a check to known stations with elevation such as the Corps of Engineers Station, "S. End W. Break Water".

The vertical datum base was USC&GS – Southeast Alaska – 26, Tidal Bench Marks. As stated, the principal point was Bench Mark 13 (1969) with an accepted elevation of 20.05 M.L.L.W. The Metlakatla, Port Chester, Annette Island datums are;

MHHW	14.60
MHW	13.70
MTL (MSL)	7.60
MLW	1.50
MLLW	0.00

PHOTOGRAMMETRIC CONTROL POINTS:

Eleven photogrammetric control points were marked on provided photographs. Because GPS methods were used, some of the "picture points" chosen could not be surveyed to due to; roof height; construction obstacles of other sorts; identified buildings destroyed or for other reasons. This report and the attached photographs reflect some of our substitutions. We have marked on aerial photographs 9-3, 10-6 and 10-8 the picture points surveyed.

The following is our description of picture points;

Picture Point 301 – The roof building outlined in the photograph was 35' above the ground surface. When roof lines are this far above the ground, GPS receiver cannot reach them, as our cables are not high enough.

Therefore, we substituted the southeast corner of the transfer bridge for the Alaska Marine Highway's ferry system in Annette Island as a picture point.

Picture Point 302 – This picture point was the southwest corner of the MEA Generator Building. This could not be used for the same reasons as in Picture Point 301.

In its place, the center of the most northeasterly fuel tank at the east end of the fuel tank site was used. See photograph and field book sketch.

Picture Point 410 – This is an "extra point" in case either of our substituted 301 or 302 points were not acceptable. This point is the northwest corner of the dock leading to the float ramp for the east small boat harbor.

Picture Point 303 – The building outlined by the photogrammetrist also had an extremely high roof and could not be used by GPS methods.

In its place, the most northerly quonset hut's northwest corner was used. There is of a row of quonset huts. See photographs and field book sketch.

Picture Point 304 – The multi-family housing building was deemed unfeasible to locate due to the height of the roof and the limits of the GPS cables. Therefore a portion of a *remaining dock was used as a substitute. Picture Point 304 became the northwest* corner at the timber dock remains on the west side of Tamgas Harbor. See photograph and field book sketch.

Picture Point 305- This was the large hangar at Annette Island Airport. The hangar roof was in excess of 40' above ground. Although we could access it, it was deemed unsafe to walk on. Therefore, three other photo identifiable points were located.

Picture Point 405 – This is the northwest corner of a concrete slab on a FAA/Weather Service (balloon launch) building (a white dome on building) halfway between the Annette Island Hangar and the main north/south runway. The building is immediately north of the taxiway. See photograph and field book sketch.

Picture Point 406 – This is the southwest corner of the runway stripping marker of the north/south runway (30/12). See photograph marking and field book sketch.

Picture Point 419 – This is the northwest corner of the letter "O" in runway marking 30.

Picture Point 306 – This is the northwest corner of the chosen building. However, the building is collapsed and the foundation corner was used. See photograph and field book.

Picture Point 307 – *This building chosen by the photogrammetrist has been rashed. The* building pads and access roads remain. We substituted roadway centerline or pad center points 413, 414, 415, 416 and 417 as a series of replacements.

Picture Point 308 – This building is a quonset hut. We used the northeast corner of the quonset hut as the control point. See photograph and field book sketch.

Picture Point 309 – This building was a circular structure, we assumed used to support a tower. We first used the center of the circular structure. Please see the still photographs as to how this was done with static GPS. The session did not "come-out". We returned to Annette Island but could not access this point with our RTK/GPS (danger of losing it). Therefore, two substitutes were used.

Picture Point 411 – This is the south (center) end of a gun turret rail in front of the building. See photographs and field book sketch.

Picture Point 412 – This is the north (center) end of the same gun turret base and rail.

Picture Point 310 – This is the center of the road as chosen by the photogrammertrist. See photograph and sketch.

Picture Point 311 – this is the northeast corner of the first residential house of the weather services housing project as outlined by the photogrammertrist. Please see photograph.

Picture Point 418 – Because P.P. 307 was not available and due to the "looseness" of P.P. 413 and 417, Picture Point 418 was obtained. It is the northeast corner of the most southerly quonset hut in a series of such buildings. See photographs and field sketch.

Please be advised that Point 309, 308 and 406 were accomplished by Static Survey Methods. All other points, including 406, were accomplished by Kidimatic Methods. Points 309 and 308 did not compute. Thus, they were redone with RTK/GPS methods.

CLOSURE

If there are questions, please do not hesitate to contact us at your convenience.

Sincerely,

R & M ENGINEERING, INC.

Malcolm A. Menzies, P.E., L.S.

MAMLCR5 06/05/00 07:37:25

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1,209,099.580	3,118,479.860	0.00	SPOT 1913
2	1,210,756.050	3,123,358.440	0.00	VIL 1913
3	1,208,764.300	3,127,107.270	0.00	PORT CHESTER NW
4	1,209,656.150	3,119,074.120	0.00	MEYLAKATLA NORTH
5	1,200,266.610	3,125,843.823	563.54	YELLOW
6	1,207,153.730	3,127,978.100	0.00	PORT CHESTER SE
7	1,194,307.340	3,121,435.870	0.00	A POINT-FOREST 1
8	1,199,561.300	3,115,953.550	0.00	MEYLAKATLA SOUTH
9	1,194,340.740	3,121,143.810	0.00	FOREST
10	1,209,317.990	3,124,708.930	20.05	945 0314 TIDAL 1
11	1,160,529.350	3,116,971.220	0.00	DAVIS
12	1,154,042.680	3,123,440.250	0.00	COW 1914
13	1,161,869.830	3,119,171.180	0.00	RAD 1958
14	1,161,848.100	3,119,154.050	44.48	RAD ECC 1958
15	1,167,042.390	3,110,867.360	0.00	DUNCAN
16	1,183,863.280	3,118,019.490	0.00	A POINT-ANN 1959
17	1,183,590.010	3,117,922.490	0.00	ANN
18	1,188,024.420	3,118,193.400	0.00	AIS1
19	1,188,285.300	3,119,546.920	0.00	ANNE USGS A
20	1,188,676.290	3,117,969.940	69.63	ANNE USGS B
21	1,187,957.480	3,119,263.510	0.00	AIS2
22	1,209,159.980	3,130,619.660	0.00	CAS 1913
23	1,213,823.980	3,128,366.980	0.00	C OF E "ROCK"
24	1,203,931.500	3,129,760.690	35.50	ROEL 1
25	1,206,076.760	3,129,396.840	27.00	ROEL 2
26	1,164,700.830	3,127,568.070	0.00	FEL
27	1,164,659.400	3,133,240.600	0.00	HARRIS
28	1,183,560.720	3,137,575.600	0.00	2" BRASS CAP
29	1,184,554.300	3,137,382.900	21.30	3-1/2" BRASS CAP
30	1,210,546.760	3,121,261.930	23.31	COR S.END W.E.W.
99	1,181,710.928	3,122,235.280	131.24	BASE PT
100	1,178,097.078	3,124,150.031	107.68	AIRPORT PANEL
101	0.000	0.000	0.00	BASE PT
301	1,206,092.526	3,129,588.050	24.88	S.E.COR.FRY.BRGE
302	1,207,280.569	3,126,854.749	87.49	CTR.END N.E.TANK
303	1,194,639.260	3,123,540.893	159.70	N.W.COR.QUOS.HUT
304	1,186,985.975	3,130,816.739	25.10	N.W.COR.DOCK REM
306	1,174,012.684	3,126,288.324	79.61	N.W.COR.BLDG.
308	1,163,713.039	3,118,633.719	33.02	N.E.COR.Q HUT
310	1,177,626.151	3,116,694.250	76.85	CTR.END OF RD.
311	1,187,634.811	3,118,975.671	91.64	N.E.COR.HOUSE
325	1,178,853.593	3,127,608.204	98.72	C.O.E.MON.CASE
405	1,177,230.354	3,124,037.244	106.65	COR.CONC.PAD
406	1,177,787.987	3,124,368.845	105.22	S.W.COR.PAINT L.
410	1,209,459.920	3,124,679.237	21.17	N.W.COR.DOCK
411	1,161,845.498	3,119,177.099	44.85	S.END GUN RAIL
412	1,161,868.417	3,119,151.296	44.88	N.END GUN RAIVVY
413	1,169,804.113	3,120,554.135	94.44	C.L.RD.AT PAD
414	1,169,956.638	3,120,504.283	96.17	C.L.RD.AT PAD
415	1,170,110.267	3,120,549.412	96.04	CTR.PAD
416	1,170,218.818	3,120,500.406	97.64	CTR.PAD
417	1,170,333.280	3,120,160.393	76.28	C.L. ROADS
418	1,173,159.258	3,124,501.739	82.19	N.E.COR.Q.HUT
419	1,175,422.444	3,125,803.730	99.18	COR.O IN 30 RW
420	1,175,422.433	3,125,803.704	99.19	COR.O IN 30 RW

mam2.RWS 06/05/00 07:37:39

JOB:Name: 001730	Date: 05-22-2000	Time: 14:07:54				
M Setup:North Azimuth	Units: US ft.	Scale: 1.000000	Curvature: Off	Angle: Degrees		
Note: Date: 05-22-2000 Time: 14:08:05.66						
Note: Date: 05-22-2000 Time: 14:54:16.49						
Store:Point: 1	North: 1,209,099.580	East: 3,118,479.860	Elev: 0.00	SPOT 1913		
Note: Date: 05-24-2000 Time: 11:54:03.58						
Store:Point: 20	North: 1,188,676.290	East: 3,117,969.940	Elev: 70.16	ANNE USGS B		
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 0.000						
Note: Date: 05-24-2000 Time: 15:24:31.78						
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966						
Note: -8:23:25.50,Get base position at BASE: LA55.022964842,LN-131.343842328,HT144.7238						
Note: 15:24:38.20,Set Base receiver position, Base Pt: 100						
Base P:Point: 100	Lat: 55.022964842	Lng: -131.343842328	Ell Ht: 144.72			
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966						
Note: 15:24:59.24,Set Base receiver position, Base Pt: 100						
Base P:Point: 100	Lat: 55.022964842	Lng: -131.343842328	Ell Ht: 144.72			
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966						
Note: -8:28:54.50,Get base position at BASE: LA55.022963260,LN-131.343841702,HT139.8879						
Note: 15:33:18.07,Set Base receiver position, Base Pt: 100						
Base P:Point: 100	Lat: 55.022963260	Lng: -131.343841702	Ell Ht: 139.89			
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966						
Note: -8:32:42.50,Get base position at BASE: LA55.022962813,LN-131.343844165,HT133.7494						
Note: Date: 05-24-2000 Time: 15:48:22.37						
Store:Point: 20	North: 1,188,676.290	East: 3,117,969.940	Elev: 69.63	ANNE USGS B		
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 0.000						
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 0.000						
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996						
Note: Send Base position to Rover:LA55.022962813,LN-131.343844165,HT133.7494						
Note: 15:51:38.40,Set Base receiver position, Base Pt: 100						
Base P:Point: 100	Lat: 55.022962813	Lng: -131.343844165	Ell Ht: 133.75			
Epoch:Time: -8:52:31.00	Lat: 55.041570157	Lng: -131.361903080	Ell Ht: 88.78	H RMS: 0.02	V RMS: 0.02	H DO
Note: -8:52:31.00,Add cntrl pt: 20,LA= 55.041570157,LN= -131.361903080,HT= 88.7753,--H,V						
Note: Date: 05-24-2000 Time: 16:20:43.60						
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996						
Note: Send Base position to Rover:LA55.022962813,LN-131.343844165,HT133.7494						
Note: 16:20:45.58,Set Base receiver position, Base Pt: 100						
Base P:Point: 100	Lat: 55.022962813	Lng: -131.343844165	Ell Ht: 133.75			
Note: 16:21:09.69,Solve for local Horizontal transformation, RMS N: 0.0000, RMS E: 0.0000						
H Cntl:Point: 20	Lat: 55.041570157	Lng: -131.361903080	Ell Ht: 88.78	H,V		
Note: 16:21:11.72,Solve for local Vertical transformation, RMS ELV: 0.0000						
V Cntl:Point: 20	Lat: 55.041570157	Lng: -131.361903080	Ell Ht: 88.78	H,V		
H Trns:Point: 100	LcTrans a: 3.280833333	b : 0.000000000	c : 2,795,742.665838309	d : 849,830.118523773	Sc:1.000000000	Rt:0.(
V Trns:Point: 100	Ht a : 0.000000000	Ht b : 0.000000000	Ht c : -19.145271534	B Lat: 55.022962813	B Lng: -131.343844165	B Ell
Store:Point: 10	North: 1,209,317.990	East: 3,124,708.930	Elev: 20.05	945 0314 TIDAL 1		
Note: 16:31:21.39,Solve for local Horizontal transformation, RMS N: 0.0000, RMS E: 0.0000						
H Cntl:Point: 20	Lat: 55.041570157	Lng: -131.361903080	Ell Ht: 88.78	H,V		
Note: 16:31:25.35,Solve for local Vertical transformation, RMS ELV: 0.0000						
V Cntl:Point: 20	Lat: 55.041570157	Lng: -131.361903080	Ell Ht: 88.78	H,V		
H Trns:Point: 100	LcTrans a: 3.280833333	b : 0.000000000	c : 2,795,742.665838309	d : 849,830.118523773	Sc:1.000000000	Rt:0.(
V Trns:Point: 100	Ht a : 0.000000000	Ht b : 0.000000000	Ht c : -19.145271534	B Lat: 55.022962813	B Lng: -131.343844165	B Ell
Note: Date: 05-25-2000 Time: 06:17:50.38						
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966						
Note: 06:18:03.02,Set Base receiver position, Base Pt: 101						
Base P:Point: 101	Lat: 55.022962813	Lng: -131.343844165	Ell Ht: 133.75			
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966						
Note: 7:17:11.50,Get base position at BASE: LA55.050868435,LN-131.343674273,HT199.3038						
Note: 06:18:25.32,Set Base receiver position, Base Pt: 101						

Base P:Point: 101 Lat: 55.050868435 Lng: -131.343674273 Ell Ht: 199.30
Note: Date: 05-25-2000 Time: 06:37:19.03
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996
Note: Send Base position to Rover:LA55.050868435,LN-131.343674273,HT199.3038
Note: 06:37:20.79,Set Base receiver position, Base Pt: 101

Base P:Point: 101 Lat: 55.050868435 Lng: -131.343674273 Ell Ht: 199.30
/ Trns:Point: 101 LcTrans a: 3.280833333 b : 0.000000000 c : 2,795,742.665838309 d : 849,830.118523773 Sc:1.000000000 Rt:0.0
/ Trns:Point: 101 Ht a : 0.000000000 Ht b : 0.000000000 Ht c : -19.145271534 B Lat: 55.050868435 B Lng: -131.343674273 B Ell
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996
Note: Send Base position to Rover:LA55.050868435,LN-131.343674273,HT199.3038

Note: 06:39:52.49,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050868435 Lng: -131.343674273 Ell Ht: 199.30
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996
Note: Date: 05-25-2000 Time: 07:27:10.71
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966

Note: 07:27:12.80,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050868435 Lng: -131.343674273 Ell Ht: 199.30
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966
Note: 8:26:16.50,Get base position at BASE: LA55.050861238,LN-131.343681559,HT196.7906
Note: 07:27:28.29,Set Base receiver position, Base Pt: 101

Base P:Point: 101 Lat: 55.050861238 Lng: -131.343681559 Ell Ht: 196.79
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966
Note: 07:28:48.87,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050861238 Lng: -131.343681559 Ell Ht: 196.79
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966

Note: 8:29:37.50,Get base position at BASE: LA55.050861072,LN-131.343682513,HT195.9507
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966
Note: 07:30:59.31,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050861072 Lng: -131.343682513 Ell Ht: 195.95
Note: Set BASE : record intrvl: 10.0, elev cutoff: 10 deg, antenna ht: 6.966

Note: 07:31:53.42,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050861072 Lng: -131.343682513 Ell Ht: 195.95
Note: Set BASE : record intrvl: 10.0, elev cutoff: 10 deg, antenna ht: 6.966
Note: 8:30:56.50,Get base position at BASE: LA55.050861171,LN-131.343682476,HT197.1056
Note: 07:32:06.87,Set Base receiver position, Base Pt: 101

Base P:Point: 101 Lat: 55.050861171 Lng: -131.343682476 Ell Ht: 197.11
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966
Note: 07:33:36.13,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050861171 Lng: -131.343682476 Ell Ht: 197.11
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966

Note: 8:32:46.00,Get base position at BASE: LA55.050861830,LN-131.343683728,HT197.2926
Note: 07:33:59.14,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050861830 Lng: -131.343683728 Ell Ht: 197.29
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966
Note: 07:36:06.62,Set Base receiver position, Base Pt: 101

Base P:Point: 101 Lat: 55.050861830 Lng: -131.343683728 Ell Ht: 197.29
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.966
Note: 8:35:15.50,Get base position at BASE: LA55.050858152,LN-131.343681073,HT204.1955
Note: 07:36:27.11,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050858152 Lng: -131.343681073 Ell Ht: 204.20

Note: Date: 05-25-2000 Time: 07:46:53.37
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996
Note: Send Base position to Rover:LA55.050858152,LN-131.343681073,HT204.1955
Note: 07:46:55.24,Set Base receiver position, Base Pt: 101
Base P:Point: 101 Lat: 55.050858152 Lng: -131.343681073 Ell Ht: 204.20

Trns:Point: 101 LcTrans a: 3.280833333 b : 0.000000000 c : 2,795,742.665838309 d : 849,830.118523773 Sc:1.000000000 Rt:0.0
Trns:Point: 101 Ht a : 0.000000000 Ht b : 0.000000000 Ht c : -19.145271534 B Lat: 55.050858152 B Lng: -131.343681073 B Ell

mam2.RW5 06/05/00 07:37:40

H Trns:Point: 101 LeTrans a: 3.280833333 b : 0.000000000 c : 2,795,742.665838309 d : 849,830.118523773 Sc:1.000000000 Rt:0.(
V Trns:Point: 101 Ht a : 0.000000000 Ht b : 0.000000000 Ht c : -19.145271534 B Lat: 55.050858152 B Lng: -131.343681073 B El
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 6.996
Note: Send Base position to Rover:LA55.050858152,LN-131.343681073,HT204.1955
Note: 07:57:45.94,Set Base receiver position, Base Pt: 101

Base P:Point: 101 Lat: 55.050858152 Lng: -131.343681073 Ell Ht: 204.20
Note: Date: 05-25-2000 Time: 08:58:31.45
Note: 17:57:23.00,Static start: ROEL, store 0.0 mins, intrvl 10 s.,SATs used: 10, HDOP: 1.00, Free mem: 7687 KB,--ROEL 1
Epoch:Time: 9:57:23.00 Lat: 55.070191375 Lng: -131.324739240 Ell Ht: 33.69 H RMS: 12.52 V RMS: 45.21 H DOI
Note: 17:57:25.00,Static end: ROEL

Note: 17:59:25.00,Static start: ROEL, store 0.0 mins, intrvl 10 s.,SATs used: 10, HDOP: 1.00, Free mem: 7682 KB,--ROEL 1
Epoch:Time: 9:59:25.00 Lat: 55.070190816 Lng: -131.324739129 Ell Ht: 33.78 H RMS: 13.14 V RMS: 45.82 H DOI
Note: 17:59:27.00,Static end: ROEL
Note: 17:59:38.50,Static start: ROEL, store 0.0 mins, intrvl 10 s.,SATs used: 10, HDOP: 1.00, Free mem: 7681 KB,--ROEL 1
Epoch:Time: 9:59:38.50 Lat: 55.070190764 Lng: -131.324739106 Ell Ht: 34.31 H RMS: 13.28 V RMS: 45.95 H DOI

Note: 17:59:40.00,Static end: ROEL
Note: Set BASE : record intrvl: 10.0, elev cutoff: 10 deg, antenna ht: 6.966
Note: 09:02:44.06,Set Base receiver position, Base Pt: 24
Base P:Point: 24 Lat: 55.050858152 Lng: -131.343681073 Ell Ht: 204.20
Note: Set BASE : record intrvl: 10.0, elev cutoff: 10 deg, antenna ht: 6.966

Note: 10: 1:57.50,Get base position at BASE: LA55.070191075,LN-131.324736489,HT24.5272
Note: 09:03:11.63,Set Base receiver position, Base Pt: 24
Base P:Point: 24 Lat: 55.070191075 Lng: -131.324736489 Ell Ht: 24.53
Note: Date: 05-25-2000 Time: 09:25:01.38
Note: 18:23:40.00,Static start: TIDE, store 0.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7832 KB,--TIDAL 13

Epoch:Time: 10:23:40.00 Lat: 55.073676537 Lng: -131.341243361 Ell Ht: -4.66 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 18:23:48.00,Static end: TIDE
Note: 18:25:6.00,Static start: TIDE, store 35.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7828 KB,--TIDAL 13
Epoch:Time: 10:25:6.00 Lat: 55.073679734 Lng: -131.341238321 Ell Ht: 3.96 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 0: 0:0.00,Static end: TIDE

Note: 18:29:29.00,Static start: TIDE, store 35.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7818 KB,--TIDAL 13
Epoch:Time: 10:29:29.00 Lat: 55.073676310 Lng: -131.341236668 Ell Ht: 3.09 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 0:29:37.00,Static end: TIDE
Note: 18:31:12.00,Static start: TIDE, store 35.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7812 KB,--TIDAL 13
Epoch:Time: 10:31:12.00 Lat: 55.073677258 Lng: -131.341237817 Ell Ht: -1.02 H RMS: 0.00 V RMS: 0.00 H DOI

Note: 0:31:28.00,Static end: TIDE
Note: 18:32:46.00,Static start: TIDE, store 30.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7807 KB,--TIDAL 13
Epoch:Time: 10:32:46.00 Lat: 55.073676431 Lng: -131.341238056 Ell Ht: -2.16 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 0: 0:0.00,Static end: TIDE
Note: 18:33:16.00,Static start: TIDE, store 30.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7805 KB,--TIDAL 13

Epoch:Time: 10:33:16.00 Lat: 55.073676702 Lng: -131.341238647 Ell Ht: -3.53 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 0: 0:0.00,Static end: TIDE
Note: 18:33:40.00,Static start: TIDE, store 30.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7803 KB,--TIDAL 13
Epoch:Time: 10:33:40.00 Lat: 55.073676175 Lng: -131.341239702 Ell Ht: -2.47 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 0:33:45.00,Static end: TIDE

Note: 18:34:8.00,Static start: TIDE, store 30.0 mins, intrvl 10 s.,SATs used: 0, HDOP: 0.00, Free mem: 7801 KB,--TIDAL 13
Epoch:Time: 10:34:8.00 Lat: 55.073676168 Lng: -131.341239558 Ell Ht: -1.49 H RMS: 0.00 V RMS: 0.00 H DOI
Note: 0: 6:11.00,Static end: TIDE
Note: Date: 05-25-2000 Time: 11:12:26.83
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 4.743

Note: 11:12:37.27,Set Base receiver position, Base Pt: 5
Base P:Point: 5 Lat: 55.070191075 Lng: -131.324736489 Ell Ht: 24.53
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 4.743
Note: 12:11:48.00,Get base position at BASE: LA55.060798114,LN-131.343242884,HT581.6859
Note: 11:13:00.94,Set Base receiver position, Base Pt: 5

Base P:Point: 5 Lat: 55.060798114 Lng: -131.343242884 Ell Ht: 581.69
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 4.743

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Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 4.743
Note: 12:14:55.50,Get base position at BASE: LA55.060807636,LN-131.343226091,HT598.6248
Note: 11:16:14.94,Set Base receiver position, Base Pt: 5
Base P:Point: 5          Lat: 55.060807636      Lng: -131.343226091   Ell Ht: 598.62
Note:  Date: 05-25-2000  Time: 11:46:40.39

Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Send Base position to Rover:LA55.060807636,LN-131.343226091,HT598.6248
Note: 11:46:42.48,Set Base receiver position, Base Pt: 5
Base P:Point: 5          Lat: 55.060807636      Lng: -131.343226091   Ell Ht: 598.62
Epoch:Time: 12:47:19.00  Lat: 55.041562922      Lng: -131.361915990   Ell Ht: 104.17     H RMS: 0.02     V RMS: 0.03     H DOI

Note: 12:47:19.00,Add cntrl pt: 20,LA= 55.041562922,LN= -131.361915990,HT= 104.1710,--H,V
Epoch:Time: 12:48:56.00  Lat: 55.041562914      Lng: -131.361916009   Ell Ht: 104.17     H RMS: 0.03     V RMS: 0.04     H DOI
Note: 12:48:56.00,Add cntrl pt: 20,LA= 55.041562914,LN= -131.361916009,HT= 104.1678,--H,V
Note:  Date: 05-25-2000  Time: 12:07:22.58
Epoch:Time: 13: 6:11.00  Lat: 55.073700699      Lng: -131.341266462   Ell Ht: 55.45      H RMS: 0.03     V RMS: 0.05     H DOI

Note: 13: 6:11.00,Add cntrl pt: 10,LA= 55.073700699,LN= -131.341266462,HT= 55.4474,--H,V
Epoch:Time: 13:13:9.00   Lat: 55.070209287      Lng: -131.324758767   Ell Ht: 70.91      H RMS: 0.03     V RMS: 0.05     H DOI
Note: 13:13:9.00,Add cntrl pt: 24,LA= 55.070209287,LN= -131.324758767,HT= 70.9099,--H,V
Epoch:Time: 13:15:42.00  Lat: 55.070209282      Lng: -131.324758757   Ell Ht: 70.92      H RMS: 0.03     V RMS: 0.05     H DOI
Note: 13:15:42.00,Add cntrl pt: 24,LA= 55.070209282,LN= -131.324758757,HT= 70.9165,--H,V

Note:  Date: 05-25-2000  Time: 13:00:53.03
Epoch:Time: 13:59:41.00  Lat: 55.070209266      Lng: -131.324758700   Ell Ht: 70.94      H RMS: 0.03     V RMS: 0.05     H DOI
Note: 13:59:41.00,Add cntrl pt: 24,LA= 55.070209266,LN= -131.324758700,HT= 70.9428,--H,V
Note: 13:01:01.44,Solve for local Horizontal transformation, RMS N: 0.9817, RMS E: 0.4061
H Cntl:Point: 20         Lat: 55.041562914      Lng: -131.361916009   Ell Ht: 104.17     H,V

H Cntl:Point: 10         Lat: 55.073700699      Lng: -131.341266462   Ell Ht: 55.45      H,V
H Cntl:Point: 24         Lat: 55.070209266      Lng: -131.324758700   Ell Ht: 70.94      H,V
Note: 13:01:04.35,Solve for local Vertical transformation, RMS ELV: 0.0000
V Cntl:Point: 20         Lat: 55.041562914      Lng: -131.361916009   Ell Ht: 104.17     H,V
V Cntl:Point: 10         Lat: 55.073700699      Lng: -131.341266462   Ell Ht: 55.45      H,V

V Cntl:Point: 24         Lat: 55.070209266      Lng: -131.324758700   Ell Ht: 70.94      H,V
H Trns:Point: 5          LcTrans a: 3.279119511 b : -0.099681956      e : 2,805,900.073588607  d : 862,386.475485312  Sc:0.999939328  Rt:-1.
V Trns:Point: 5          Ht a : -0.000102464    Ht b : -0.000101122   Ht c : -14.725136402  B Lat: 55.060807636  B Lng: -131.343226091  B Ell
Note:  Date: 05-25-2000  Time: 13:16:27.87
Epoch:Time: 14:15:15.00  Lat: 55.073700753      Lng: -131.341266434   Ell Ht: 55.45      H RMS: 0.03     V RMS: 0.04     H DOI

Note: 14:15:15.00,Add cntrl pt: 10,LA= 55.073700753,LN= -131.341266434,HT= 55.4507,--H,V
Note: 13:16:32.81,Solve for local Horizontal transformation, RMS N: 1.0012, RMS E: 0.4021
H Cntl:Point: 20         Lat: 55.041562914      Lng: -131.361916009   Ell Ht: 104.17     H,V
H Cntl:Point: 10         Lat: 55.073700753      Lng: -131.341266434   Ell Ht: 55.45      H,V
H Cntl:Point: 24         Lat: 55.070209266      Lng: -131.324758700   Ell Ht: 70.94      H,V

Note: 13:16:36.65,Solve for local Vertical transformation, RMS ELV: 0.0000
V Cntl:Point: 20         Lat: 55.041562914      Lng: -131.361916009   Ell Ht: 104.17     H,V
V Cntl:Point: 10         Lat: 55.073700753      Lng: -131.341266434   Ell Ht: 55.45      H,V
V Cntl:Point: 24         Lat: 55.070209266      Lng: -131.324758700   Ell Ht: 70.94      H,V
H Trns:Point: 5          LcTrans a: 3.279114841 b : -0.099682723      e : 2,805,900.613143798  d : 862,386.848952325  Sc:0.999937912  Rt:-1.

V Trns:Point: 5          Ht a : -0.000101035    Ht b : -0.000102163   Ht c : -14.764779531  B Lat: 55.060807636  B Lng: -131.343226091  B Ell
Note:  Date: 05-25-2000  Time: 13:51:52.77
Store:Point: 30          North: 0.000           East: 0.000           Elev: 23.50         COE S.END W.B.W.
Epoch:Time: 14:51:15.00  Lat: 55.074495514      Lng: -131.351266317   Ell Ht: 58.60      H RMS: 0.02     V RMS: 0.03     H DOI
Note: 14:51:15.00,Add cntrl pt: 30,LA= 55.074495514,LN= -131.351266317,HT= 58.6003,--H,V

Note: 13:52:39.95,Solve for local Vertical transformation, RMS ELV: 0.0563
V Cntl:Point: 20         Lat: 55.041562914      Lng: -131.361916009   Ell Ht: 104.17     H,V
V Cntl:Point: 10         Lat: 55.073700753      Lng: -131.341266434   Ell Ht: 55.45      H,V
V Cntl:Point: 24         Lat: 55.070209266      Lng: -131.324758700   Ell Ht: 70.94      H,V
V Cntl:Point: 30         Lat: 55.074495514      Lng: -131.351266317   Ell Ht: 58.60      H,V

V Trns:Point: 5          LcTrans a: 3.279114841 b : -0.099682723      c : 2,805,900.613143798  d : 862,386.848952325  Sc:0.999937912  Rt:-1.
V Trns:Point: 5          Ht a : -0.000159083    Ht b : -0.000067457   Ht c : -12.416260539  B Lat: 55.060807636  B Lng: -131.343226091  B Ell
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Note: Date: 05-25-2000 Time: 14:09:39.53						
Epoch:Time: 15: 8:28.00	Lat: 55.041562907	Lng: -131.361915878	Ell Ht: 104.16	H RMS: 0.02	V RMS: 0.02	H DOI
Note: 15: 8:28.00,Add cntrl pt: 20,LA= 55.041562907,LN= -131.361915878,HT= 104.1645,--H,V						
Note: 14:10:37.92,Solve for local Horizontal transformation, RMS N: 496874.8119, RMS E: 1225623.2051						
H Cntl:Point: 20	Lat: 55.041562907	Lng: -131.361915878	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
Note: 14:10:40.83,Solve for local Vertical transformation, RMS ELV: 0.0563						
V Cntl:Point: 20	Lat: 55.041562907	Lng: -131.361915878	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
H Trns:Point: 5	LcTrans a: -11.476800717	b : -199.668781315	c : 23,653,160.862493701	d : -17,886,434.241176572	Sc:60.959618384	Rt:-9
V Trns:Point: 5	Ht a : -0.000159326	Ht b : -0.000067910	Ht c : -12.345388109	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Epoch:Time: 15:10:12.00	Lat: 55.041562920	Lng: -131.361915898	Ell Ht: 104.14	H RMS: 0.02	V RMS: 0.03	H DOI
Note: 15:10:12.00,Add cntrl pt: 20,LA= 55.041562920,LN= -131.361915898,HT= 104.1382,--H,V						
Note: 14:11:34.00,Solve for local Horizontal transformation, RMS N: 496874.9378, RMS E: 1225623.2239						
H Cntl:Point: 20	Lat: 55.041562920	Lng: -131.361915898	Ell Ht: 104.14	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
Note: 14:11:36.91,Solve for local Vertical transformation, RMS ELV: 0.0558						
V Cntl:Point: 20	Lat: 55.041562920	Lng: -131.361915898	Ell Ht: 104.14	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
H Trns:Point: 5	LcTrans a: -11.476853443	b : -199.668792638	c : 23,653,167.457530499	d : -17,886,429.861218572	Sc:60.959622751	Rt:-9
V Trns:Point: 5	Ht a : -0.000161265	Ht b : -0.000071536	Ht c : -11.779041635	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Epoch:Time: 15:15:29.00	Lat: 55.041562902	Lng: -131.361915996	Ell Ht: 104.16	H RMS: 0.03	V RMS: 0.04	H DOI
Note: 15:15:29.00,Add cntrl pt: 20,LA= 55.041562902,LN= -131.361915996,HT= 104.1612,--H,V						
Epoch:Time: 15:15:50.00	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H RMS: 0.02	V RMS: 0.04	H DOI
Note: 15:15:50.00,Add cntrl pt: 20,LA= 55.041562901,LN= -131.361916003,HT= 104.1645,--H,V						
Note: 14:17:13.11,Solve for local Horizontal transformation, RMS N: 496875.0018, RMS E: 1225623.6793						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
Note: 14:17:14.97,Solve for local Vertical transformation, RMS ELV: 0.0563						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
H Trns:Point: 5	LcTrans a: -11.477272439	b : -199.668096093	c : 23,653,138.633422598	d : -17,886,317.052202400	Sc:60.959418123	Rt:-9
V Trns:Point: 5	Ht a : -0.000159326	Ht b : -0.000067910	Ht c : -12.345468143	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: Date: 05-25-2000 Time: 14:54:12.97						
Epoch:Time: 15:53:1.00	Lat: 55.022955576	Lng: -131.343857009	Ell Ht: 142.08	H RMS: 0.04	V RMS: 0.06	H DOI
GPS:Point: 100	North: 987,951.995	East: 3,889,129.837	Elev: 107.49	AIRPORT PANEL		
Note: Date: 05-25-2000 Time: 15:49:25.86						
Epoch:Time: -8:48:17.00	Lat: 55.022104990	Lng: -131.344095680	Ell Ht: 141.02	H RMS: 0.02	V RMS: 0.03	H DOI
GPS:Point: 405	North: 982,506.588	East: 3,942,134.748	Elev: 106.46	COR.CONC.PAD		
Note: Date: 05-25-2000 Time: 16:27:00.94						
Epoch:Time: -7:25:52.00	Lat: 55.070374443	Lng: -131.325047266	Ell Ht: 60.32	H RMS: 0.05	V RMS: 0.07	H DOI
GPS:Point: 301	North: 1,273,225.339	East: 2,174,100.822	Elev: 24.85	S.E.COR.FRY.BRGE		
Note: Date: 05-25-2000 Time: 17:36:45.33						
Epoch:Time: -6:35:36.00	Lat: 55.071627662	Lng: -131.333683276	Ell Ht: 122.89	H RMS: 0.02	V RMS: 0.05	H DOI
GPS:Point: 302	North: 1,104,697.960	East: 2,106,203.658	Elev: 87.52	CTR.END N.E.TANK		

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Note:  Date: 05-25-2000  Time: 18:15:06.04
Epoch:Time: -5:13:56.00   Lat: 55.051272292    Lng: -131.344040268   Ell Ht: 194.60    H RMS: 0.05    V RMS: 0.08    H DOI
GPS:Point: 303            North: 923,575.963   East: 2,882,037.001   Elev: 159.67      N.W.COR.QUOS.HUT
Note:  Date: 05-26-2000  Time: 08:09:54.64
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 4.743

Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 4.743
Note: 08:10:26.16,Set Base receiver position, Base Pt: 5
Base P:Point: 5           Lat: 55.060807636    Lng: -131.343226091   Ell Ht: 598.62
Note:  Date: 05-26-2000  Time: 10:17:16.26
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000

Note: Send Base position to Rover:LA55.060807636,LN-131.343226091,HT598.6248
Note: 10:17:18.78,Set Base receiver position, Base Pt: 5
Base P:Point: 5           Lat: 55.060807636    Lng: -131.343226091   Ell Ht: 598.62
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 10.400
Note: Send Base position to Rover:LA55.060807636,LN-131.343226091,HT598.6248

Note: 10:32:02.86,Set Base receiver position, Base Pt: 5
Base P:Point: 5           Lat: 55.060807636    Lng: -131.343226091   Ell Ht: 598.62
Note:  Date: 05-26-2000  Time: 10:38:45.91
Epoch:Time: 11:37:36.00   Lat: 55.040506870    Lng: -131.360243431   Ell Ht: 126.17    H RMS: 0.09    V RMS: 0.09    H DOI
GPS:Point: 311            North: 656,907.324   East: 3,316,416.430   Elev: 91.61       N.E.COR.HOUSE

Epoch:Time: 11:49:11.00   Lat: 55.041131073    Lng: -131.355228265   Ell Ht: 124.51    H RMS: 0.03    V RMS: 0.04    H DOI
Note: 11:49:11.00,Add cntrl pt: 19,LA= 55.041131073,LN= -131.355228265,HT= 124.5079,--H,V
Note: 10:50:28.35,Solve for local Horizontal transformation, RMS N: 412537.4006, RMS E: 1121463.8019
H Cntl:Point: 20          Lat: 55.041562901    Lng: -131.361916003   Ell Ht: 104.16    H,V
H Cntl:Point: 10          Lat: 55.073700753    Lng: -131.341266434   Ell Ht: 55.45     H,V

H Cntl:Point: 24          Lat: 55.070209266    Lng: -131.324758700   Ell Ht: 70.94     H,V
H Cntl:Point: 30          Lat: 55.074495514    Lng: -131.351266317   Ell Ht: 58.60     H,V
H Cntl:Point: 19          Lat: 55.041131073    Lng: -131.355228265   Ell Ht: 124.51    H,V
Note: 10:50:31.20,Solve for local Vertical transformation, RMS ELV: 28.2704
V Cntl:Point: 20          Lat: 55.041562901    Lng: -131.361916003   Ell Ht: 104.16    H,V

V Cntl:Point: 10          Lat: 55.073700753    Lng: -131.341266434   Ell Ht: 55.45     H,V
V Cntl:Point: 24          Lat: 55.070209266    Lng: -131.324758700   Ell Ht: 70.94     H,V
V Cntl:Point: 30          Lat: 55.074495514    Lng: -131.351266317   Ell Ht: 58.60     H,V
V Cntl:Point: 19          Lat: 55.041131073    Lng: -131.355228265   Ell Ht: 124.51    H,V
H Trns:Point: 5           LcTrans a: -42.621115169  b : -179.108325236   c : 24,667,536.869316749   d : -12,621,908.355943630   Sc:56.116723960   Rt:-1(

V Trns:Point: 5           Ht a : -0.001744381  Ht b : 0.007861938   Ht c : -665.909264890   B Lat: 55.060807636   B Lng: -131.343226091   B Ell
Note:  Date: 05-26-2000  Time: 11:13:37.03
Epoch:Time: 12:12:26.00   Lat: 55.022712782    Lng: -131.364673655   Ell Ht: 107.36    H RMS: 0.03    V RMS: 0.04    H DOI
GPS:Point: 310            North: 890,280.138   East: 3,820,017.686   Elev: 3.66        CTR.END OF RD.
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000

Note: Send Base position to Rover:LA55.060807636,LN-131.343226091,HT598.6248
Note: 11:17:31.34,Set Base receiver position, Base Pt: 5
Base P:Point: 5           Lat: 55.060807636    Lng: -131.343226091   Ell Ht: 598.62
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Send Base position to Rover:LA55.060807636,LN-131.343226091,HT598.6248

Note: 11:23:14.13,Set Base receiver position, Base Pt: 5
Base P:Point: 5           Lat: 55.060807636    Lng: -131.343226091   Ell Ht: 598.62
Note:  Date: 05-26-2000  Time: 12:23:43.66
Epoch:Time: 13:22:29.00   Lat: 55.022712839    Lng: -131.364673637   Ell Ht: 110.80    H RMS: 0.03    V RMS: 0.05    H DOI
GPS:Point: 310            North: 890,279.980   East: 3,820,014.403   Elev: 7.10        CTR.END OF RD.

Note:  Date: 05-26-2000  Time: 13:38:13.66
Epoch:Time: 14:37:4.00    Lat: 55.022624781    Lng: -131.343498737   Ell Ht: 139.63    H RMS: 0.03    V RMS: 0.05    H DOI
GPS:Point: 406            North: 1,310,509.691 East: 3,725,289.182   Elev: 31.63       S.W.COR.PAINT L.
Note:  Date: 05-26-2000  Time: 14:03:10.66
Epoch:Time: 15: 2:1.00    Lat: 55.014867260    Lng: -131.340405481   Ell Ht: 113.96    H RMS: 0.04    V RMS: 0.07    H DOI

GPS:Point: 306            North: 1,458,440.324 East: 3,909,981.429   Elev: -4.13       N.W.COR.BLDG.
Note:  Date: 05-26-2000  Time: 15:25:29.67
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Epoch:Time: -8:24:19.00	Lat: 55.035512419	Lng: -131.323948291	Ell Ht: 60.00	H RMS: 0.02	V RMS: 0.02	H DOI
GPS:Point: 304	North: 1,560,509.043	East: 3,145,585.410	Elev: -29.97	N.W.COR.DOCK REM		
Note: Date: 05-26-2000 Time: 16:02:22.23						
Epoch:Time: -7: 1:12.00	Lat: 55.023597052	Lng: -131.333883940	Ell Ht: 133.26	H RMS: 0.02	V RMS: 0.03	H DOI
GPS:Point: 325	North: 1,476,265.420	East: 3,628,926.748	Elev: 25.89	C.O.E.MON.CASE		
Note: Date: 05-31-2000 Time: 10:03:09.85						
Note: Date: 05-31-2000 Time: 10:03:57.03						
Note: Date: 05-31-2000 Time: 14:26:29.72						
Note: 14:26:29.72,Solve for local Horizontal transformation, RMS N: 0.8907, RMS E: 0.3356						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Cntl:Point: 19	Lat: 55.041131073	Lng: -131.355228265	Ell Ht: 124.51	H,V		
Note: 14:26:36.59,Solve for local Vertical transformation, RMS ELV: 28.2704						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
V Cntl:Point: 19	Lat: 55.041131073	Lng: -131.355228265	Ell Ht: 124.51	H,V		
H Trns:Point: 5	LcTrans a: 3.279141374	b : -0.099655992	c : 2,805,895.196171347	d : 862,386.828382692	Sc:0.999945748	Rt:-1.
V Trns:Point: 5	Ht a : -0.001744381	Ht b : 0.007861938	Ht c : -665.909264890	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Store:Point: 14	North: 1,161,848.100	East: 3,119,154.050	Elev: 44.48	RAD ECC 1958		
Note: 14:39:54.16,Solve for local Horizontal transformation, RMS N: 0.8907, RMS E: 0.3356						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Cntl:Point: 19	Lat: 55.041131073	Lng: -131.355228265	Ell Ht: 124.51	H,V		
Note: 14:39:56.08,Solve for local Vertical transformation, RMS ELV: 28.2704						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
V Cntl:Point: 19	Lat: 55.041131073	Lng: -131.355228265	Ell Ht: 124.51	H,V		
H Trns:Point: 5	LcTrans a: 3.279141374	b : -0.099655992	c : 2,805,895.196171347	d : 862,386.828382692	Sc:0.999945748	Rt:-1.
V Trns:Point: 5	Ht a : -0.001744381	Ht b : 0.007861938	Ht c : -665.909264890	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: Date: 05-31-2000 Time: 14:47:34.11						
Note: 14:47:34.05,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
Note: 14:47:36.08,Solve for local Vertical transformation, RMS ELV: 0.0563						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000159326	Ht b : -0.000067910	Ht c : -12.345468143	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Store:Point: 30	North: 1,210,546.760	East: 3,121,261.930	Elev: 23.31	COE S.END W.B.W.		
Note: 14:50:11.25,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
Note: 14:50:12.29,Solve for local Vertical transformation, RMS ELV: 0.0072						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		

H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: 14:51:03.48,Solve for local Horizontal transformation, RMS N: 197.9246, RMS E: 70.0661						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
Note: 14:51:05.35,Solve for local Vertical transformation, RMS ELV: 0.0072						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	H,V		
H Trns:Point: 5	LcTrans a: 3.308158272	b : -0.086808967	c : 2,801,715.248866129	d : 860,871.845295294	Sc:1.008675758	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: 14:51:39.90,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
Note: 14:51:41.93,Solve for local Vertical transformation, RMS ELV: 0.0072						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: Date: 05-31-2000 Time: 14:54:22.42						
Note: Date: 05-31-2000 Time: 14:55:13.89						
Note: 15:03:57.77,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: 15:04:33.03,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
Note: 15:04:35.01,Solve for local Vertical transformation, RMS ELV: 0.0072						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: Date: 05-31-2000 Time: 15:15:46.69						
Note: 15:15:46.63,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010						
H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
Note: 15:15:48.61,Solve for local Vertical transformation, RMS ELV: 0.0072						
V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell
Note: Date: 05-31-2000 Time: 15:22:58.62						

Note: Date: 06-01-2000 Time: 12:44:22.45
Note: Date: 06-01-2000 Time: 13:57:28.03
Note: Date: 06-01-2000 Time: 13:58:30.04
Note: Date: 06-01-2000 Time: 13:59:17.44
Note: Date: 06-01-2000 Time: 14:00:58.29

Note: Date: 06-01-2000 Time: 14:02:04.75
Note: Date: 06-02-2000 Time: 09:13:37.94
Note: 09:13:37.89,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010

H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		

Note: 09:13:39.87,Solve for local Vertical transformation, RMS ELV: 0.0072

V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999935487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell

Note: Recompute coordinates with the latest localization coefficients.
Note: Date: 06-02-2000 Time: 09:21:17.34

Note: Date: 06-02-2000 Time: 10:59:02.51

Store:Point: 5	North: 1,200,268.080	East: 3,123,843.869	Elev: 563.54	YELLOW

Note: Date: 06-02-2000 Time: 15:04:57.14
Note: 15:07:19.12,Solve for local Horizontal transformation, RMS N: 1.0014, RMS E: 0.4010

H Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
H Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
H Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		

Note: 15:07:21.16,Solve for local Vertical transformation, RMS ELV: 0.0072

V Cntl:Point: 20	Lat: 55.041562901	Lng: -131.361916003	Ell Ht: 104.16	H,V		
V Cntl:Point: 10	Lat: 55.073700753	Lng: -131.341266434	Ell Ht: 55.45	H,V		
V Cntl:Point: 24	Lat: 55.070209266	Lng: -131.324758700	Ell Ht: 70.94	H,V		
V Cntl:Point: 30	Lat: 55.074495514	Lng: -131.351266317	Ell Ht: 58.60	V		
H Trns:Point: 5	LcTrans a: 3.279113490	b : -0.099681312	c : 2,805,900.605428528	d : 862,387.130037146	Sc:0.999937487	Rt:-1.
V Trns:Point: 5	Ht a : -0.000108756	Ht b : -0.000098145	Ht c : -14.391419385	B Lat: 55.060807636	B Lng: -131.343226091	B Ell

Note: Date: 06-03-2000 Time: 09:38:46.36

Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 09:41:26.53,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.060807636 Lng: -131.343226091 Ell Ht: 598.62
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 10:41:2.00,Get base position at BASE: LA55.030620599,LN-131.351018454,HT107.2752

Note: 09:42:27.55,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030620599 Lng: -131.351018454 Ell Ht: 107.28
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 09:48:50.16,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030620599 Lng: -131.351018454 Ell Ht: 107.28

Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 10:48:21.50,Get base position at BASE: LA55.030623967,LN-131.351036508,HT123.6170
Note: 09:49:41.62,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030623967 Lng: -131.351036508 Ell Ht: 123.62
Note: Date: 06-03-2000 Time: 10:48:40.36

Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Send Base position to Rover:LA55.030623967,LN-131.351036508,HT123.6170
Note: 10:48:42.29,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030623967 Lng: -131.351036508 Ell Ht: 123.62
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000

Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000

Note: Send Base position to Rover:LA55.030623967,LN-131.351036508,HT123.6170
Note: 10:52:37.26,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030623967 Lng: -131.351036508 Ell Ht: 123.62
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Date: 06-03-2000 Time: 11:42:05.49

Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064

Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 11:54:56.53,Set Base receiver position, Base Pt: 99

Base P:Point: 99 Lat: 55.030623967 Lng: -131.351036508 Ell Ht: 123.62
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 12:54:7.50,Get base position at BASE: LA55.030576088,LN-131.350929621,HT134.9359
Note: 11:55:27.07,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030576088 Lng: -131.350929621 Ell Ht: 134.94

Note: Date: 06-03-2000 Time: 12:05:34.44
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Send Base position to Rover:LA55.030576088,LN-131.350929621,HT134.9359
Note: 12:05:36.19,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030576088 Lng: -131.350929621 Ell Ht: 134.94

Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Send Base position to Rover:LA55.030576088,LN-131.350929621,HT134.9359
Note: 12:06:38.70,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030576088 Lng: -131.350929621 Ell Ht: 134.94

Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064
Note: 12:12:35.60,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030576088 Lng: -131.350929621 Ell Ht: 134.94
Note: Set BASE : record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 5.064

Note: 13:11:43.00,Get base position at BASE: LA55.030571753,LN-131.350911626,HT105.6479
Note: 12:13:03.62,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030571753 Lng: -131.350911626 Ell Ht: 105.65
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: Send Base position to Rover:LA55.030571753,LN-131.350911626,HT105.6479

Note: 12:16:40.96,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030571753 Lng: -131.350911626 Ell Ht: 105.65
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000
Note: 13:15:33.00,Get base position at ROVER: LA55.030571753,LN-131.350911626,HT105.6479
Note: Send Base position to Rover:LA55.030571753,LN-131.350911626,HT105.6479

Note: 12:17:31.43,Set Base receiver position, Base Pt: 99
Base P:Point: 99 Lat: 55.030571753 Lng: -131.350911626 Ell Ht: 105.65
Epoch:Time: 13:17:14.00 Lat: 55.022623755 Lng: -131.343456139 Ell Ht: 79.54 H RMS: 0.02 V RMS: 0.02 H DO
Note: 13:17:14.00,Add cntrl pt: 406,LA= 55.022623755,LN= -131.343456139,HT= 79.5418,--H,V
Note: Date: 06-03-2000 Time: 12:35:20.56

Epoch:Time: 13:33:59.00 Lat: 55.041561885 Lng: -131.361873324 Ell Ht: 44.08 H RMS: 0.02 V RMS: 0.03 H DO
Note: 13:33:59.00,Add cntrl pt: 20,LA= 55.041561885,LN= -131.361873324,HT= 44.0793,--H,V
Note: 12:35:26.43,Solve for local Horizontal transformation, RMS N: 0.0000, RMS E: 0.0000
H Cntl:Point: 20 Lat: 55.041561885 Lng: -131.361873324 Ell Ht: 44.08 H,V
H Cntl:Point: 406 Lat: 55.022623755 Lng: -131.343456139 Ell Ht: 79.54 H,V

Note: 12:35:29.29,Solve for local Vertical transformation, RMS ELV: 0.0000
V Cntl:Point: 20 Lat: 55.041561885 Lng: -131.361873324 Ell Ht: 44.08 H,V

V Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
H Trns:Point: 99	LcTrans a: 3.279127542	b : -0.099303881	c : 2,804,253.072177793	d : 843,867.114570496	Sc:0.999938279	Rt:-1.
V Trns:Point: 99	Ht a : 0.000016332	Ht b : -0.000029878	Ht c : 26.990093614	B Lat: 55.030571753	B Lng: -131.350911626	B Ell
Note: Date: 06-03-2000 Time: 12:51:23.24						
Note: 12:51:23.18,Solve for local Horizontal transformation, RMS N: 0.0000, RMS E: 0.0000						
H Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
H Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
Note: 12:51:27.30,Solve for local Vertical transformation, RMS ELV: 0.0000						
V Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
V Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
H Trns:Point: 99	LcTrans a: 3.279127542	b : -0.099303881	c : 2,804,253.072177793	d : 843,867.114570496	Sc:0.999938279	Rt:-1.
V Trns:Point: 99	Ht a : 0.000016332	Ht b : -0.000029878	Ht c : 26.990093614	B Lat: 55.030571753	B Lng: -131.350911626	B Ell
Note: Date: 06-03-2000 Time: 13:10:15.09						
Epoch:Time: 14: 8:56.00	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H RMS: 0.03	V RMS: 0.04	H DOI
Note: 14: 8:56.00,Add cntrl pt: 24,LA= 55.070208262,LN= -131.324715886,HT= 10.8215,--H,V						
Note: 13:10:21.18,Solve for local Horizontal transformation, RMS N: 0.2014, RMS E: 0.0879						
H Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
H Cntl:Point: 24	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H,V		
H Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
Note: 13:10:23.00,Solve for local Vertical transformation, RMS ELV: 0.0000						
V Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
V Cntl:Point: 24	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H,V		
V Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
H Trns:Point: 99	LcTrans a: 3.279254054	b : -0.099290105	c : 2,804,239.106883585	d : 843,855.833200723	Sc:0.999976696	Rt:-1.
V Trns:Point: 99	Ht a : -0.000102416	Ht b : -0.000094787	Ht c : 45.349402300	B Lat: 55.030571753	B Lng: -131.350911626	B Ell
Epoch:Time: 14:19:3.00	Lat: 55.073699766	Lng: -131.341223760	Ell Ht: -4.51	H RMS: 0.05	V RMS: 0.07	H DOI
Note: 14:19:3.00,Add cntrl pt: 10,LA= 55.073699766,LN= -131.341223760,HT= -4.5066,--H,V						
Note: 13:20:27.94,Solve for local Horizontal transformation, RMS N: 0.8664, RMS E: 0.3751						
H Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
H Cntl:Point: 10	Lat: 55.073699766	Lng: -131.341223760	Ell Ht: -4.51	H,V		
H Cntl:Point: 24	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H,V		
H Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
Note: 13:20:30.80,Solve for local Vertical transformation, RMS ELV: 0.0554						
V Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
V Cntl:Point: 10	Lat: 55.073699766	Lng: -131.341223760	Ell Ht: -4.51	H,V		
V Cntl:Point: 24	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H,V		
V Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
H Trns:Point: 99	LcTrans a: 3.279113217	b : -0.099202783	c : 2,804,244.508671239	d : 843,878.712277493	Sc:0.999932983	Rt:-1.
V Trns:Point: 99	Ht a : -0.000084796	Ht b : -0.000110201	Ht c : 45.136651295	B Lat: 55.030571753	B Lng: -131.350911626	B Ell
Note: Date: 06-03-2000 Time: 13:26:22.21						
Epoch:Time: 14:25:5.00	Lat: 55.073839354	Lng: -131.341266396	Ell Ht: -3.45	H RMS: 0.03	V RMS: 0.05	H DOI
GPS:Point: 410	North: 1,209,459.920	East: 3,124,679.237	Elev: 21.17	N.W.COR.DOCK		
Note: Date: 06-03-2000 Time: 14:01:50.52						
Epoch:Time: 15: 0:29.00	Lat: 54.595091319	Lng: -131.361221478	Ell Ht: 18.24	H RMS: 0.02	V RMS: 0.03	H DOI
Note: 15: 0:29.00,Add cntrl pt: 14,LA= 54.595091319,LN= -131.361221478,HT= 18.2362,--H,V						
Note: 14:01:56.07,Solve for local Horizontal transformation, RMS N: 0.9529, RMS E: 0.3541						
H Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
H Cntl:Point: 10	Lat: 55.073699766	Lng: -131.341223760	Ell Ht: -4.51	H,V		
H Cntl:Point: 24	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H,V		
H Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
H Cntl:Point: 14	Lat: 54.595091319	Lng: -131.361221478	Ell Ht: 18.24	H,V		
Note: 14:01:58.93,Solve for local Vertical transformation, RMS ELV: 0.0634						
V Cntl:Point: 20	Lat: 55.041561885	Lng: -131.361873324	Ell Ht: 44.08	H,V		
V Cntl:Point: 10	Lat: 55.073699766	Lng: -131.341223760	Ell Ht: -4.51	H,V		
V Cntl:Point: 24	Lat: 55.070208262	Lng: -131.324715886	Ell Ht: 10.82	H,V		
V Cntl:Point: 406	Lat: 55.022623755	Lng: -131.343456139	Ell Ht: 79.54	H,V		
V Cntl:Point: 14	Lat: 54.595091319	Lng: -131.361221478	Ell Ht: 18.24	H,V		

H Trns:Point: 99	LcTrans a: 3.279017920	b : -0.099138875	c : 2,804,247.375648124	d : 843,895.248020828	Sc:0.999903361	Rt:-1.
V Trns:Point: 99	Ht a : -0.000085370	Ht b : -0.000101478	Ht c : 44.273003559	B Lat: 55.030571753	B Lng: -131.350911626	B Elf
Epoch:Time: 15: 6:40.00	Lat: 54.595088762	Lng: -131.361182588	Ell Ht: 18.55	H RMS: 0.03	V RMS: 0.04	H DOI
GPS:Point: 411	North: 1,161,845.498	East: 3,119,177.099	Elev: 44.85	S.END GUN RAIL		
Note: Date: 06-03-2000 Time: 14:17:01.08						
Epoch:Time: 15:15:43.00	Lat: 54.595112107	Lng: -131.361225635	Ell Ht: 18.58	H RMS: 0.03	V RMS: 0.07	H DOI
GPS:Point: 412	North: 1,161,868.417	East: 3,119,151.296	Elev: 44.88	N.END GUN RAIVVV		
Note: Date: 06-03-2000 Time: 14:42:51.62						
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 8.900						
Note: Send Base position to Rover:LA55.030571753,LN-131.350911626,HT105.6479						
Note: 14:42:53.71,Set Base receiver position, Base Pt: 99						
Base P:Point: 99	Lat: 55.030571753	Lng: -131.350911626	Ell Ht: 105.65			
Epoch:Time: 15:47:17.00	Lat: 55.000945228	Lng: -131.362035185	Ell Ht: 6.77	H RMS: 0.02	V RMS: 0.03	H DOI
GPS:Point: 308	North: 1,163,713.029	East: 3,118,623.719	Elev: 33.02	N.E.COR.Q HUT		
Note: Set ROVER: record intrvl: OFF, elev cutoff: 10 deg, antenna ht: 7.000						
Note: Send Base position to Rover:LA55.030571753,LN-131.350911626,HT105.6479						
Note: 14:50:54.86,Set Base receiver position, Base Pt: 99						
Base P:Point: 99	Lat: 55.030571753	Lng: -131.350911626	Ell Ht: 105.65			
Note: Date: 06-03-2000 Time: 15:11:17.94						
Epoch:Time: -8: 9:58.00	Lat: 55.010889795	Lng: -131.354411898	Ell Ht: 68.43	H RMS: 0.06	V RMS: 0.07	H DOI
GPS:Point: 413	North: 1,169,804.113	East: 3,120,554.135	Elev: 94.44	C.L.RD.AT PAD		
Epoch:Time: -8:12:29.00	Lat: 55.011041559	Lng: -131.354489518	Ell Ht: 70.16	H RMS: 0.03	V RMS: 0.04	H DOI
GPS:Point: 414	North: 1,169,956.638	East: 3,120,504.283	Elev: 96.17	C.L.RD.AT PAD		
Epoch:Time: -8:15:37.00	Lat: 55.011191594	Lng: -131.354404181	Ell Ht: 70.05	H RMS: 0.03	V RMS: 0.04	H DOI
GPS:Point: 415	North: 1,170,110.267	East: 3,120,549.422	Elev: 96.04	CTR.PAD		
Epoch:Time: -8:18:10.00	Lat: 55.011300004	Lng: -131.354482636	Ell Ht: 71.64	H RMS: 0.02	V RMS: 0.02	H DOI
GPS:Point: 416	North: 1,170,218.818	East: 3,120,500.406	Elev: 97.64	CTR.PAD		
Epoch:Time: -8:22:7.00	Lat: 55.011422863	Lng: -131.355059828	Ell Ht: 50.28	H RMS: 0.04	V RMS: 0.05	H DOI
GPS:Point: 417	North: 1,170,333.280	East: 3,120,160.393	Elev: 76.28	C.L. ROADS		
Note: Date: 06-03-2000 Time: 15:40:55.99						
Epoch:Time: -8:39:39.00	Lat: 55.014078065	Lng: -131.343467587	Ell Ht: 56.39	H RMS: 0.02	V RMS: 0.02	H DOI
GPS:Point: 418	North: 1,173,159.258	East: 3,124,501.739	Elev: 82.19	N.E.COR.Q.HUT		
Epoch:Time: -8:47:13.00	Lat: 55.020268972	Lng: -131.341116117	Ell Ht: 73.48	H RMS: 0.03	V RMS: 0.04	H DOI
GPS:Point: 419	North: 1,175,422.444	East: 3,125,803.730	Elev: 99.18	COR.0 IN 30 RW		
Epoch:Time: -8:51:45.00	Lat: 55.020268962	Lng: -131.341116162	Ell Ht: 73.49	H RMS: 0.02	V RMS: 0.03	H DOI
GPS:Point: 420	North: 1,175,422.433	East: 3,125,803.704	Elev: 99.19	COR.0 IN 30 RW		
Note: Date: 06-05-2000 Time: 06:35:46.54						

```
39,1181710.9276,3122235.2801,131.24,BASE PT
308,1163713.0288,3118623.7185,33.02,N.E.COR.Q HUT
410,1209459.9195,3124679.2375,21.17,N.W.COR.DOCK
411,1161845.4979,3119177.0988,44.85,S.END GUN RAIL
412,1161868.4166,3119151.2956,44.88,N.END GUN RAIVVV
413,1169804.1130,3120554.1354,94.44,C.L.RD.AT PAD
414,1169956.6383,3120504.2827,96.17,C.L.RD.AT PAD
415,1170110.2674,3120549.4215,96.04,CTR.PAD
416,1170218.8179,3120500.4060,97.64,CTR.PAD
417,1170333.2799,3120160.3933,76.28,C.L. ROADS
418,1173159.2578,3124501.7390,82.19,N.E.COR.Q.HUT
419,1175422.4437,3125803.7299,99.18,COR.0 IN 30 RW
420,1175422.4329,3125803.7042,99.19,COR.0 IN 30 RW
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4/22/70

SOUTHEAST ALASKA - 26

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

TIDAL BENCH MARKS

Metlakatla, Port Chester, Annette Island
Lat. 55°07'.7; Long. 131°34'.0

BENCH MARK 11 (1969) is a standard disk, stamped "BM 11 1969", set in east corner of 5-foot square concrete foundation of 4-foot high transformer housing, about ½ mile east of town of Metlakatla. It is 30 feet west of centerline of gravel road leading to Port of Metlakatla Wharf, 574 feet north of intersection of road to wharf and road leading to cannery cable house, 476 feet southeast of Coast Guard Light at northwest tip of small boat harbor breakwater and 164 feet southwest of southwest corner of wharf warehouse. Elevation: 24.04 feet above mean lower low water.

BENCH MARK 12 (1969) is a standard disk, stamped "BM 12 1969", set in footing of Coast Guard Light LL #2938 at northwest tip of small boat harbor breakwater and 505 feet northwest of centerline of road leading to Port of Metlakatla Wharf. The Coast Guard Light is a white steel structure about 10 feet above the breakwater. Elevation: 23.20 feet above mean lower low water.

BENCH MARK 13 (1969) is a standard disk, stamped "BM 13 1969", set in top of large rock 30 feet northeast of centerline of road leading to cannery cable house. It is 131 feet southeast of entrance to floating dock in small boat harbor and 148 feet northwest of intersection of road to cannery cable house and road to Port of Metlakatla Wharf. Elevation: 20.05 feet above mean lower low water.

Mean lower low water at Metlakatla, Port Chester is based on 2 months of records, August - September 1969, reduced to mean values. Elevations of other tide planes referred to this datum are as follows:

	Feet
Mean higher high water	14.60
Mean high water	13.70
Mean tide level	7.60
Mean low water	1.50
Mean lower low water	0.00

(OVER)

2000

FB # [illegible] TOWN

R & M ENGINEERING, INC.

Juneau ALASKA Ketchikan

LAND & ENGINEERING SURVEYS

OUT OF TOWN

Field Book 2 of

JUNEAU

2000

MEASUREMENT CONVERSIONS

IF YOU KNOW	MULTIPLY BY	* TO FIND
LENGTH		
inches	2.540	centimeters
feet	30.480	centimeters
yards	0.914	meters
miles	1.609	kilometers
millimeters	0.039	inches
centimeters	0.393	inches
meters	3.280	feet
meters	1.093	yards
kilometers	0.621	miles
WEIGHT		
ounces	28.350	grams
pounds	0.453	kilograms
grams	0.035	ounces
kilograms	2.204	pounds
VOLUME		
*fluid ounces	29.573	milliliters
pints	0.473	liters
quarts	0.946	liters
gallons (U.S.)	3.785	liters
milliliters	0.033	fluid ounces
liters	*1.056	quarts
liters	0.264	gallons (U.S.)
TEMPERATURE		
°C = (°F - 32) x .555		
°F = (°C x 1.8) + 32		

Inches	Decimals of foot	Millimeters
1/16	.0052	1.5875
1/8	.0104	3.1750
3/16	.0156	4.7625
1/4	.0208	6.3500
5/16	.0260	7.9350
3/8	.0313	9.5250
1/2	.0417	12.700
5/8	.0521	15.875
3/4	.0625	19.050
7/8	.0729	22.225
1"	.0833	25.400
2"	.1667	50.800
3"	.2500	76.200
4"	.3333	101.60
5"	.4167	127.00
6"	.5000	152.40
7"	.5833	177.80
8"	.6667	203.20
9"	.7500	228.60
10"	.8333	254.00
11"	.9167	279.40
1 foot	1.0000	304.80

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67-70	" " " "	6/3/00

ANGOON – CONT'D

⊼ @ 204 B.S. 202

TOPO = 207, 206, 208,
209, 210, 211,

F.S. 269° 58' 00" 33.00
= 212 N.E. COR

213 SATCH SLOPE
214 SHDLR RD
215 EDGE BKTOP

5.32 (5.2)

⊼ @ 203 B.S. 39
℄
F.S. R/W = 216
269° 58' 66.00

F.S. 217 = S.W. COR CITY HALL
" 218 SE " " "

SAME

SET 1" AL. DRIVE PIPE
w/ 3" CAP

ANNETTE GPS

STA	+	HI	−		ELEV
ANNE LISCG "B"				→	~~70.16~~ 69.63
	4.36			→	
			4.88		
	3.98				
			15.08		
	0.71				
			12.70		
	0.42				
			8.36		
	0.78				
			15.55		
	0.67				
			14.51		
	3.27				
			11.42	→	~~1.93~~
	11.51	13.44			
			1.42		12.02
	12.69	24.71			
			0.31		24.40
	13.82	38.22			
			0.14		38.08
	10.50	48.58			
			0.12		48.46

5/24/00 CLOUDY 45 52

MAM/KC

← STA FOUND AS DESCRIBED

HI. 6:35/24 ~~4.47~~ −0.11 6.02

11.8 + ~~13.1~~ −0.7 ~~12.4~~ 11.1

5/24/00

LOW 11:27AM +1.4

CORR − 0:07 0.0

11:20 +1.4

$\boxed{1.4}$

Tide SHOT @ 11:42AM PST.

STA	+	HI	−	ELEV
	10^{50}			
			0^{12}	~~48.76~~
	11^{31}	59.77		
			0^{57}	~~58.95~~
	12^{09}	71.04		
			2^{02}	~~69.55~~
	5^{47}	75.04		
ANNE	USCG "B"		4^{88}	~~70.16~~
				69.63
	92^{20}		92^{23}	

HI TRIPOD 83.6"
− 6.97'

ANT. RAD = 0.25

SOME

ERROR +0.03

STA	+	H.I.	−	Φ	ELEV.
RAD ECC	58				
	1 36				
			13 22		
	1 21				
			14 53		
	0 34				
			15 26		5 30
	13 21	18 91			
			0 52		18 29
	15 87	34.16			
			0 72		33.44
	12 10	45.54			
RAD ECC			1 06		44 98
	44 29		44 29		

3:30	8.20
45	8.70
4	9.10
4:30	9.9
5:00	10.5
5:30	10.9
6:00	11.1 < 5:50 6:15

SAME

STA FND. w/ DISC BUSTED
ONLY STEM EXISTS

H_2O @ 2:09pm AST

ERROR 0 00

ANNETTE CONT'D

POINT 100 = RANDOM

BASE @ AIRPORT ON

AERIAL PANEL. — SET UP

@ ± 4:20pm w/ 13 SATS.

LOCALIZED ON ANNE

USCG B @ 4:52pm

FIX IN 2min.

POINT No. 20

LOCAL ON ROEL 1

POINT 24

NO RADIO LINK — ? —

TION 13 — PT. 10

Ele 20.05

COULDN'T RECEIVE

SAME

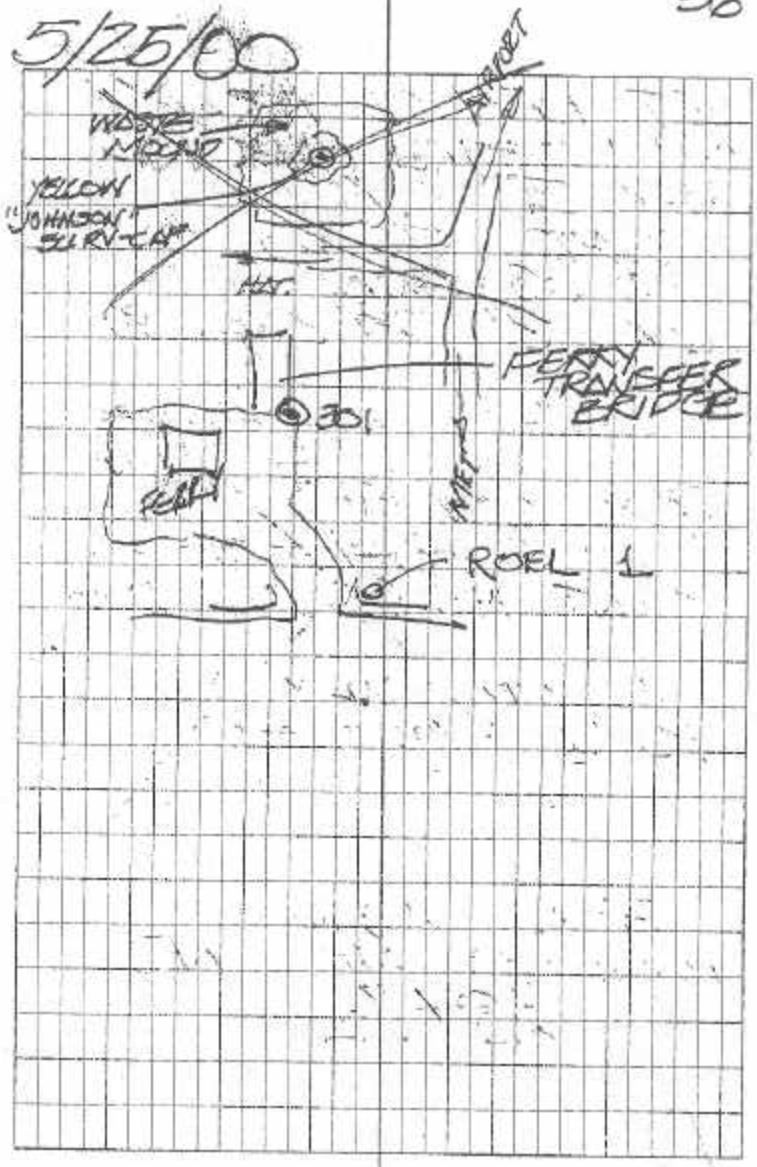
5/25/00

SET NEW CENTRAL PT. ON WASTE MOUND — STARTED @ 7:13 AM CALLED PT. AS 101 — NO SIGNAL — RESTART 8:37 w/SIG.

COULDN'T RECEIVE RADIO — HILLS (?) — GO STATIC ANT. @ ROEL = 83" = 6.92' STARTED @ ±10:10 AM

SET UP ROVER @ TIDAL 13 @ ±10:26 AM

STATIC SESSIONS WOULD NOT RECEIVE ON ROVER



SET BASE @ YELLOW
MTN — PT. 5
H.I. = 57" = 4.75
TIME 12:16 pm
LAT. 55.060807636 N
LNG. 131.343226091 W
Ellip hgt. = 598.625'

ROVER @ ANNE USCG B
TIME ~~12:43~~ pm 3:10 pm
POINT No. 20 N = 1.0012
FIX WAS IMMED. E. 0.4021
.02H / .03V. El. 0.05
SCALE = ~~1.0~~ — ~~0~~ 0.999938
ROT. = 0 — -1.4428

ROVER @ TIDAL 13
POINT 10
TIME ~~1:05~~ pm 1:15 START
~~1:07~~ 2:17 "
.02H .03V
SCALE ~~1.0~~ .999938
ROT. = 0 -1.4428
N = 1.0012
E = 0.4021 El. = 0.0

SAME

ROEL 1 = Pt. 24
TIME ON ~~1:13~~ 1:55 START
FIX ~~2 or 1:14~~ END
SCALE ~~1.0~~ / 999939
ROT. ~~0~~ / -1.4428
N 0.9817 E 0.4061

ROEL 2 = Pt. 25 —
X LOST

PT. 30
COE MON S END W BW
El. 23.5
Scale 0.999938
Rot. -1.4428
N 1.0012 E 0.~~0563~~ 4021
El. 0.0563

STA	+	H.I.	−	Elev.
COE Mon	1.04 / 1.54			
			13.72 / 14.75	
	11.10			
			14.33	
	12.55			
			15.30	4.80
	15.29	20.09		
			0.66	19.43
	8.42	27.85		
COE Mon	48.40		4.35 / 48.36	23.50

2/25/00

S "END" W.B.W

2:40 Tide shot

COE MON S. END W.B.W

NOTE: ANNE B. 2ND TIME POINT 20
N 496875.0
E 1225623.
E. = 0.0563
SCALE 60.959948
ROT -93.1723

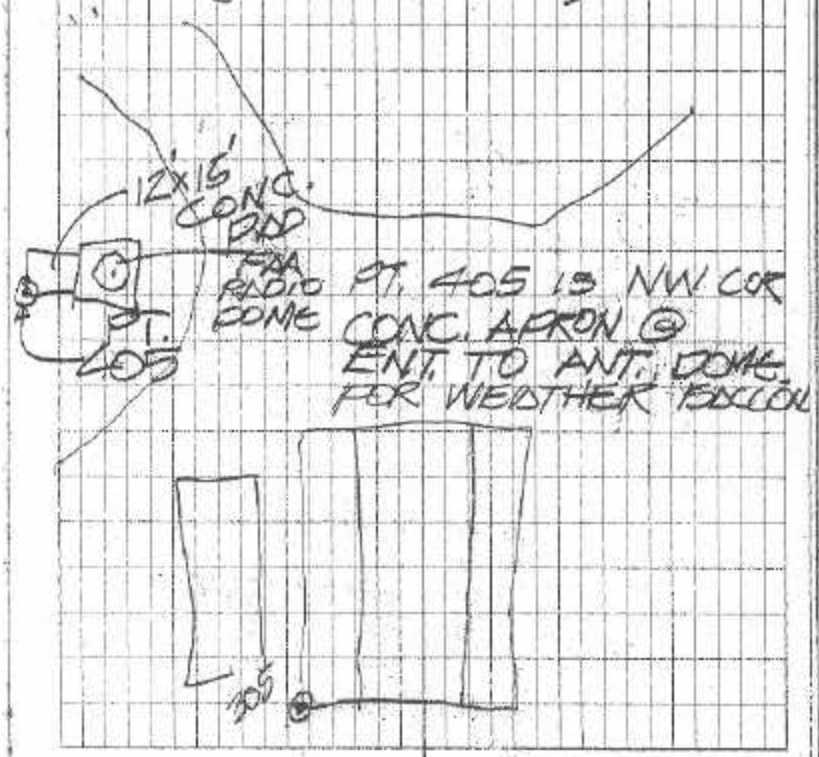
RND ECC 1958
(El. = 49.48) PT. # 14
WOULDN'T REACH

POINT 100 —
PANEL @ AIRPORT

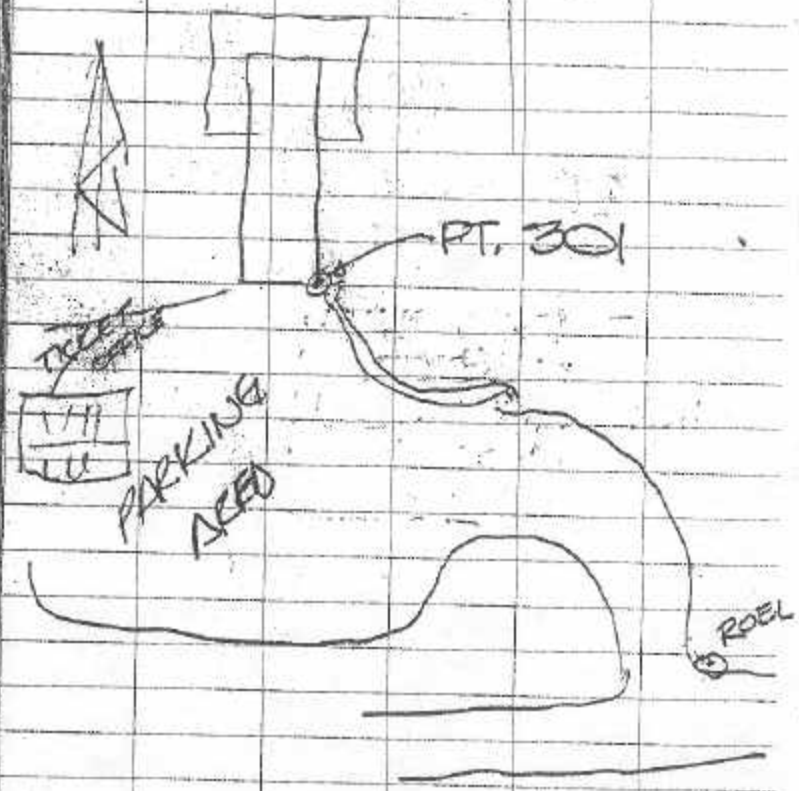
POINT 305
N.W. COR HANGER
@ GD. — COULD NOT
OBTAIN DUE TO ROOF
HGT. / SAFTEY

SAME

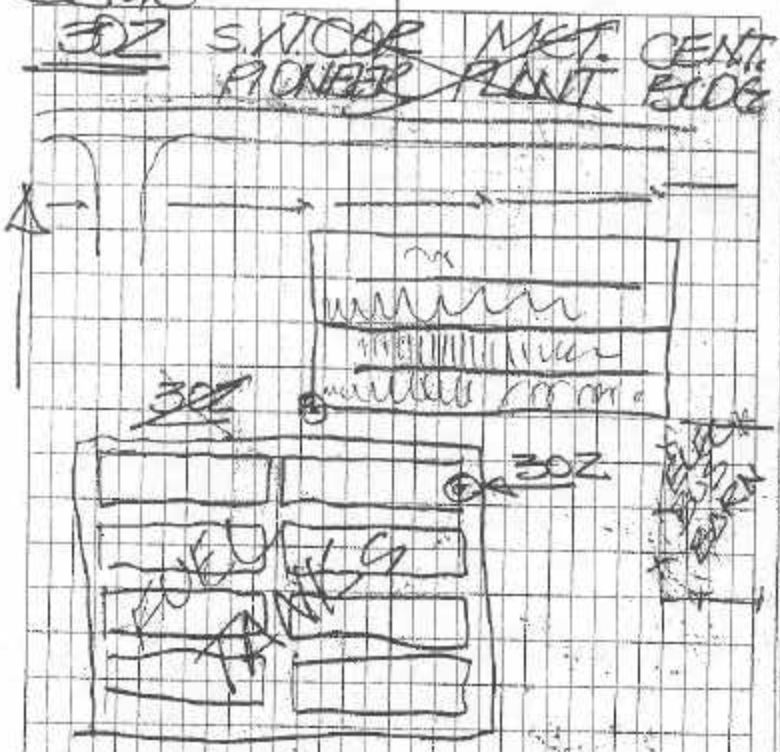
FOR POINT 305 UNIT
COULDN'T BE PLACED
ABOVE ROOF (ROTTEN)
UNIT IS DISK DIA. AWAY
ROOF IS ±3.75 ABOVE
GD. (LOST SAT'S)



PT. 301 "CHANGE"
SE END FERRY TERM
BRIDGE



SAME



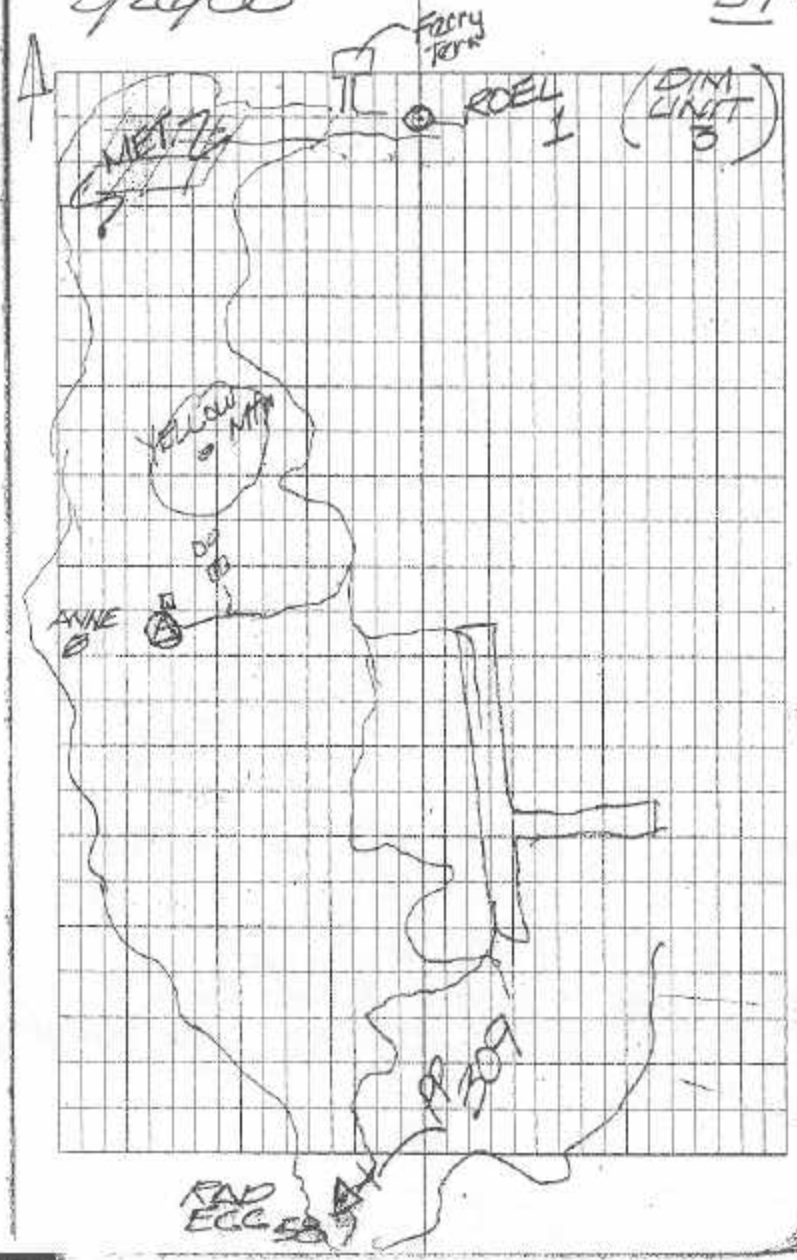
302 = CTR. END N.E.
FUEL TANK

UNIT 3 @ ROEL 1
Hgt = 201.8 cm = 79.3" = 6'6"
ON @ 6:53 AM
OFF @ 8:12

UNIT 2 @ ANNF USCG 'B'
TURN ON 7:25 AM
Hgt. = 201.8 cm = 79.3" = 6.6'
OFF @ 7:57 PM

UNIT 1 @ RAD ECC 58
TURN ON @ 8:10
Hgt = 156 cm = 61.5" = 5'13"
OFF @ 10:23 AM

5/26/00



303—
N.W. COR— 7TH Bldg. &
6TH QUONSET HUT
(LAST IN SERIES OF
3— & SMALLEST)

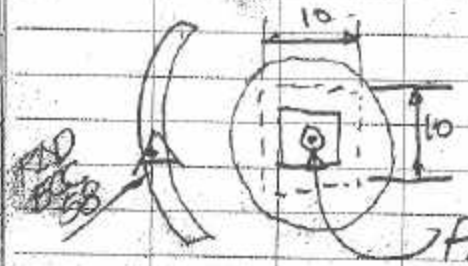
5/25/00 60
SAME DATE / MSM

Hike Up Yellow Mtn. @
7:30 pm for Battery.

YELLOW Mtn Base on
@ 9:09AM

Pt. No. 311 IS PER PHOTO
I.D. - GPS UNIT PLACE 10A
ABOVE GD. & 0.3' ABOVE
NE ROOF COR.

NOTE: FLOOR ISLAB
ELEV. IS 2.1'
LOWER THED
RAD ECC
BLDG FLOOR TO
BTTM ROOF = 12.5
ROOF THICK = 65 (8")
TOP ELEV. = 55.6

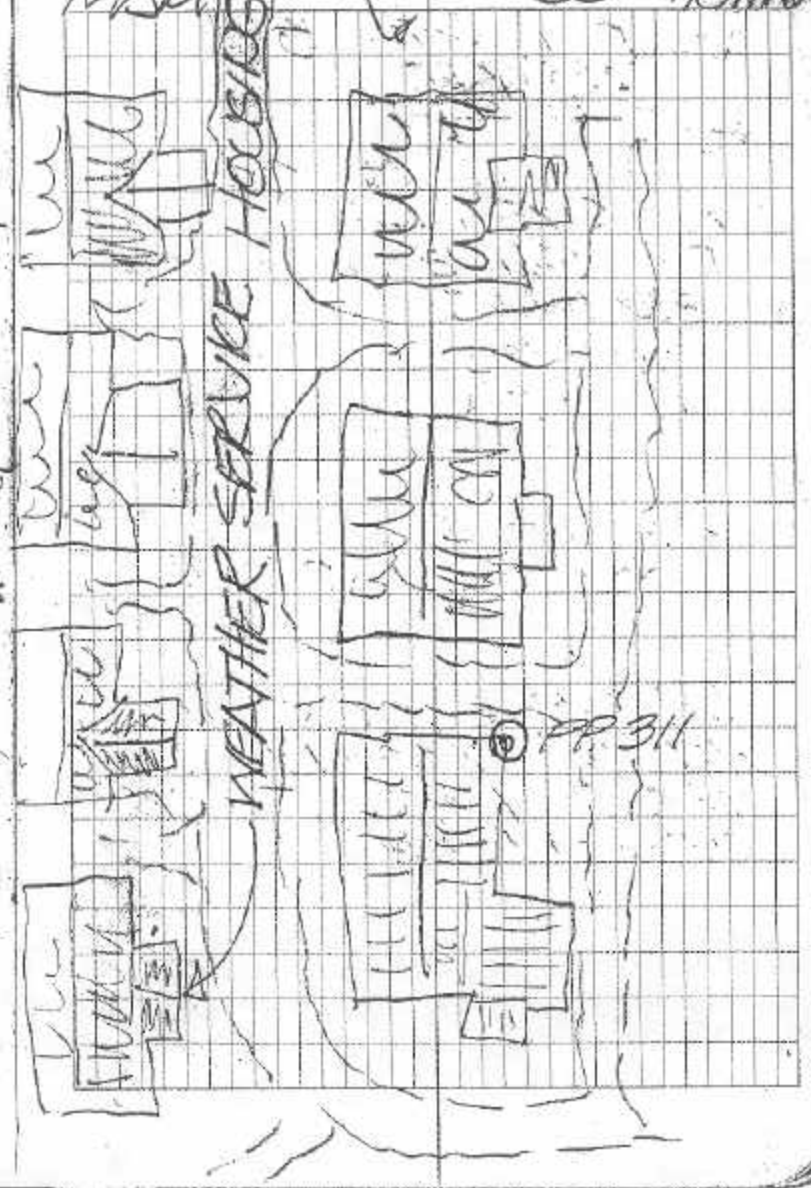


P.P. 309 - ELEV. = 42.4

PP 309 w/ DIM. UNIT 1
CTR OF SQ. 10x10 BLOCK
HSE w/ CIRCULAR TOP
GPS IS THRU CTR OPENING
444 CM ABOVE FLOOR &
1.1" ABOVE CIRCLE TOP
ON @ 10:47AM (do not count
first 10 min. due to climb,
set hgt, etc
OFF @ 2pm

5/26/00
MAM

CLEAR 61
50° +10 WIND



ANNE USCG BA
PT. 19
POINT FIXED @ 11:50 AM
.02 H / .03 V
N = 412.5374
E = 1121.463
E/R = 28.27
SCALE = 56.116724
ROT. = -103.2307

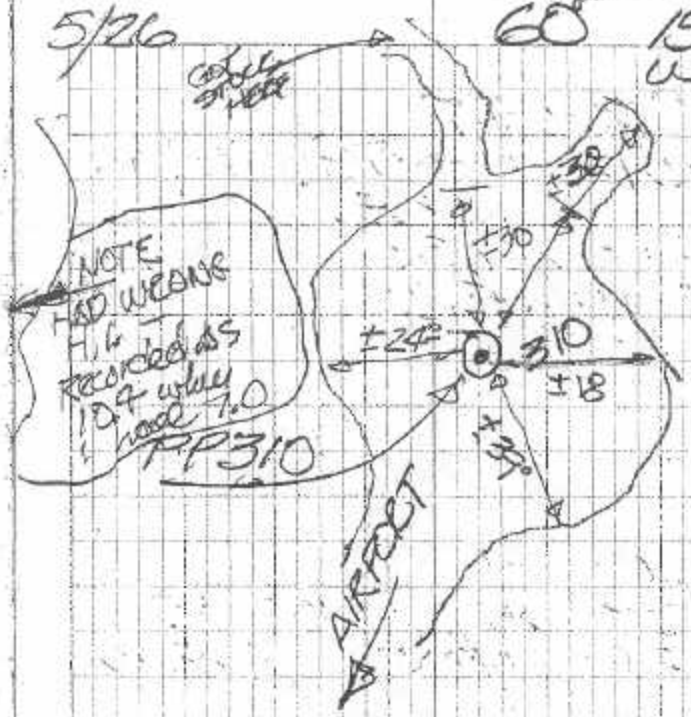
(?)

310 —
CTR END OF RD
START/STOP 12:13 pm

did 310 twice — HAD
WRONG H.I. — HAD 10.4
IN ⊼ WHEN IT WAS
7.0 — RE shot

MAM
5/26

CLEAR 62
60° 15 MPH
WIND

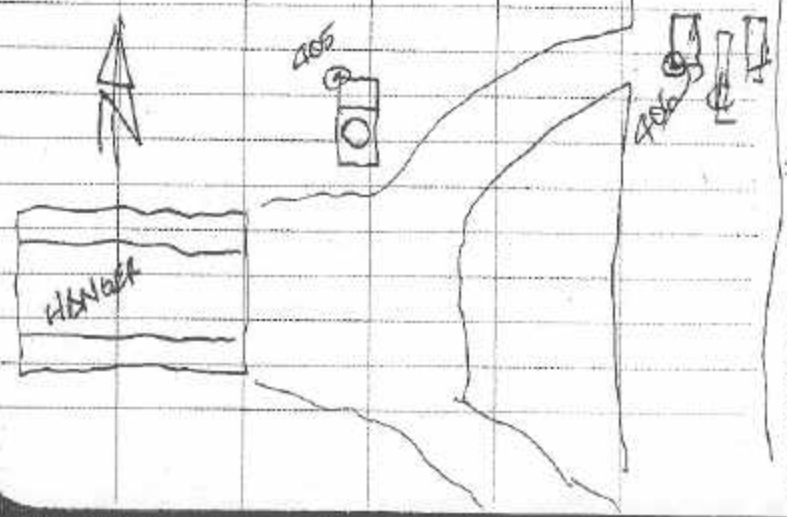


P.P. 308

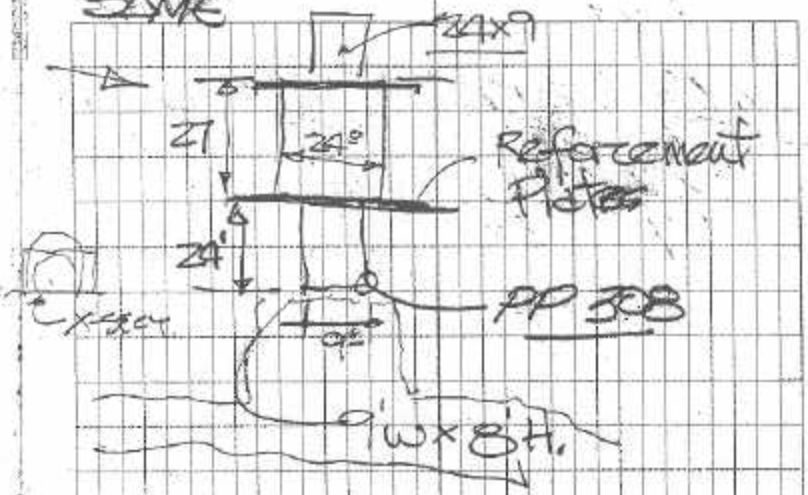
W/DIM. UNIT 1 TIME ON
= 2:15 PM → OFF 3:19 PM
CMT. "LOCKED"
HGT. = 201.8 CM = 6.61
UNIT @ NE COR QU. HUT
RE-SHOT 6/3 W/8.9 HI

P.P. 406

POINT IS SW COR PAINT
STRIP ON MAIN N-S
RUN @ NORTH TAXIWAY



SAME

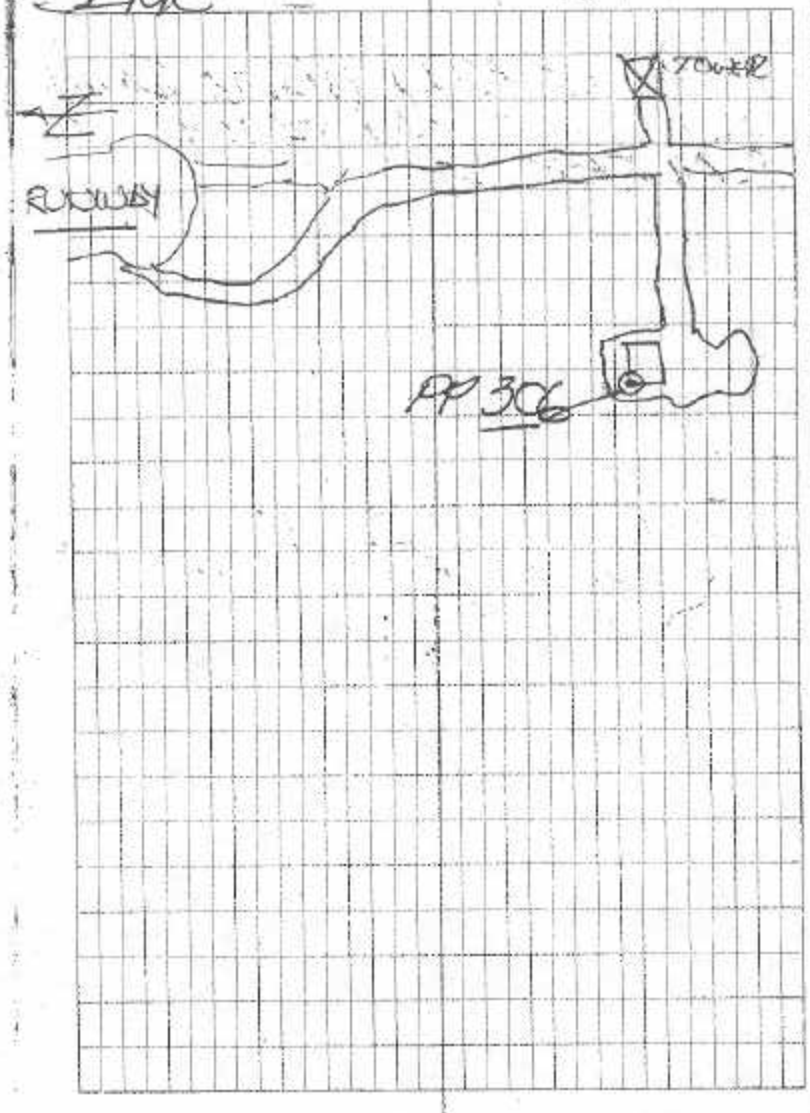


PIC. POINT 306

N.W. Cor. Bldg. (Fallen Down)
@ Ftn. per Mappers
Request
$\phi = 7^{\circ}$

DIM. UNIT 1 PUT ON
P.P. #306 @ 3:34pm
Hgt. = 201.8CM
TIME OFF = 5:06pm

SAME



304 P.P. 4:30pm

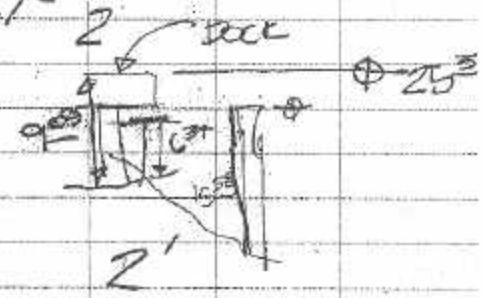
N.W. Cor Dock Remains AS IT X-ING SHOT ROCK CAUSEWAY

Tide 4:30pm 5/26 —— +7.0

+15.58 22.58

-6.34 18.3

Dock 9.09 27.4

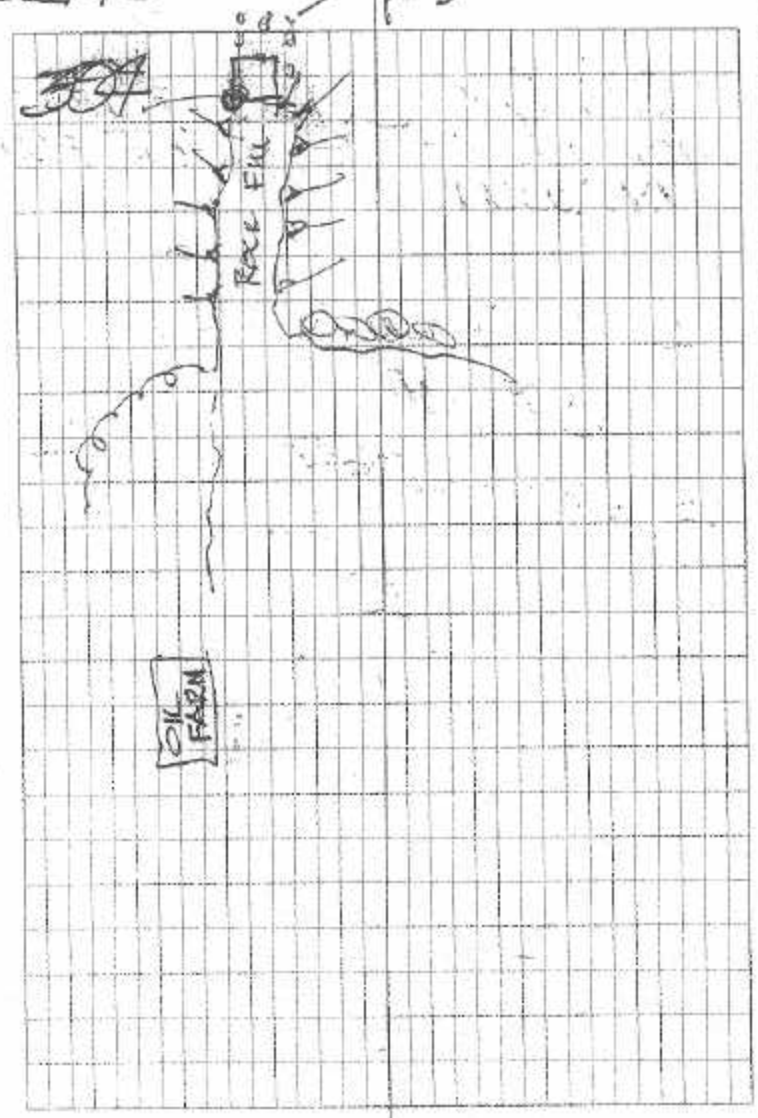


H_2O +7.0

pile 15.58 22.58

Pile Cap (9.09 - 6.34) = +2.75 = 25.32

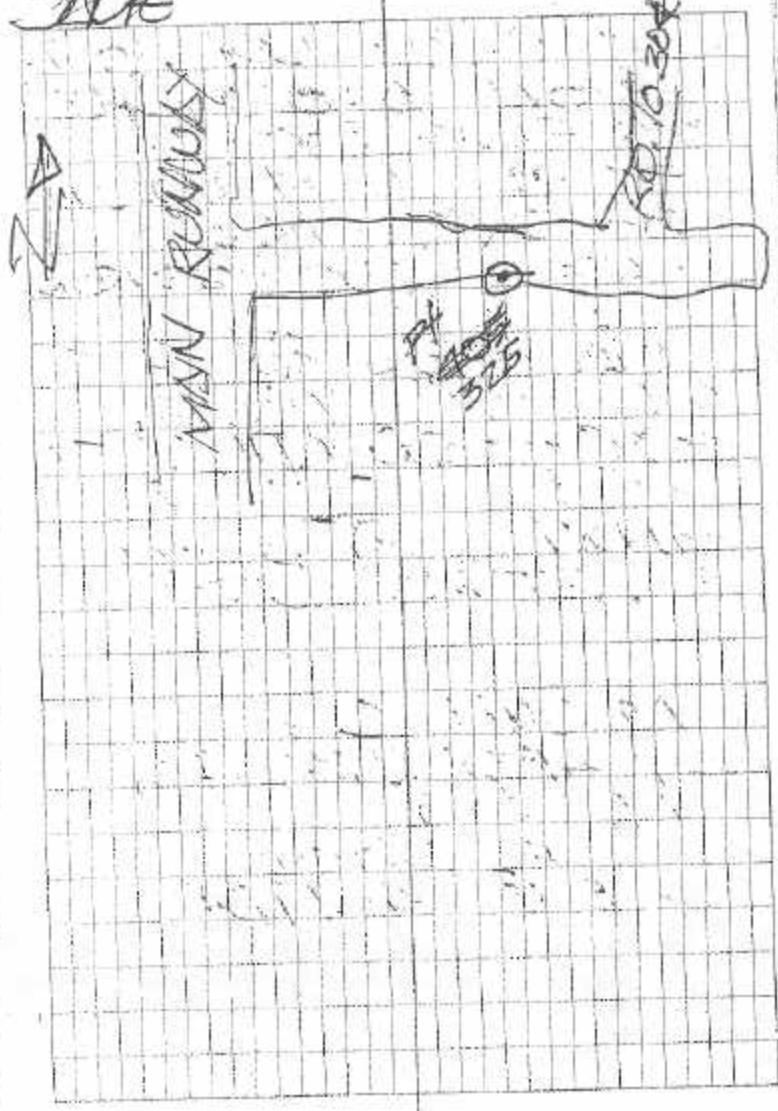
SAME



Pt. 325 = COE Mon Case (Couldn't Open) on SOUTH Side of E-W Runway. Point is ±5' N of SADR. — HAS PVC COVER THAT is Sealed

Note — ON Rd. to 304 ALSO FND CARSONITE POST — COULDN'T FIND A MON. — BOTH ARE MARKED COE, w/o a Witness Dist.

DIM. UNIT 1 @ S.E. WEST B.W. @ 6:10pm (pt. # 30)
Hgt = 201.8 CM
OFF @ 8:27pm



BASE STA. PLACED @
N. END RUNWAY 30/12
CTR. OVER EAST SOCKET
FOR RNWY LGT
PT. 99 H.I. = 5.07
TIME ON 10:42AM
LAT = 55.030620599 N
LNG 131.351018454
Ellip Hgt. = 107.275

— LOCALIZATION —

YELLOW = PT. 5 — LOST
ALL SAT'S @ BASE —

— ON —

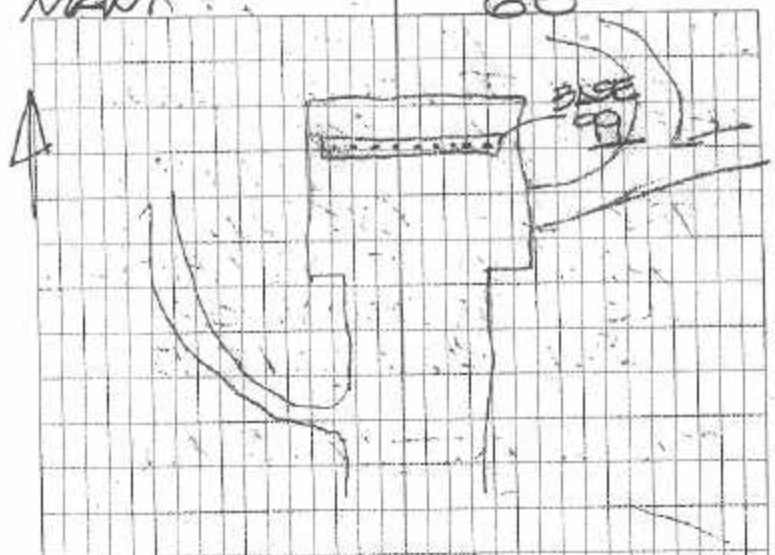
SET @ PP406
N. 1.0014 E. 0.401
El. = .0072
Scale 0.999937
Rot. -1.4428

— ON —

ANNE B (Pt. #20)
N & E 0—0
SCALE 999938
ROT. -1.4405

6/3/00
MAM

CLEAR 67
+10 WIND
60°



— ON —

TIDAL 13 — PT. #10
N & E 0—0 N08664/E.3751
Scale 999938 El. = 0.0554
Rot -1.4405 SCALE 0.999937
CONTROL 4H/4V Rot. -1.4358

ROBL 1
N. = 0.2014 E. = 0.0879
El. = 0.0 Scale = 999977
Rot. = -1.4403
CONTROL USED 3H 3V

6/13/00

Tide Shot 2:07 PM

STA + HI — ELEV 14.9

16° 30.9

P.P. 301 58 25.1

(By GPS = 24.9) GOOD CK.

PT. 410 — P.P. @ N.W. COR SMNC BOAT HARBOR DOCK @ FLOAT 100± W. OF TIDAL 13. POINT IS TO BULL RAIL WHICH IS 10" (.84) ABOVE DOCK — HAND RAIL IS 2.5' ABOVE BULL RAIL

— LOCAL — ON

RND ECC 58 PT. #14

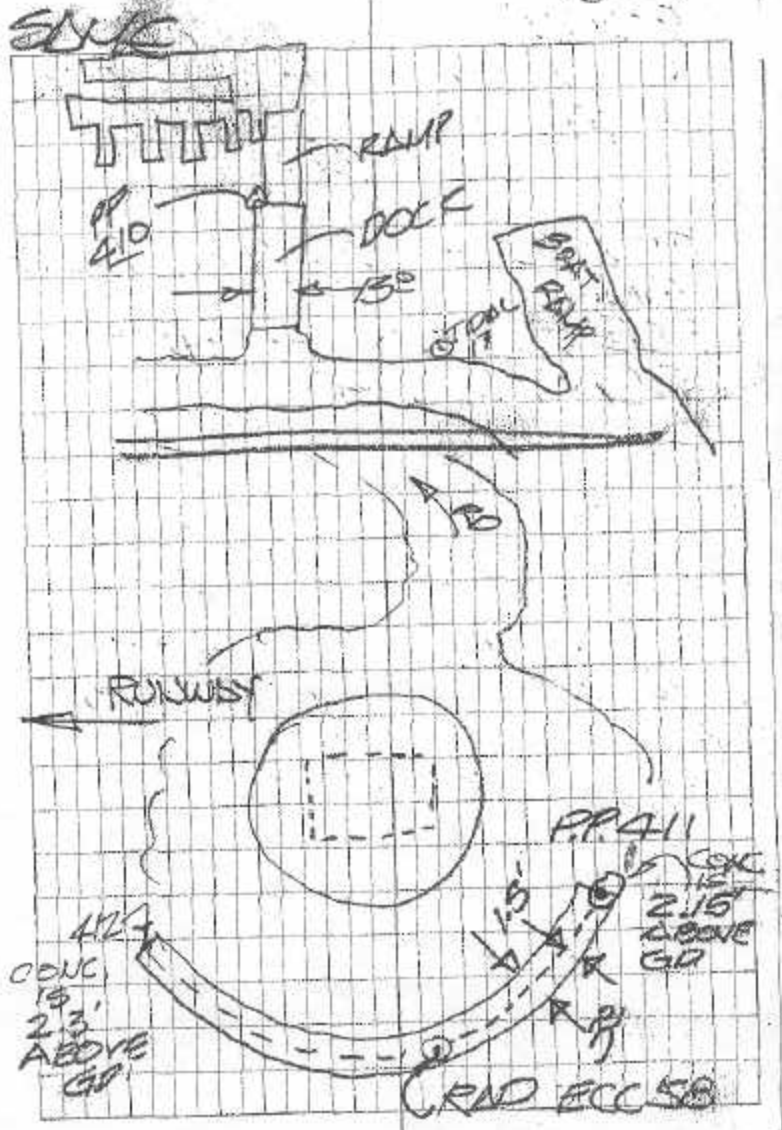
N = 0.9529 E. = 0.3541

El. = 0.0634

Scale = 999903

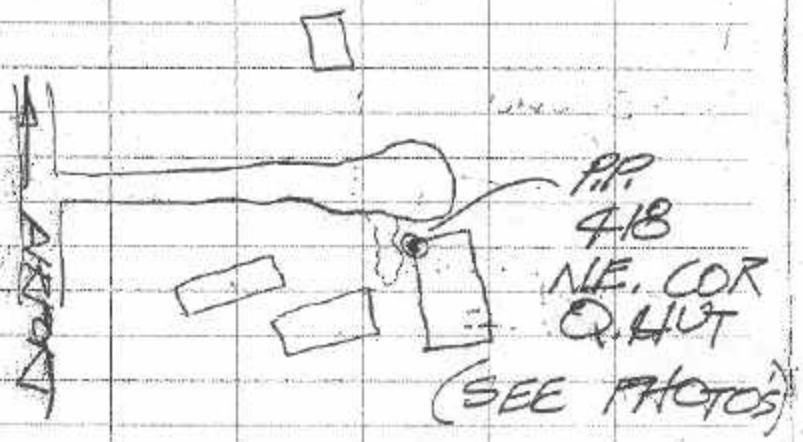
Rot. = -1.4337

P.P. 411 & 412 ARE SO & N. END 1/2 CIR. GUN RAIL

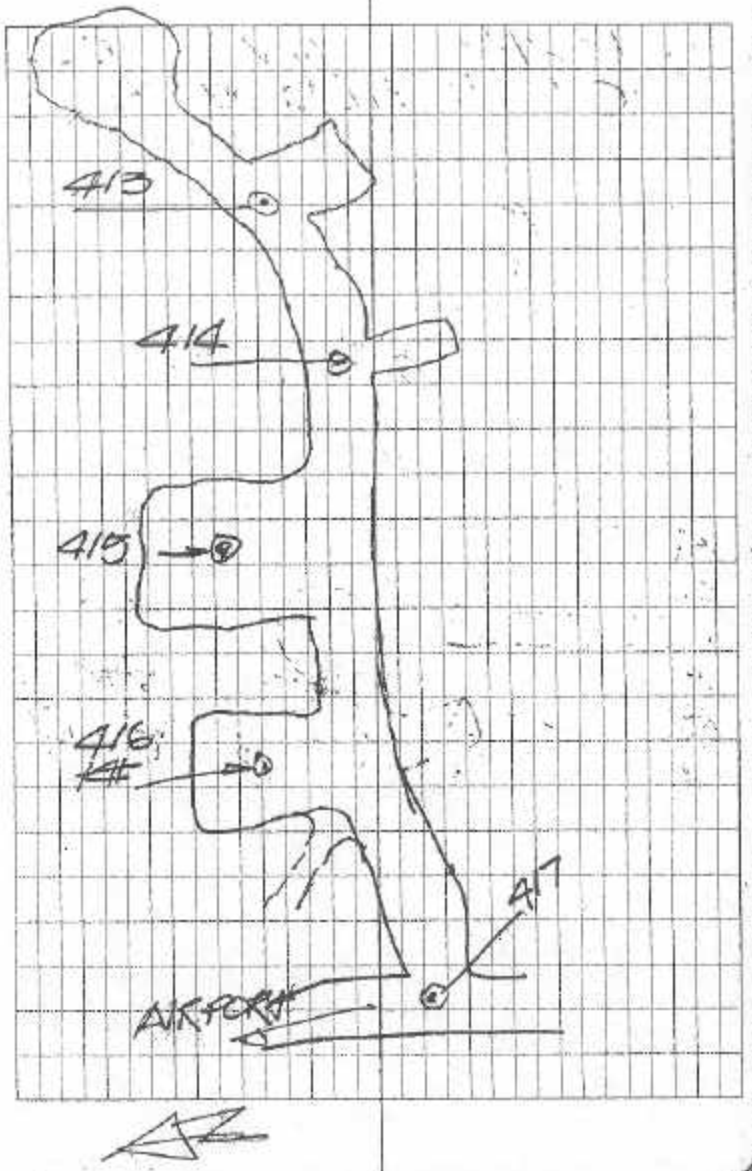


POINT 307 IS BLDG. CLEAN-UP AREA - TOOK SHOT POINTS @ ℄ RD & ℄ PAD'S

TWO "locals" verified" house removed.
SEE SKETCH P.P. 413/414/415/416 & 417



SAME



P.P. 419 N.W. COR OF "O" IN RUNWAY 30

FROM SO. END RUNWAY APPEARS TO HAVE Δ SAG V.C. NEAR P.P. 406
P.P. 420 IS SAME AS 419
ROD HI. @ 7.0 (May not have been on 419)

SAME

P.P. 301

P.P. 302

P.P. 301

P.P. 303
Northwest Corner Most
Northerly Quonset Hut.

P.P. 311
Northeast Corner
Residence

P.P. 406
(GPS/RTK Occupied)
Dome Building In Back Ground.

P.P. 306

P.P. 308

P.P. 304
Northwest Corner Dock

Various Views of P.P. 309 (didn't work)

P.P. 303
Northwest Corner
Quonset Hut.

Found Panel On North/South Runway

GPS/RTK Rover Unit On USCG Sta. Anne A

Gps/Rtk Base Station On
Usc&Gs Station "Yellow"
Looking Toward Metlakatla

Monument Station "YELLOW"

On Station "YELLOW" Looking
South To Point Duncan

ASHTECH Dimension (Static)
Control Station RAD ECC 58

USCG Control Station Anne B

ASTECH GPS/RTK Unit On
UN-I.D. C.O.E. Station On
East/West Runway Shoulder

GPS/RTK Base Station Established For Project

Looking Northeast Runway 12 RTK/GPS
Base Station on 6/3/00

Looking South

RTK/GPS Radio Repeater on Yellow Mountain

P.P. 406 Looking Westerly To Weather Service While Domed (Balloon Launch) Building In Background (W-SW) For Which The NW Corner Of A 12'x15' Front (North) Concrete Pad Was Used As P.P. 405.

P.P. 411
South End Of Center Rail For
"Half-Moon" Gun Turnett

P.P. 412
North Center End Of Center
Rail For "Half-Moon" Gun
Turnett

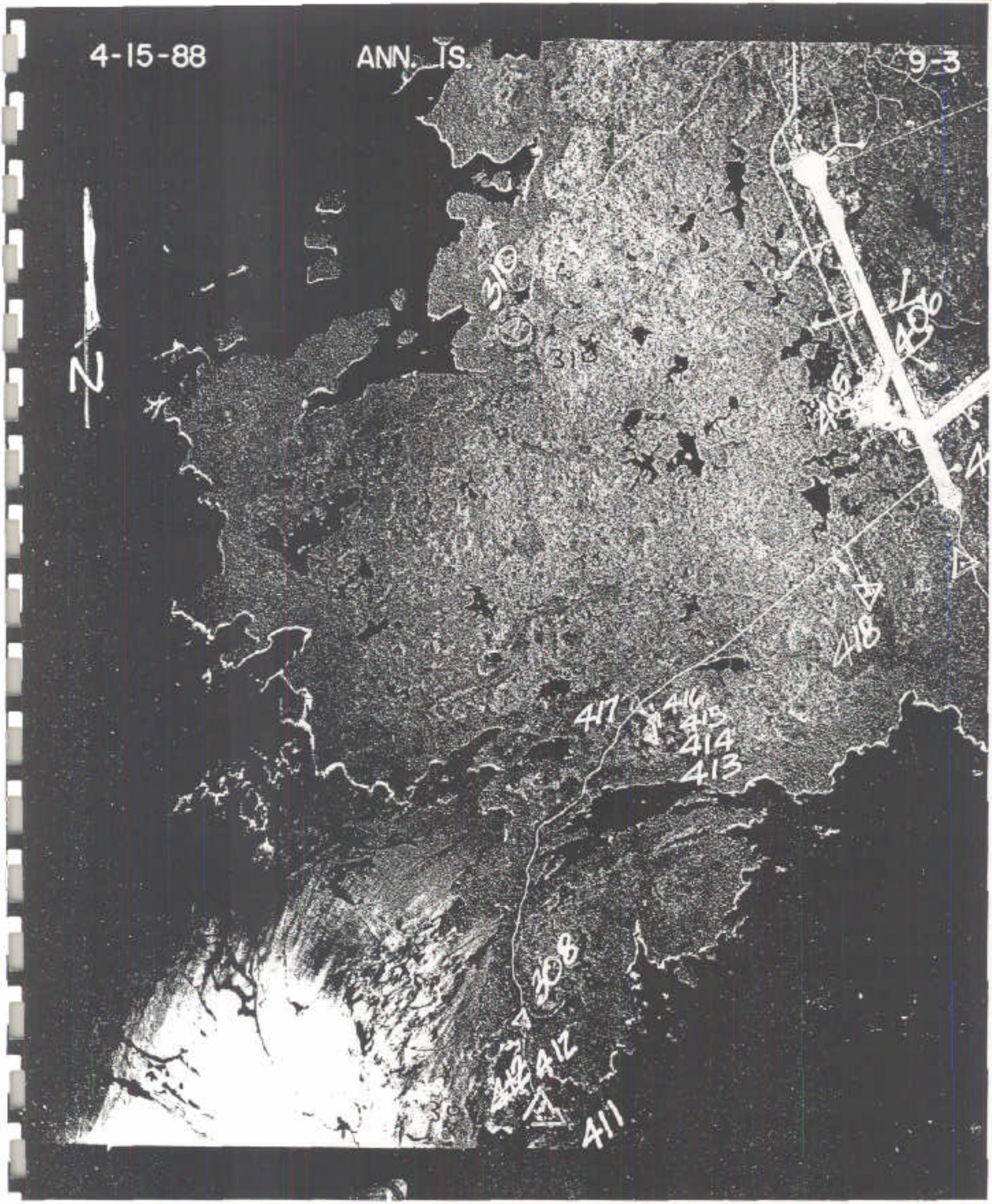
P.P. 410
N.W. Corner Of Dock Gangway.

Bullrail	= 21.2'
Deck	= 20.4'
Hand Rail	= 23.7'

P.P. 308

P.P. 418

P.P.'s 411 (Left) and
412 (Right) From A Point
East Of Building Marked
For P.P. 309


4-15-88
ANN. IS.
9-3
N
310
318
420
419
418
417
416
415
414
413
308
412
411

METLAKATLA
6000309

PHOTO ID

06
67.99N
4,368.85E
.2 - S.W. COR. - LANDING BAR ▯ IN RUNWAY
CONTROL
308

406 △
308 N.W. CORNER BLDG.
1,177,230.55N
3,124,057.74E
405 3/8
106.7 - N.W. COR. CONC. PAD @ WEATHER BALLON BLDG.
VERTICAL
△ 310

1,177,626.15N
3,116,694.25E
76.7
CTR. @ END OF RD (ALMOST A CUL-DE-SAC)

△ 419 → 1,175,422.44N
3,125,803.73E
99.2 - N.W. COR OF ▯ IN RUNWAY 30 MARKING
CENTER OF ROAD

△ 6 → 1,174,012.68N
3,126,286.52E
79.6 N.W. BLDG. COR
△ 418

9.26N
501.74E
COR. Q'HUT

417 — ℄ OF RDS — 1,170,330.28N
3,120,160.39E
416 — CTR. of PAD — 1,170,218.82N
3,120,500.41E
415 — CTR. of PAD — 1,170,110.27
3,120,549.42
414 — ℄ RD. @ PAD — 1,169,956.64N
3,120,504.28E
413 — ℄ Rd. @ Pad — 1,169,804.11N
3,120,554.14E

SEE FIELD BOOK SKETCH

416 415 417 414 413

2
.868.42N
151.30E
TOP / 42.6 GD.
ND - HALF MOON
N RAIL

△ 308 — 1,163,713.03N
3,118,623.72E
33.0 N.E. COR. Q'HUT

~~414~~ 411 1,161,845.50N
3,119,177.10E
44.9 TOP / 42.8 GD.
S.END - HALF MOON
GUN RAIL

4-15-88
N
ANNE 'B'
20
311
304

303
1,194,639.26N
3,123,540.89E
159.7
N.W. COR. Q'HUT

N.W. COR
CONC PD
W. OF ANT
N. OF THE
20
ANNE
USCG
STA.

311
1,187,634.81N
3,118,975.67E
91.6 GD.
N.E. COR HOU

30A
1,186,985.98N
3,130,816.74E
25.1
N.W. COR.,
DOCK REMAINS
@ X-ING. ROCK'D
RODDWAY

4-15-88
ANN. IS.
410
302
301

△ 410 (X-TRA POINT)
1,209,459.92N
3,124,679.24E
21.2 (BULL RAIL)
N.W. COR. TIMBER
DOCK @ X-ING
FLOAT RAMP

△ 302
1,207,280.57N
3,126,854.75E
87.6 (TOP OF TANK)
CENTER OF END
OF N.E. TANK
OF FUEL TANK
ROWS

△ 301
1,206,092.52N
3,129,588.05E
24.9
S.E. COR. FERRY
TERMINAL TRANSFER
BRIDGE @ X-ING
GD./ROWY LINE.

△ 303
1,194,639.26N
3,123,540.89E.
159.7
N.W. COR. Q'HUT