

INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTHSOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/AZIMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

LEGEND

- △ USCGS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ✕ ✕ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USCGS MONUMENT "PASS, 1922" AS N 1,577,605.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.08 AND E 2,742,987.61.
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- 3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- 4. THE EXISTING PROJECT, ADOPTED 30 AUGUST 1935 AND MODIFIED 3 SEPTEMBER 1954, PROVIDES FOR A CHANNEL 70 FEET WIDE AND 12 FEET DEEP AT MEAN LOWER LOW WATER THROUGH 7 SHOALS IN THE WATERWAY BETWEEN EL CAPITAN PASSAGE AND SHAKAN STRAIT.
- 5. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



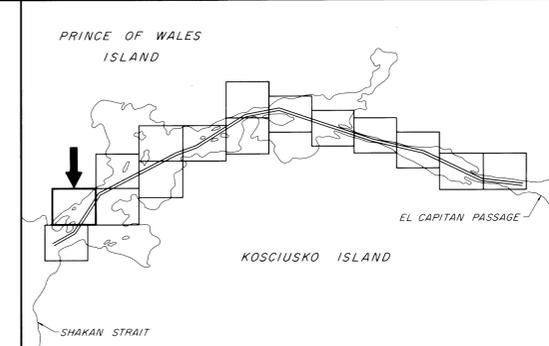
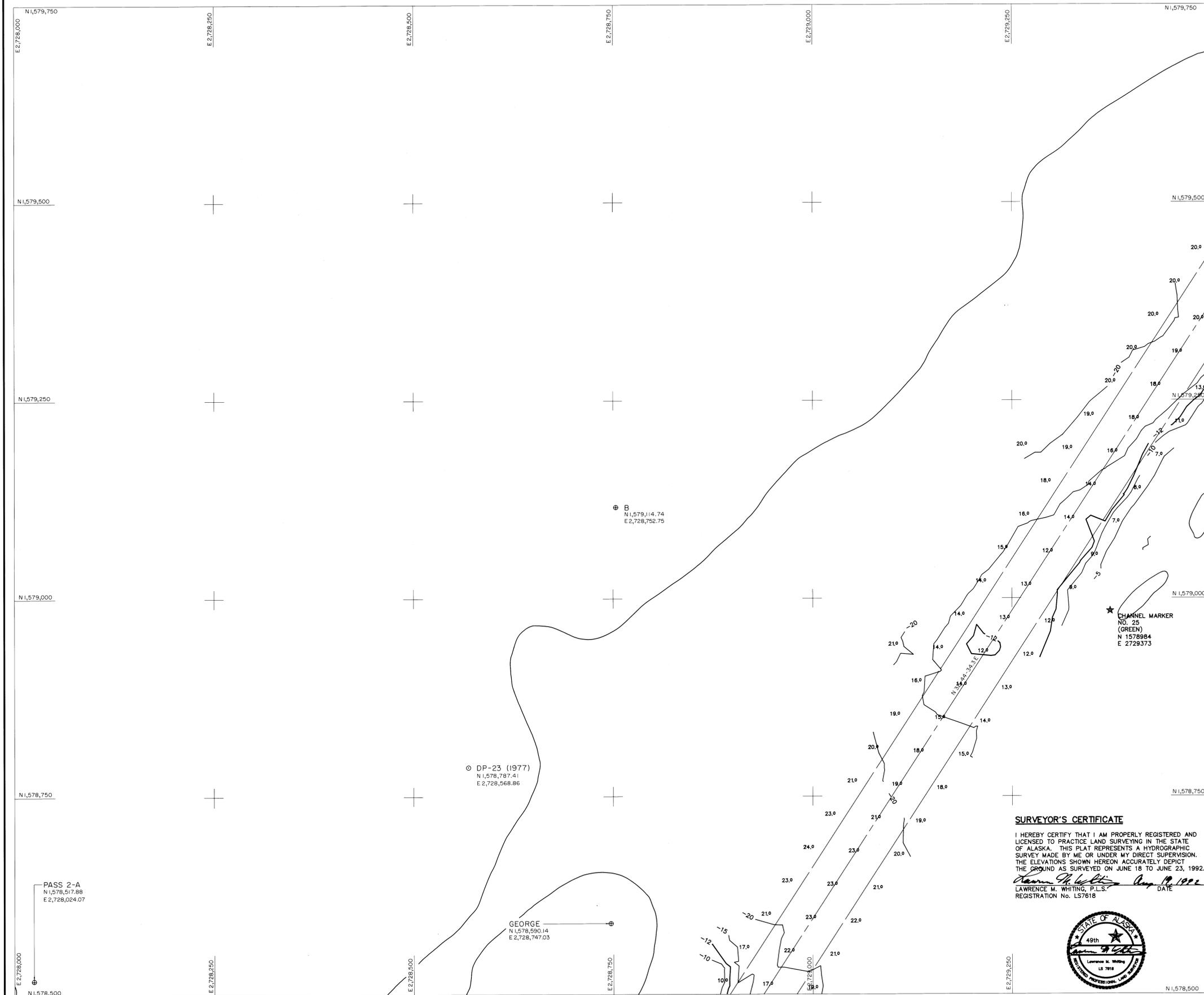
SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA. THIS PLAT REPRESENTS A HYDROGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION. THE ELEVATIONS SHOWN HEREON ACCURATELY DEPICT THE GROUND AS SURVEYED ON JUNE 18 TO JUNE 23, 1992.

Lawrence M. Whiting Aug 19, 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS PROJECT CONDITION SURVEY	
SUBMITTED:		
RECOMMENDED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	DATE: Sep 13, 1992
PROJECT MANAGER	CHIEF, OPERATIONS & READINESS BRANCH	
SURVEY NO. 1589-92	SCALE: 1" = 50'	
	SHEET 1 OF 15	



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LEGEND

- △ USCBGS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ ⊗ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

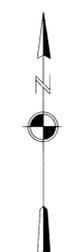
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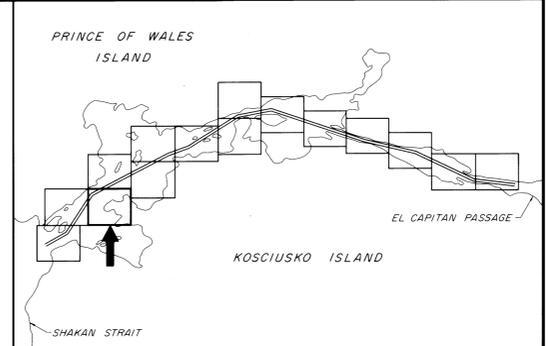
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Lawrence M. Whiting DATE *Aug 19, 1992*
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS PROJECT CONDITION SURVEY	
SUBMITTED:		
RECOMMENDED: <i>[Signature]</i> PROJECT MANAGER	APPROVED: <i>[Signature]</i> CHIEF, OPERATIONS & BUSINESS BRANCH	DATE: <i>Aug 19, 1992</i>
SURVEY NO. 1589-92		SCALE: 1" = 50'
SHEET 2 OF 15		



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- △ USCBGS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ ⊗ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

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- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USCBGS MONUMENT "PASS, 1922" AS N 1,577,805.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
- 2. ELEVATION DATUM IS MEAN LOWER LOW WATER BASED ON USCBGS TIDAL BENCH MARK #3 (1922, ELEV. 14.88') AND #4 (1922, ELEV. 15.17'). BENCH MARK ELEVATIONS WERE ESTABLISHED FROM 96 HIGH WATERS AND 56 LOW WATERS 17 OCTOBER - 15 NOVEMBER, 1922 AS GIVEN ON "TO-A-145" U.S. ENGINEER OFFICE, SEATTLE, WASHINGTON.
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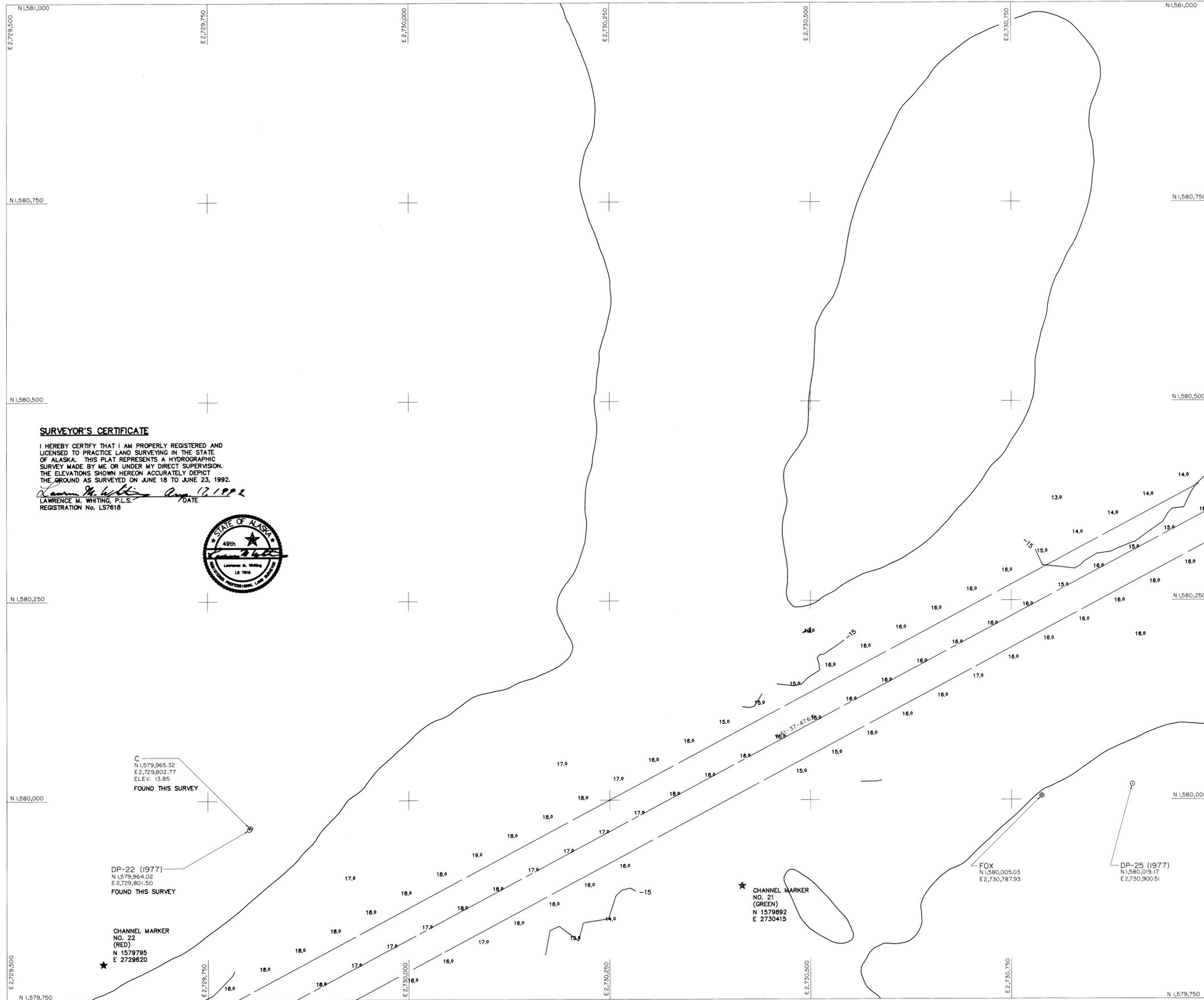
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Lawrence M. Whiting *Aug. 17, 1992*
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
DRY PASS, ALASKA DRY PASS PROJECT CONDITION SURVEY		
SURVEYED: BK	RECOMMENDED: <i>E. S. Chorn</i> PROJECT MANAGER	APPROVED: <i>[Signature]</i> CHIEF, OPERATIONS & BUSINESS BRANCH
DRAWN: CR		DATE: Sep 19 1992
SUBMITTED:		SCALE: 1" = 50'
SURVEY NO. 1589-92		SHEET 3 OF 15



SURVEYOR'S CERTIFICATE

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Lawrence M. Whiting Aug 12 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



C
 N 1,579,965.32
 E 2,729,802.77
 ELEV. 13.85
 FOUND THIS SURVEY

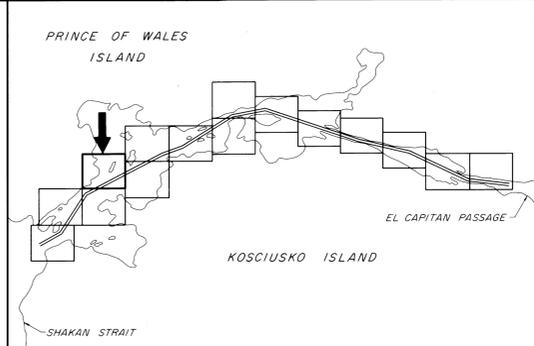
DP-22 (1977)
 N 1,579,964.02
 E 2,729,801.50
 FOUND THIS SURVEY

CHANNEL MARKER
 NO. 22
 (RED)
 N 1579795
 E 2729820

★ CHANNEL MARKER
 NO. 21
 (GREEN)
 N 1579892
 E 2730415

FOX
 N 1,580,005.03
 E 2,730,787.93

DP-25 (1977)
 N 1,580,019.17
 E 2,730,900.51



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LEGEND

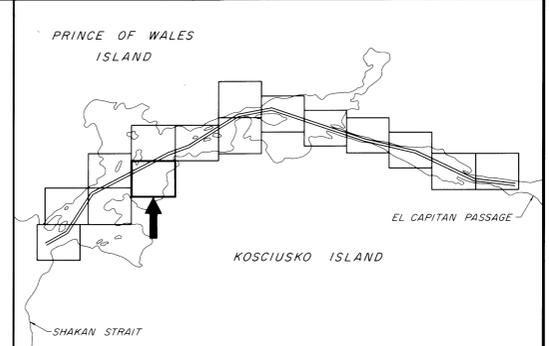
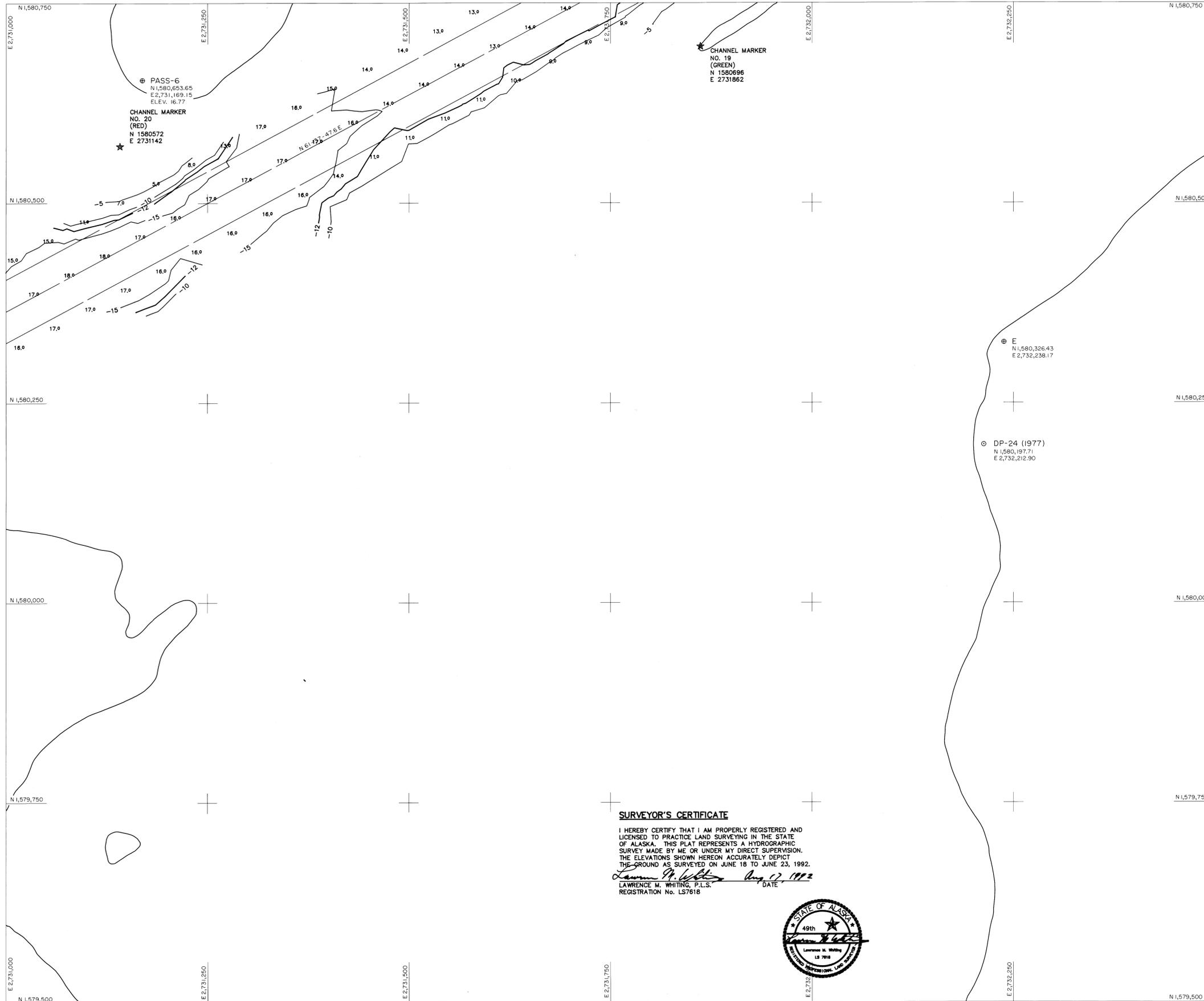
- △ USC&GS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ✕ ✕ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

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U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
DRY PASS, ALASKA DRY PASS PROJECT CONDITION SURVEY		
SURVEYED: BK	APPROVED: <i>[Signature]</i> CHIEF, OPERATIONS & BUSINESS BRANCH	DATE: Sep 19, 1992
DRAWN: CR		SCALE: 1" = 50'
SUBMITTED:		
RECOMMENDED: <i>[Signature]</i> PROJECT MANAGER		
SURVEY NO. 1589-92		SHEET 4 OF 15



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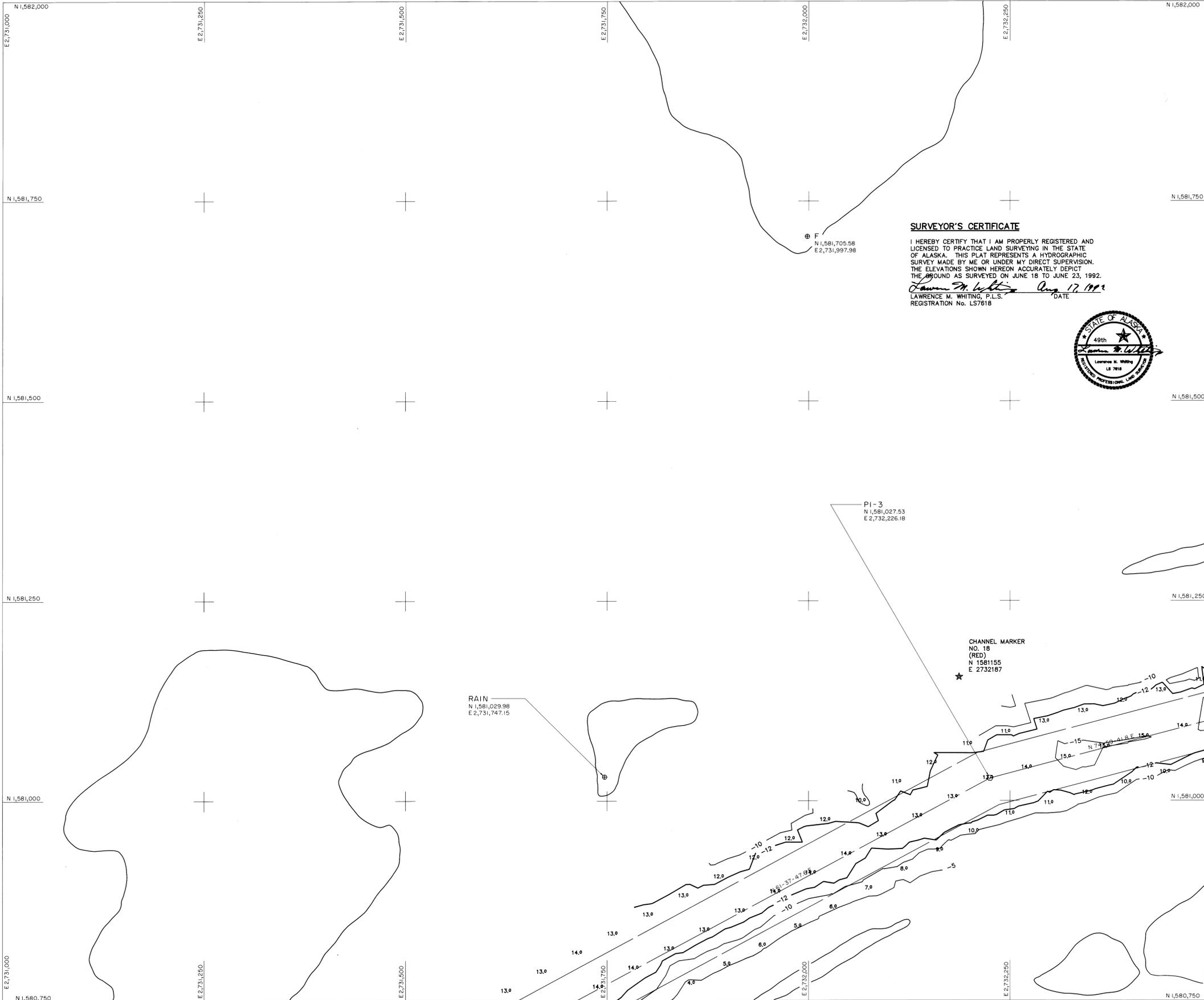
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Lawrence M. Whiting Aug 17, 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



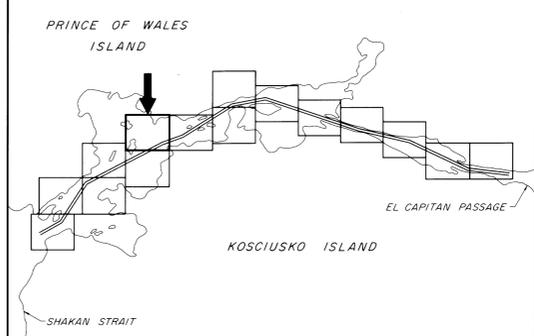
U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS PROJECT CONDITION SURVEY	
SUBMITTED:		
RECOMMENDED: PROJECT MANAGER	APPROVED: CHIEF OPERATIONS & READINESS BRANCH	DATE: Sep 18, 1992
SURVEY NO. 1589-92		SCALE: 1" = 50'
		SHEET 5 OF 15



SURVEYOR'S CERTIFICATE

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Lawrence M. Whiting Aug 17, 1992
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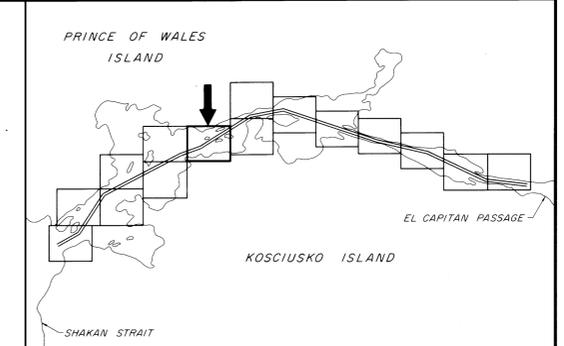
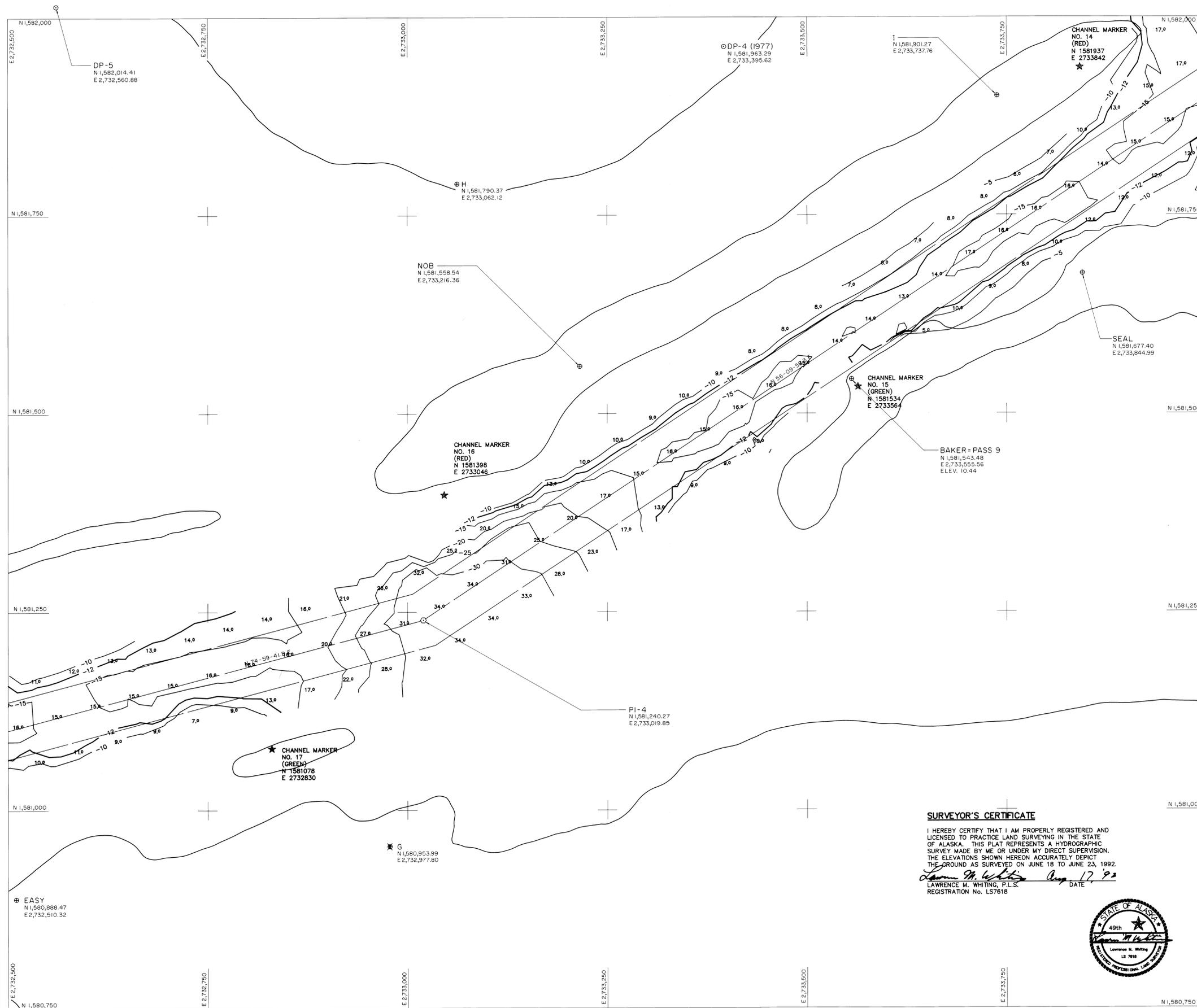
LEGEND

- △ USC&GS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
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U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS PROJECT CONDITION SURVEY	
SUBMITTED:		
RECOMMENDED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i> CHIEF, OPERATIONS & READINESS BRANCH	DATE: Sept 18, 1992
SURVEY NO. 1589-92	SCALE: 1" = 50'	
	SHEET 6 OF 15	



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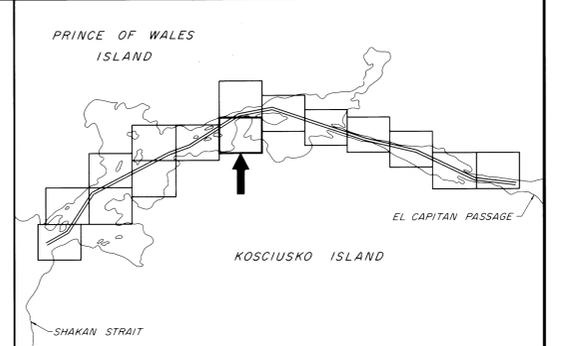
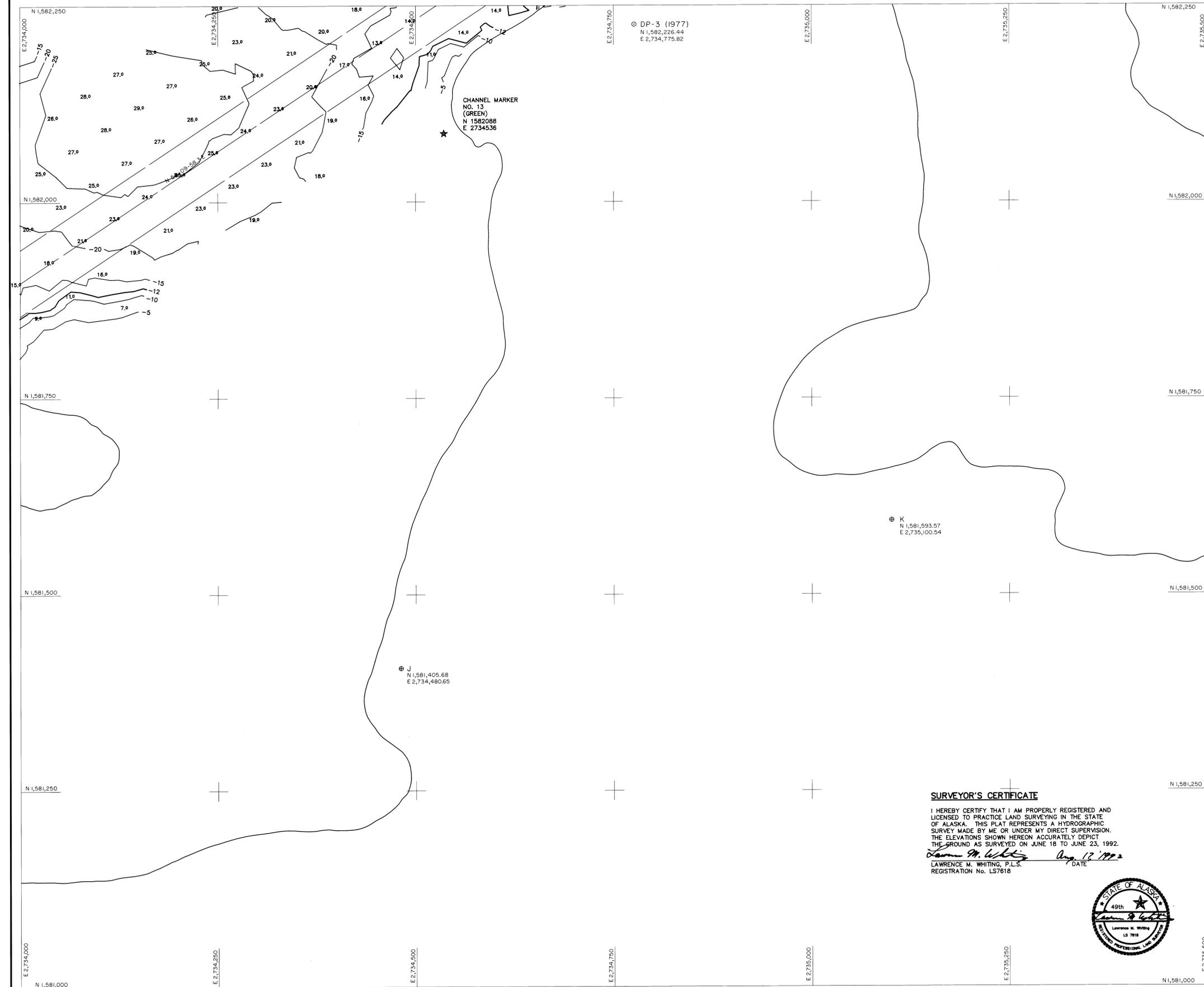
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Lawrence M. Whiting Aug 17, '92
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
DRY PASS, ALASKA		
DRY PASS PROJECT CONDITION SURVEY		
SURVEYED: BK		
DRAWN: CR		
SUBMITTED:		
RECOMMENDED: PROJECT MANAGER	APPROVED: CHIEF, OPERATIONS & REQUIREMENTS BRANCH	DATE: Sept 18, 1992
SURVEY NO. 1589-92		SCALE: 1" = 50'
		SHEET 7 OF 15



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- 4. THE EXISTING PROJECT, ADOPTED 30 AUGUST 1935 AND MODIFIED 3 SEPTEMBER 1954, PROVIDES FOR A CHANNEL 70 FEET WIDE AND 12 FEET DEEP AT MEAN LOWER LOW WATER THROUGH 7 SHOALS IN THE WATERWAY BETWEEN EL CAPITAN PASSAGE AND SHAKAN STRAIT.
- 5. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



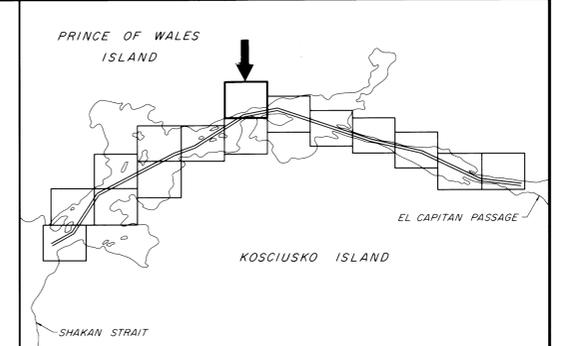
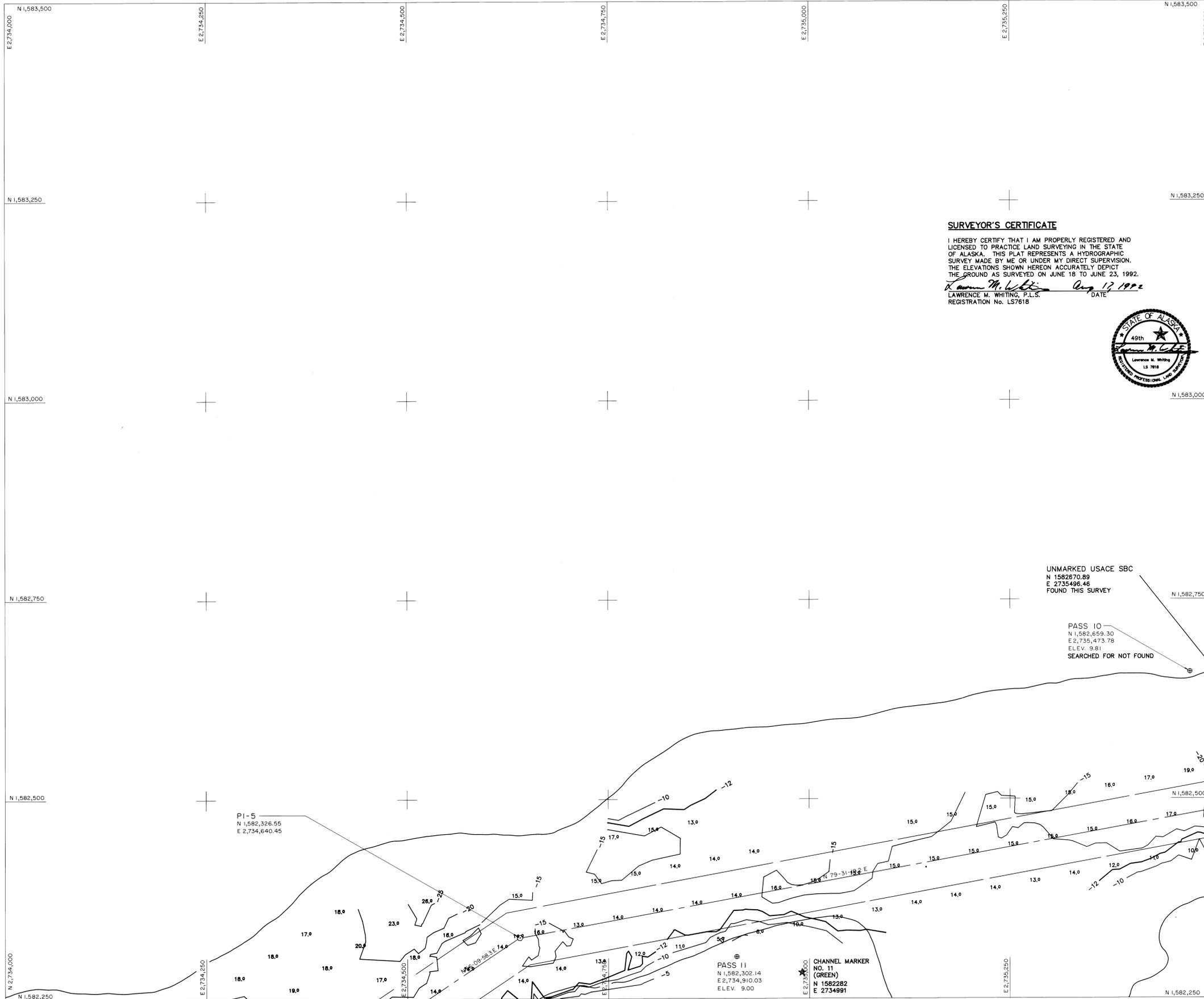
SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA. THIS PLAT REPRESENTS A HYDROGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION. THE ELEVATIONS SHOWN HEREON ACCURATELY DEPICT THE GROUND AS SURVEYED ON JUNE 18 TO JUNE 23, 1992.

Lawrence M. Whiting DATE *Aug. 12, 1992*
LAWRENCE M. WHITING, P.L.S. REGISTRATION No. LS7618



U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS	
SUBMITTED:	PROJECT CONDITION SURVEY	
RECOMMENDED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	DATE: <i>Sept. 14, 1992</i>
PROJECT MANAGER		CHIEF, OPERATIONS & READINESS BRANCH
SURVEY NO. 1589-92		SCALE: 1" = 50'
SHEET 8 OF 15		



INDEX TO SHEETS

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA. THIS PLAT REPRESENTS A HYDROGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION. THE ELEVATIONS SHOWN HEREON ACCURATELY DEPICT THE GROUND AS SURVEYED ON JUNE 18 TO JUNE 23, 1992.

Lawrence M. Whiting Aug 17 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7818



NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTHSOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/AZIMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

LEGEND

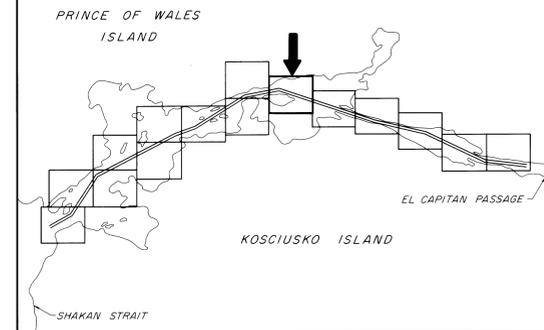
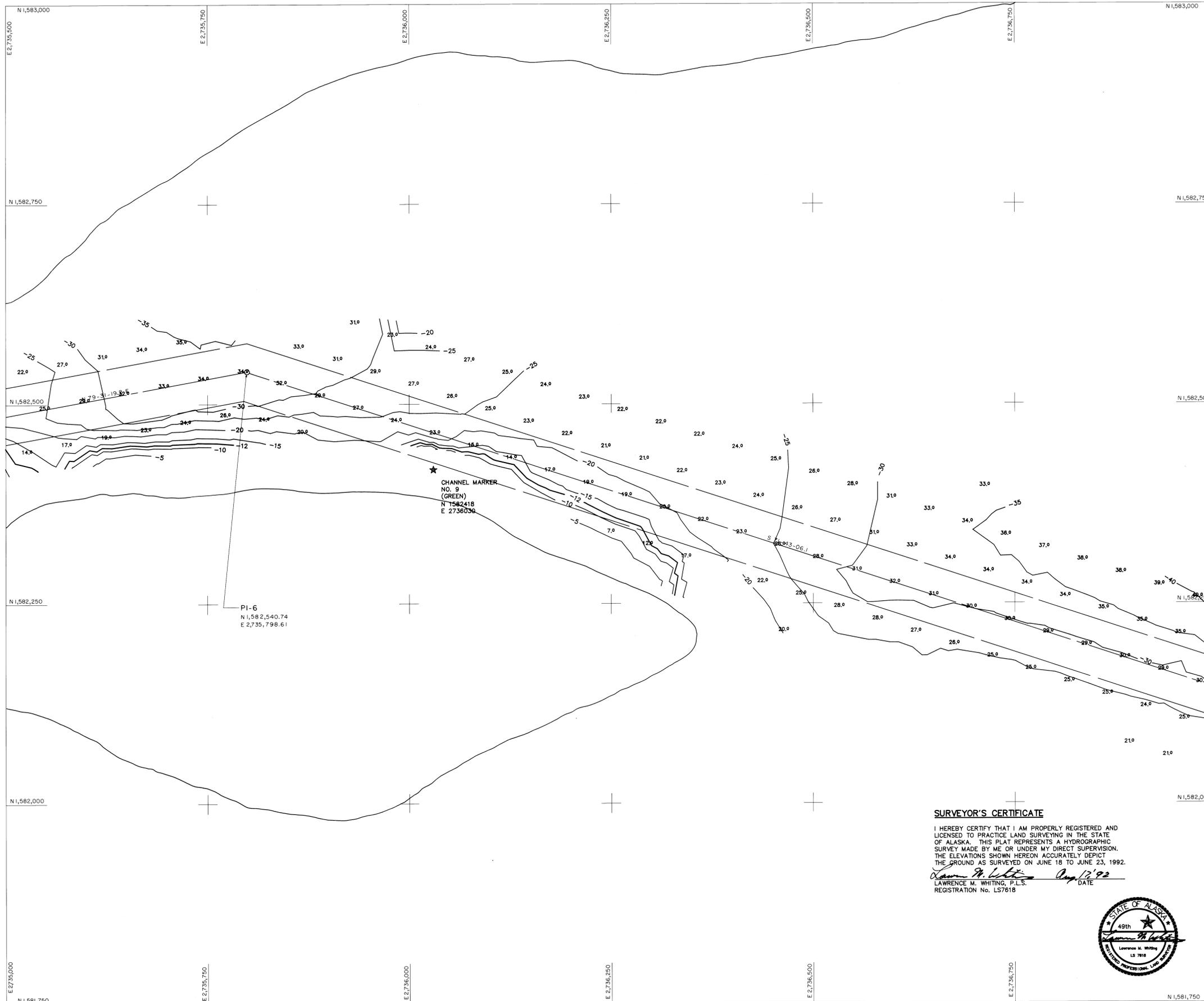
- △ USC&GS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ ⊗ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, INCLUDING THE PUBLISHED COORDINATES OF USC&GS MONUMENT "PASS, 1922" AS N 1,577,605.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
- 2. ELEVATION DATUM IS MEAN LOWER LOW WATER BASED ON USC&GS TIDAL BENCH MARK #3 (1922, ELEV. 14.88) AND #4 (1922, ELEV. 15.17). BENCH MARK ELEVATIONS WERE ESTABLISHED FROM 56 HIGH WATERS AND 56 LOW WATERS 17 OCTOBER - 15 NOVEMBER, 1922 AS GIVEN ON "TD-A-145" U.S. ENGINEER OFFICE, SEATTLE, WASHINGTON.
- 3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- 4. THE EXISTING PROJECT, ADOPTED 30 AUGUST 1935 AND MODIFIED 3 SEPTEMBER 1954, PROVIDES FOR A CHANNEL 70 FEET WIDE AND 12 FEET DEEP AT MEAN LOWER LOW WATER THROUGH 7 SHOALS IN THE WATERWAY BETWEEN EL CAPITAN PASSAGE AND SHAKAN STRAIT.
- 5. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
DRY PASS, ALASKA DRY PASS PROJECT CONDITION SURVEY		
SURVEYED: BK	DRY PASS, ALASKA DRY PASS PROJECT CONDITION SURVEY	APPROVED: <i>[Signature]</i> CHIEF, OPERATIONS & BUSINESS BRANCH
DRAWN: CR		DATE: Sept 18 1992
SUBMITTED:		SCALE: 1" = 50'
RECOMMENDED: <i>[Signature]</i> PROJECT MANAGER	SURVEY NO. 1589-92	SHEET 9 OF 15



INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACWB5-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTH SOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/AZIMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

LEGEND

- △ USCBGS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ ⊗ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USCBGS MONUMENT "PASS 1922" AS N 1,577,805.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
- 2. ELEVATION DATUM IS MEAN LOWER LOW WATER BASED ON USCBGS TIDAL BENCH MARK #3 (1922, ELEV. 14.88') AND #4 (1922, ELEV. 15.17'). BENCH MARK ELEVATIONS WERE ESTABLISHED FROM 56 HIGH WATERS AND 56 LOW WATERS 17 OCTOBER - 15 NOVEMBER, 1922 AS GIVEN ON "TD-A-145" U.S. ENGINEER OFFICE, SEATTLE, WASHINGTON.
- 3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- 4. THE EXISTING PROJECT, ADOPTED 30 AUGUST 1935 AND MODIFIED 3 SEPTEMBER 1954, PROVIDES FOR A CHANNEL, 70 FEET WIDE AND 12 FEET DEEP AT MEAN LOWER LOW WATER THROUGH 7 SHOALS IN THE WATERWAY BETWEEN EL CAPITAN PASSAGE AND SHAKAN STRAIT.
- 5. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



SURVEYOR'S CERTIFICATE

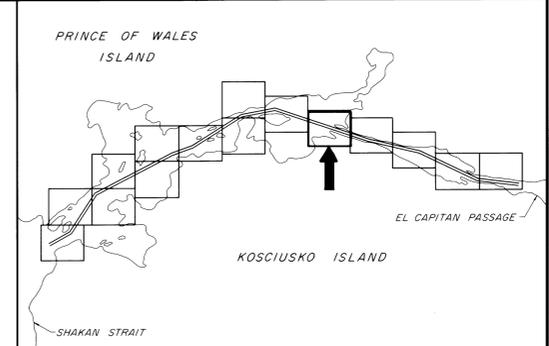
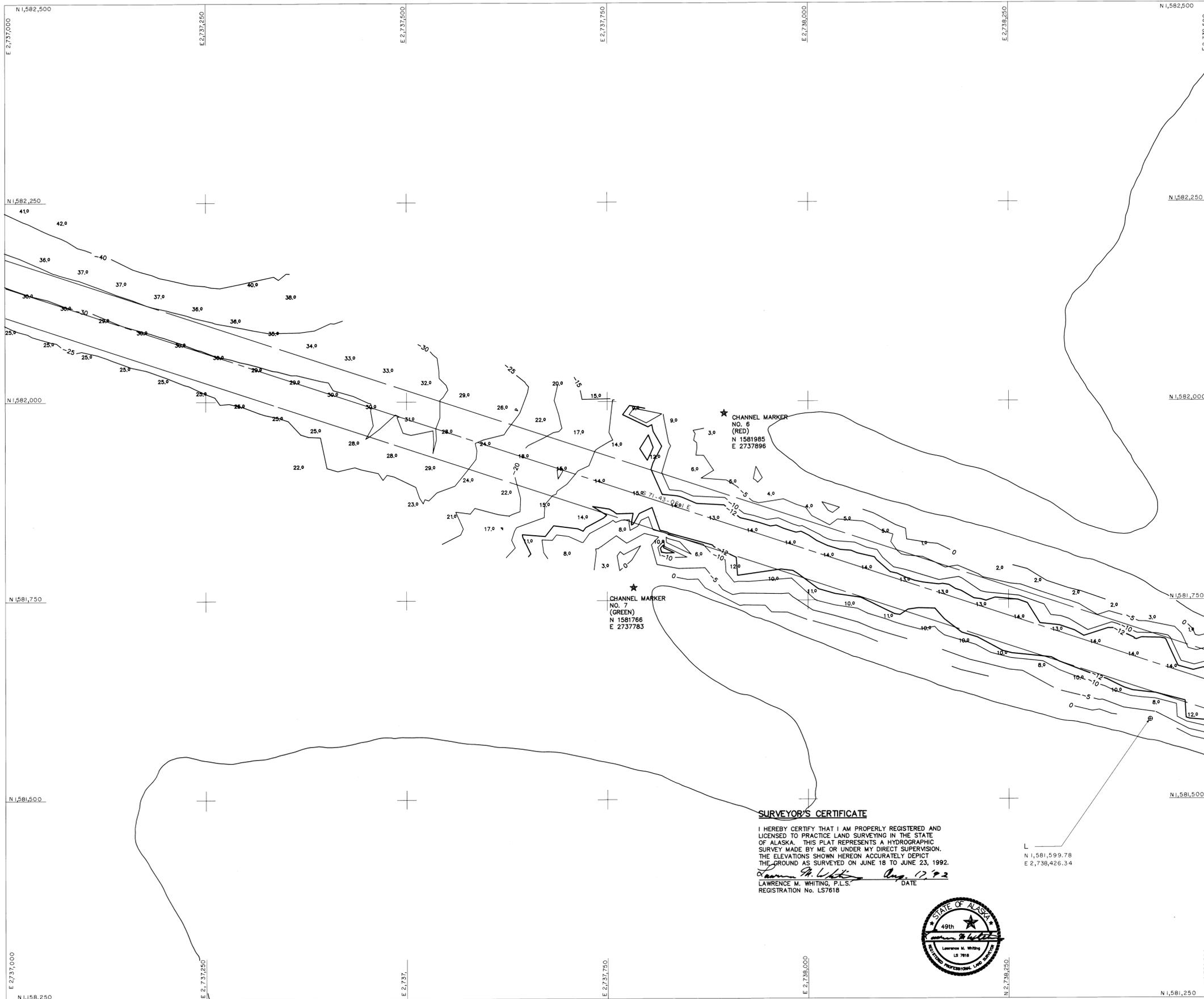
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Lawrence M. Whiting Aug 12 '92
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U. S. ARMY ENGINEER DISTRICT, ALASKA
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS	
SUBMITTED:	PROJECT CONDITION SURVEY	
RECOMMENDED:	APPROVED: <i>William C. ...</i>	DATE: Sept 23, 1992
PROJECT MANAGER:	CHIEF, OPERATIONS & BUSINESS BRANCH	
SURVEY NO. 1589-92	SCALE: 1" = 50'	
	SHEET 10 OF 15	



INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTHSOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/ AZMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

LEGEND

- △ USC&GS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ or ⊘ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USC&GS MONUMENT "PASS, 1922" AS N 1,577,605.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
- 2. ELEVATION DATUM IS MEAN LOWER LOW WATER BASED ON USC&GS TIDAL BENCH MARK #3 (1922, ELEV. 14.98') AND #4 (1922, ELEV. 15.17') BENCH MARK. ELEVATIONS WERE ESTABLISHED FROM 56 HIGH WATERS AND 56 LOW WATERS 17 OCTOBER - 15 NOVEMBER, 1922 AS GIVEN ON "TD-A-145" U.S. ENGINEER OFFICE, SEATTLE, WASHINGTON.
- 3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- 4. THE EXISTING PROJECT, ADOPTED 30 AUGUST 1935 AND MODIFIED 3 SEPTEMBER 1954, PROVIDES FOR A CHANNEL 70 FEET WIDE AND 12 FEET DEEP AT MEAN LOWER LOW WATER THROUGH 7 SHOALS IN THE WATERWAY BETWEEN EL CAPITAN PASSAGE AND SHAKAN STRAIT.
- 5. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



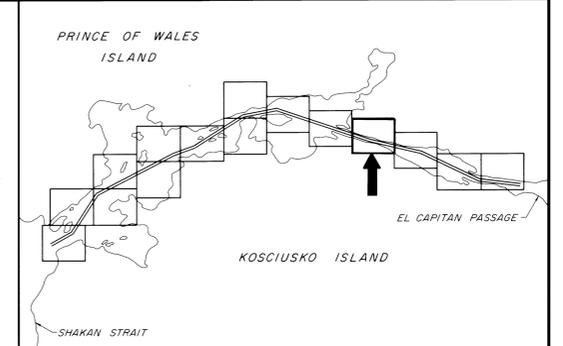
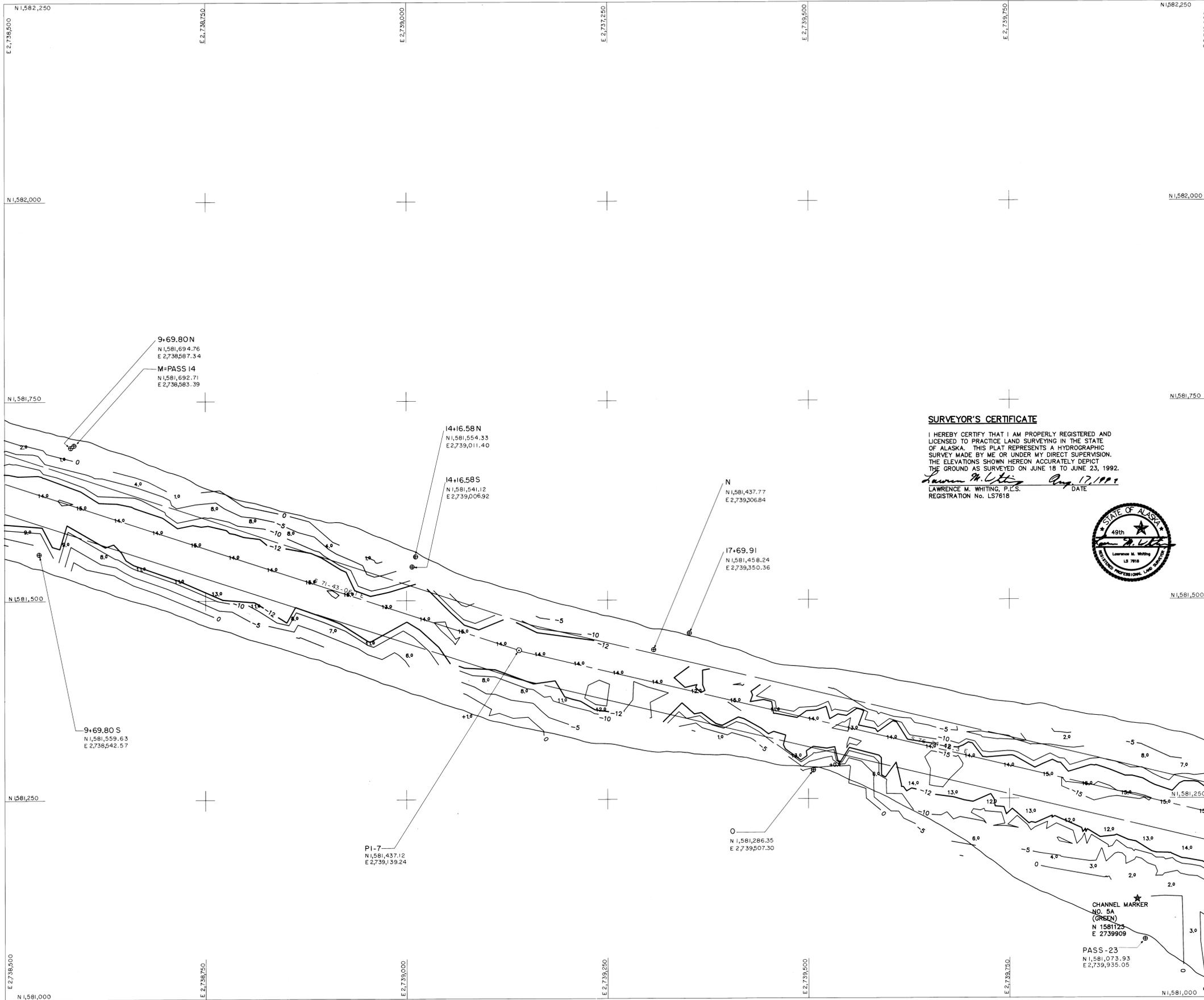
SURVEYOR'S CERTIFICATE

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Lawrence M. Whiting Aug. 12, 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS PROJECT CONDITION SURVEY	
SUBMITTED:		
RECOMMENDED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i> CHIEF, OPERATIONS & READINESS BRANCH	DATE: Sep 10, 1992
SURVEY NO. 1589-92	SCALE: 1" = 50'	
SHEET 11 OF 15		



INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTHSOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/AZIMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

LEGEND

- △ USC&GS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USC&GS MONUMENT "PASS, 1922" AS N 1,577,605.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
- 2. ELEVATION DATUM IS MEAN LOWER LOW WATER BASED ON USC&GS TIDAL BENCH MARK #3 (1922, ELEV. 14.88) AND #4 (1922, ELEV. 15.17). BENCH MARK ELEVATIONS WERE ESTABLISHED FROM 56 HIGH WATERS AND 56 LOW WATERS 17 OCTOBER - 15 NOVEMBER, 1922 AS GIVEN ON "TD-A-145" U.S. ENGINEER OFFICE, SEATTLE, WASHINGTON.
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SURVEYOR'S CERTIFICATE

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Lawrence M. Whiting Aug 17, 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



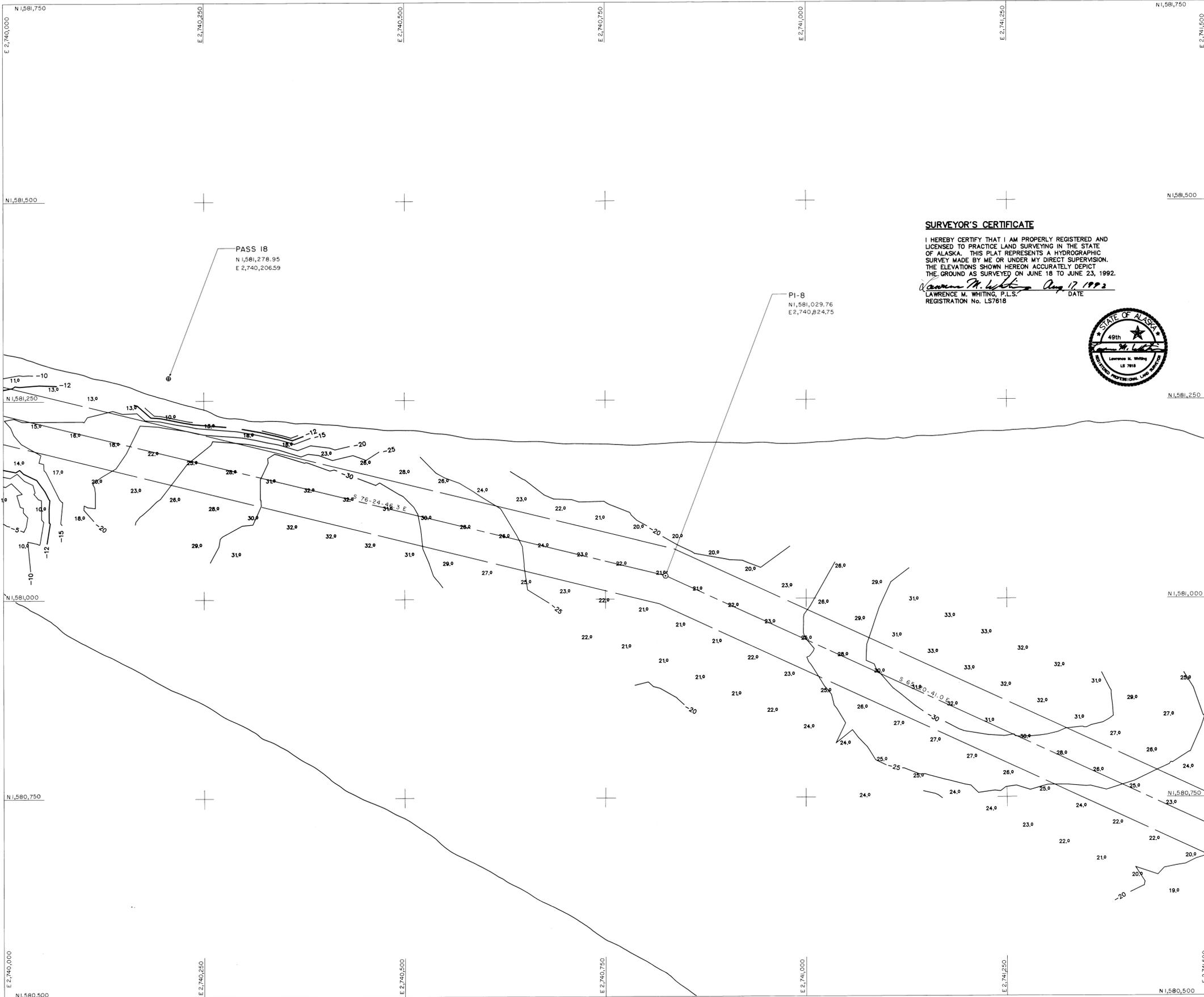
U.S. ARMY ENGINEER DISTRICT, ALASKA
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

SURVEYED: BK
 DRAWN: CR
 SUBMITTED:

DRY PASS, ALASKA
 DRY PASS
 PROJECT CONDITION SURVEY

RECOMMENDED: *[Signature]* APPROVED: *[Signature]* DATE: *Sept 18, 1992*
 PROJECT MANAGER: CHIEF, OPERATIONS & READINESS BRANCH

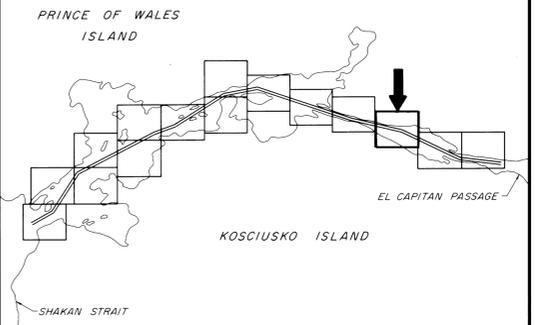
SURVEY NO. 1589-92 SCALE: 1" = 50'
 SHEET 12 OF 15



SURVEYOR'S CERTIFICATE

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Lawrence M. Whiting Aug 17 1992
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
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LEGEND

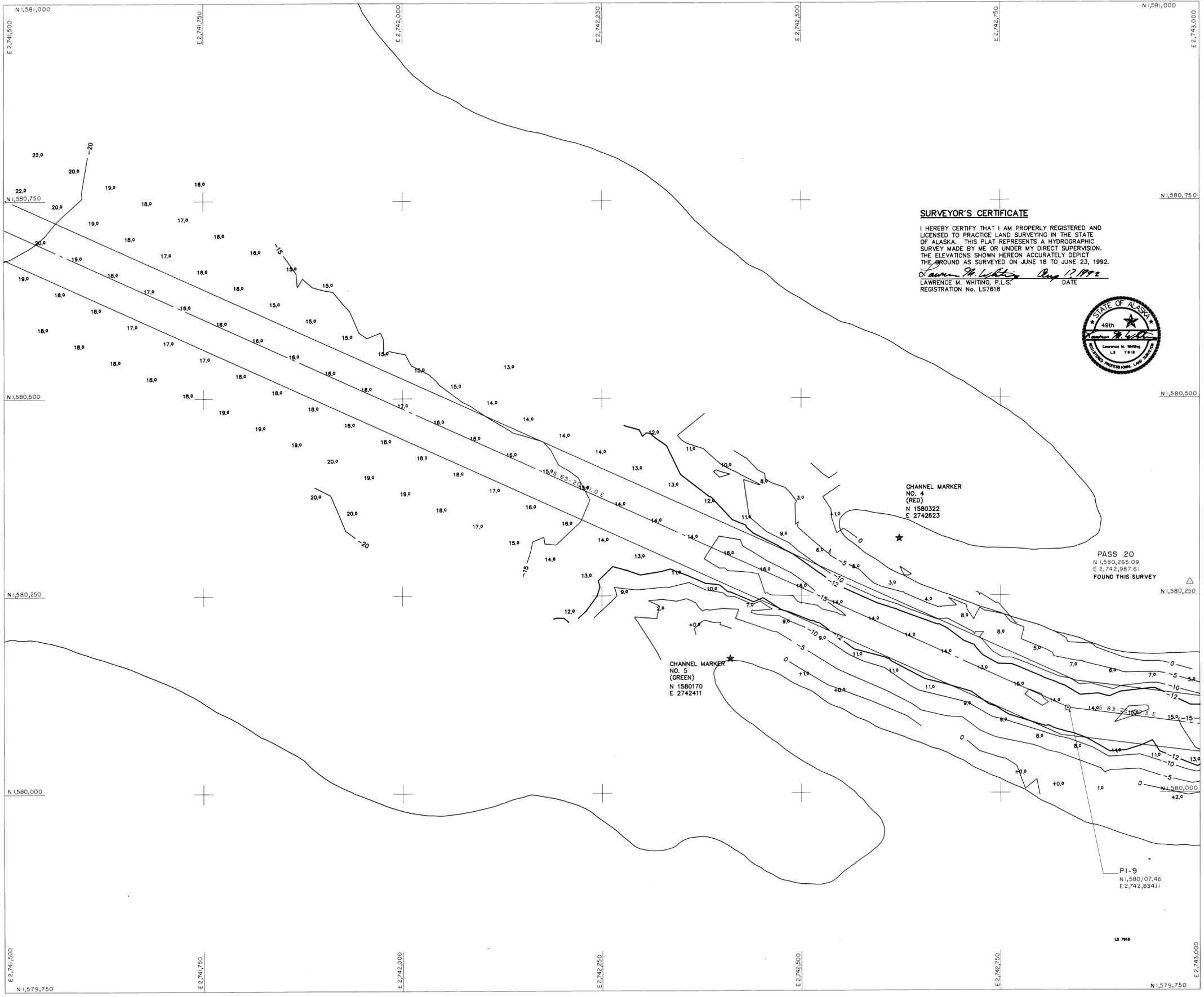
- △ USCGS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ or ⊘ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USCGS MONUMENT "PASS, 1922" AS N 1,577,605.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
- 2. ELEVATION DATUM IS MEAN LOWER LOW WATER BASED ON USCGS TIDAL BENCH MARK #3 (1922, ELEV. 14.88') AND #4 (1922, ELEV. 15.17'). BENCH MARK ELEVATIONS WERE ESTABLISHED FROM 56 HIGH WATERS AND 56 LOW WATERS 17 OCTOBER - 15 NOVEMBER, 1922 AS GIVEN ON "TD-A-145" U.S. ENGINEER OFFICE, SEATTLE, WASHINGTON.
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- 5. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.



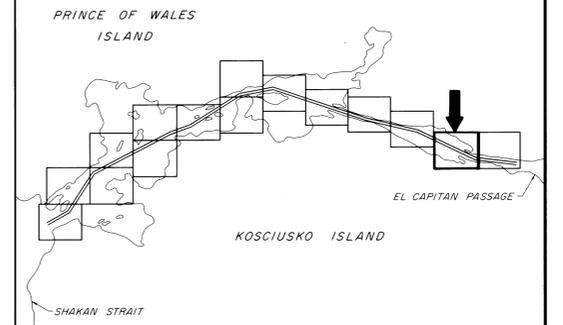
U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS	
SUBMITTED:	PROJECT CONDITION SURVEY	
RECOMMENDED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	DATE: Sep 14 1992
PROJECT MANAGER	CHIEF, OPERATIONS & BUSINESS BRANCH	
SURVEY NO. 1589-92	SCALE: 1" = 50'	
	SHEET 13 OF 15	



SURVEYOR'S CERTIFICATE

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Lawrence M. Whiting *Sept 17, 1992*
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTHSOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/AZIMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

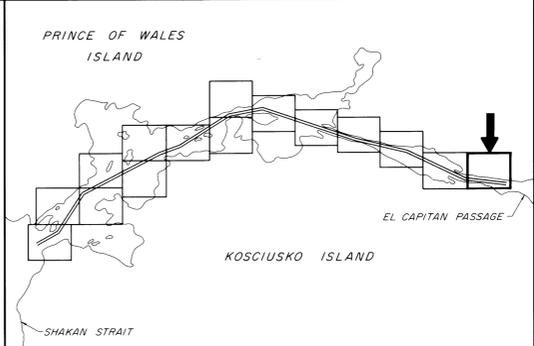
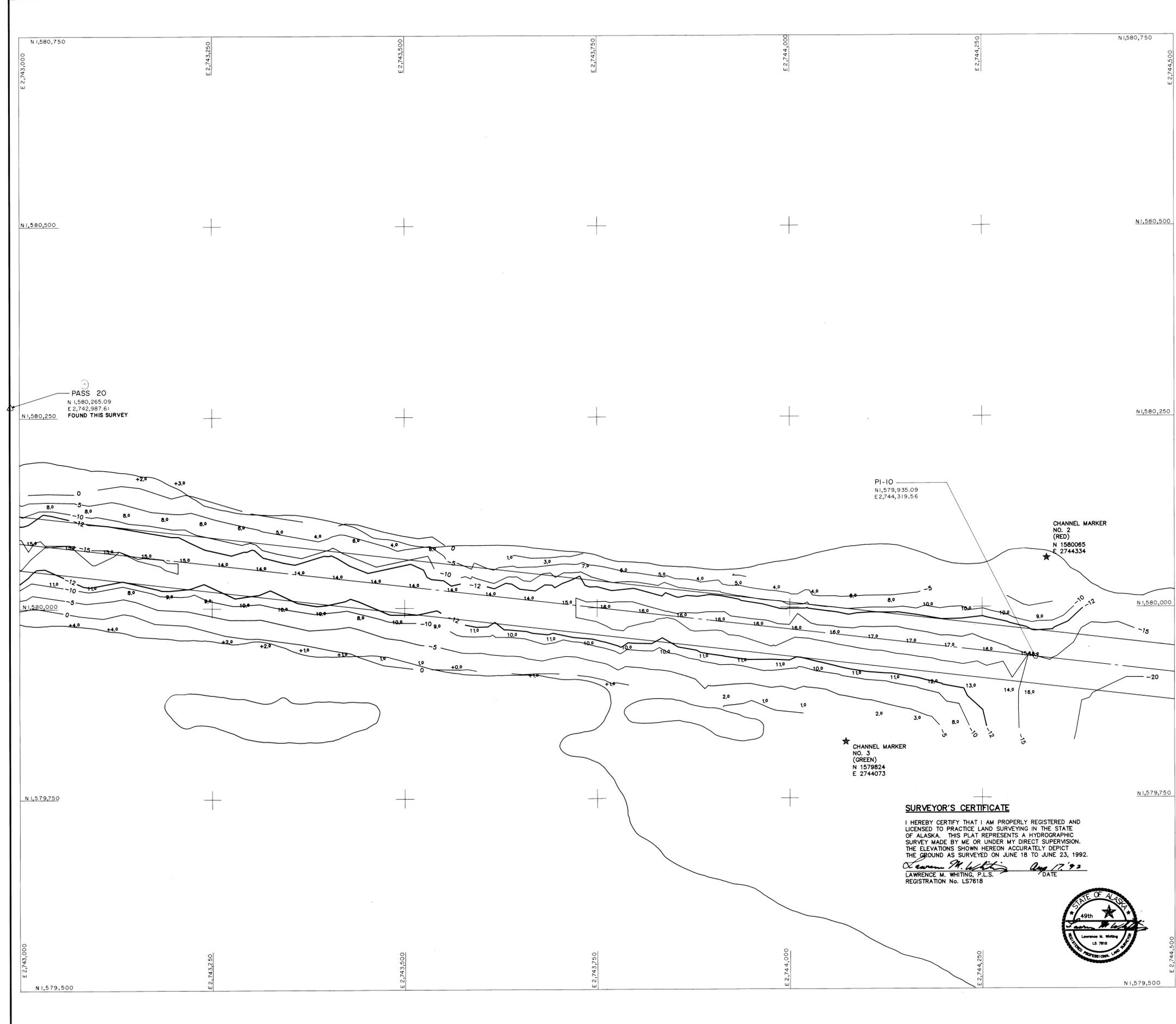
LEGEND

- △ USCBGS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ⊗ ⊗ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

- 1. GRID SYSTEM IS ALASKA STATE PLANE ZONE 1, HOLDING THE PUBLISHED COORDINATES OF USCBGS MONUMENT "PASS, 1922" AS N 1,577,605.39 AND E 2,728,287.74 AND USACE MONUMENT "PASS 20" AS N 1,580,265.09 AND E 2,742,987.61.
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U.S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS	
SUBMITTED:	PROJECT CONDITION SURVEY	
RECOMMENDED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	DATE: Sept 10, 1992
PROJECT MANAGER	CHIEF, OPERATIONS & READINESS BRANCH	SCALE: 1" = 50'
SURVEY NO. 1589-92	SHEET 14 OF 15	



INDEX TO SHEETS

NOTES CONTINUED

- 6. THIS SURVEY WAS DONE UNDER CONTRACT NO. DACW85-91-D-0006 BY LCMF LIMITED.
- 7. DATA ACQUISITION WAS CONDUCTED ON JUNE 18 TO JUNE 23, 1992. SOUNDINGS WERE OBTAINED WITH AN ECHOTRAC 3100 DEPTHSOUNDER AND POSITIONING WAS PROVIDED BY A LASER TRACT RANGE/AZIMUTH SYSTEM AND INTEGRATED SEXTANT SOFTWARE. DEPTHS WERE CORRECTED FOR TIDE USING A TIDE STAFF AND ENDECO TIDE GAUGE INSTALLED BY LCMF LIMITED.

LEGEND

- △ USC&GS MONUMENTS
- USACE MONUMENTS
- ⊕ USACE NON-MONUMENTED CONTROL POINTS
- ✕ ✕ INDICATES MONUMENT IS DESTROYED
- ★ NAVIGATION AIDS

NOTES

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Lawrence M. Whiting DATE *Aug 17 92*
 LAWRENCE M. WHITING, P.L.S. DATE
 REGISTRATION No. LS7618



U. S. ARMY ENGINEER DISTRICT, ALASKA CORPS OF ENGINEERS ANCHORAGE, ALASKA		
SURVEYED: BK	DRY PASS, ALASKA	
DRAWN: CR	DRY PASS PROJECT CONDITION SURVEY	
SUBMITTED:		
RECOMMENDED: PROJECT MANAGER	APPROVED: <i>Lawrence M. Whiting</i> CHIEF OPERATIONS & READINESS BRANCH	DATE: <i>Sept 18 1992</i>
SURVEY NO. 1589-92	SCALE: 1" = 50'	
SHEET 15 OF 15		