

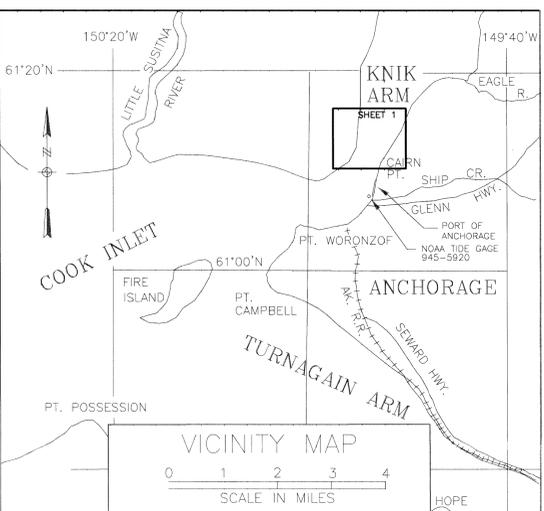
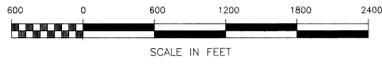
SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA AND I AM AN ACSM, CERTIFIED INSHORE HYDROGRAPHER. THIS PLAT REPRESENTS A HYDROGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION. THE ELEVATIONS SHOWN HEREON ACCURATELY DEPICT THE DEPTHS AS SURVEYED SEPTEMBER 18-21, 2002.

THOMAS S. NEWMAN, P.L.S.
 REGISTRATION NO. LS 8034
 ACSM CERTIFICATION NO. 173



12/10/02
 DATE



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET. HOLDING USACE STANDARD ALUMINUM CAP MONUMENT "PORT 1989" AS N 2,639,936.63, E 1,656,922.51.
- VERTICAL DATUM IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW = 0.0'). HOLDING USACE SAC "PORT 1989" AS 39.93' MLLW (EHT = 50.33') FOR BASELINES 1 THROUGH 10, AND HOLDING 3" ALUMINUM CAP "AWWU 1994" AS 70.40' MLLW (EHT = 78.93') FOR BASELINES 11 THROUGH 14. THE ELEVATION SHOWN FOR "AWWU 1994" REPRESENTS MLLW AT THE COOK INLET NAVIGATION CHANNEL AND SHOULD NOT BE USED AS A MLLW REFERENCE FOR OTHER PROJECTS OUTSIDE THIS AREA.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED ON SEPTEMBER 18-21, 2002. SINGLEBEAM SOUNDINGS WERE OBTAINED USING AN ODOM 3200DF MKII PRECISION DEPTH SOUNDER WITH A 200KHZ, 3" BEAM-WIDTH TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE DSM212L DGPS RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM THE USCG BEACON AT KENAI (310MHz). VESSEL ATTITUDE CORRECTIONS WERE APPLIED USING DATA FROM A TSS "HDM320" HEADING AND DYNAMIC MOTION SENSOR. DATA WAS COLLECTED AND REDUCED USING HYPACK MAX INTEGRATED SOFTWARE.
- SOUNDINGS WERE CORRECTED FOR TIDE USING REAL-TIME KINEMATIC HEIGHT DATA RECORDED ABOARD THE VESSEL DURING THIS SURVEY. RTK HEIGHT DATA WAS LOGGED AT FIVE SECOND INTERVALS USING A TRIMBLE 4000SSI RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSE RECEIVER SET AT "PORT 1989" (BASELINES 1-10) AND AT "AWWU 1994" (BASELINES 11-14).
- THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
- THE DRAWING BACKGROUND IS NOAA CHART 16665, 6TH EDITION, DATED 5/31/97. A DIGITAL RASTER IMAGE OF THIS CHART WAS TRANSLATED INTO ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET USING BLUE MARBLE GEOGRAPHICS TRANSFORMATION SOFTWARE.

CONTROL DATA				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.29	USACE SBC 1978
S. END 1978	2,644,298.25	1,659,725.47	40.37	USACE SBC 1978
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC 1989
EQ-1	2,629,995.41	1,643,787.75	82.97	-
AWWU 1994	2,629,310.92	1,635,837.52	-	See Note 2

BASELINE PROFILE	BASELINE PROFILE COORDINATES			
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,648,200.00	1,656,700.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00
11	2,647,052.00	1,617,887.00	2,620,909.00	1,629,043.00
12	2,646,787.00	1,615,367.00	2,615,335.00	1,622,288.00
13	2,645,909.00	1,606,764.00	2,616,100.00	1,619,005.00
14	2,646,959.00	1,593,667.00	2,620,668.00	1,604,139.00

CONTRACT NO. DACW85-01-D-0001
 CONTRACTOR TERRA SURVEYS, LLC
 CITY PALMER STATE AK

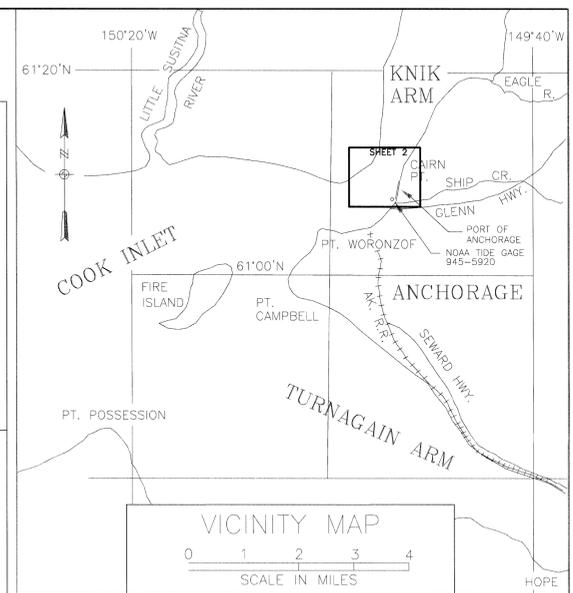
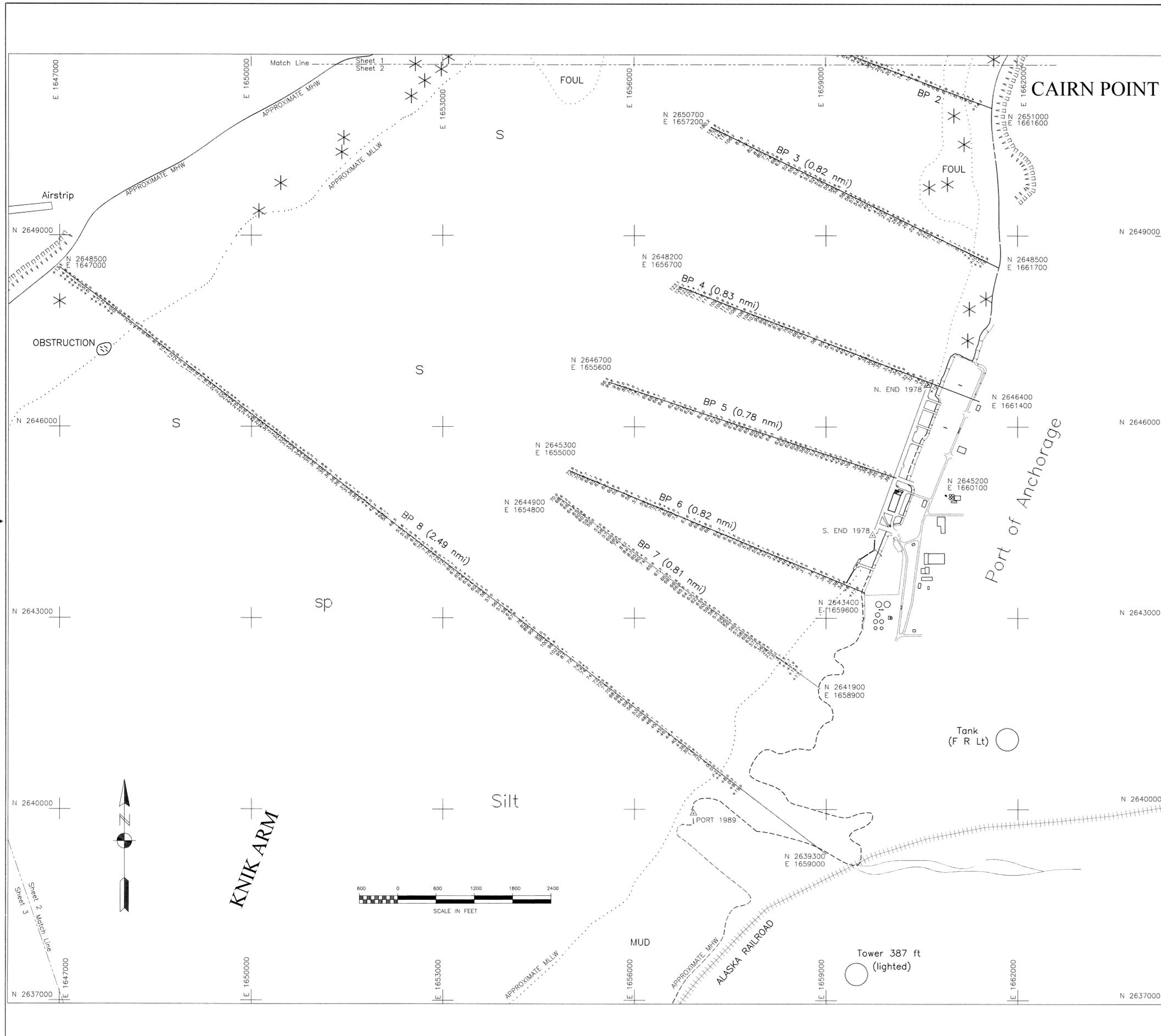
ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

SURVEYED: CK/DM/LG
 DRAWN: LES
 CHECKED: TSN
 SUBMITTED: [Signature]

ANCHORAGE, ALASKA
 ANCHORAGE BASELINE PROFILES
 SEPTEMBER 18-21, 2002

RECOMMENDED: [Signature] APPROVED: [Signature] DATE: 1/9/03
 PROJECT MANAGER: [Signature] CAP. DRAFTER: [Signature]

SURVEY NO. 2006-02 SCALE: 1" = 600'
 SHEET 1 OF 5



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET. HOLDING USACE STANDARD ALUMINUM CAP MONUMENT "PORT 1989" AS N 2,639,936.63, E 1,656,922.51.
- VERTICAL DATUM IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW = 0.0'). HOLDING USACE SAC "PORT 1989" AS 39.93' MLLW (EHT = 50.33') FOR BASELINES 1 THROUGH 10, AND HOLDING 3" ALUMINUM CAP "AWWU 1994" AS 70.40' MLLW (EHT = 78.93') FOR BASELINES 11 THROUGH 14. THE ELEVATION SHOWN FOR "AWWU 1994" REPRESENTS MLLW AT THE COOK INLET NAVIGATION CHANNEL AND SHOULD NOT BE USED AS A MLLW REFERENCE FOR OTHER PROJECTS OUTSIDE THIS AREA.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED ON SEPTEMBER 18-21, 2002. SINGLEBEAM SOUNDINGS WERE OBTAINED USING AN ODOM 3200DF MKII PRECISION DEPTH SOUNDER WITH A 200KHZ, 3" BEAM-WIDTH TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE DSM212L DGPS RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM THE USCG BEACON AT KENAI (310MHz). VESSEL ATTITUDE CORRECTIONS WERE APPLIED USING DATA FROM A TSS "HDM5320" HEADING AND DYNAMIC MOTION SENSOR. DATA WAS COLLECTED AND REDUCED USING HYPACK MAX INTEGRATED SOFTWARE.
- SOUNDINGS WERE CORRECTED FOR TIDE USING REAL-TIME KINEMATIC HEIGHT DATA RECORDED ABOARD THE VESSEL DURING THIS SURVEY. RTK HEIGHT DATA WAS LOGGED AT FIVE SECOND INTERVALS USING A TRIMBLE 4000SSI RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSI RECEIVER SET AT "PORT 1989" (BASELINES 1-10) AND AT "AWWU 1994" (BASELINES 11-14).
- THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
- THE DRAWING BACKGROUND IS NOAA CHART 16665, 6TH EDITION, DATED 5/31/97. A DIGITAL RASTER IMAGE OF THIS CHART WAS TRANSLATED INTO ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET USING BLUE MARBLE GEOGRAPHICS TRANSFORMATION SOFTWARE.

CONTROL DATA				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.29	USACE SBC 1978
S. END 1978	2,644,298.25	1,659,725.47	40.37	USACE SBC 1978
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC 1989
EQ-1	2,629,995.41	1,643,787.75	82.97	-
AWWU 1994	2,629,310.92	1,635,837.52	-	See Note 2

BASELINE PROFILE	BASELINE PROFILE COORDINATES			
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,648,200.00	1,656,700.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,644,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00
11	2,647,052.00	1,617,887.00	2,620,909.00	1,629,043.00
12	2,646,787.00	1,615,367.00	2,615,335.00	1,622,288.00
13	2,645,909.00	1,606,764.00	2,616,100.00	1,619,005.00
14	2,646,959.00	1,593,667.00	2,620,668.00	1,604,139.00

CONTRACT NO. DACW85-01-D-0001
 CONTRACTOR TERRA SURVEYS, LLC
 CITY PALMER STATE AK

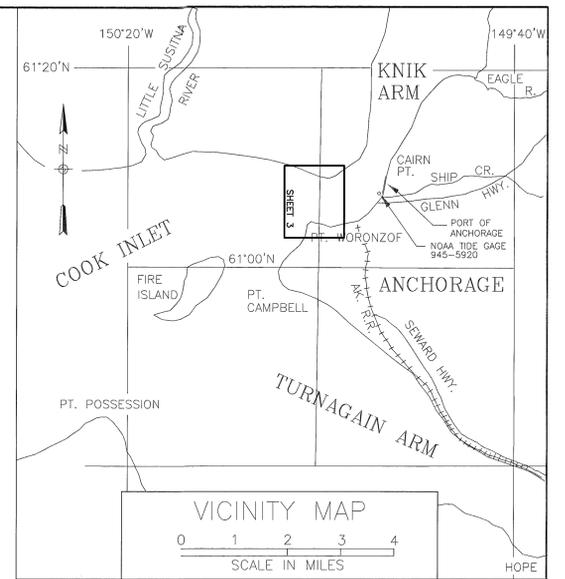
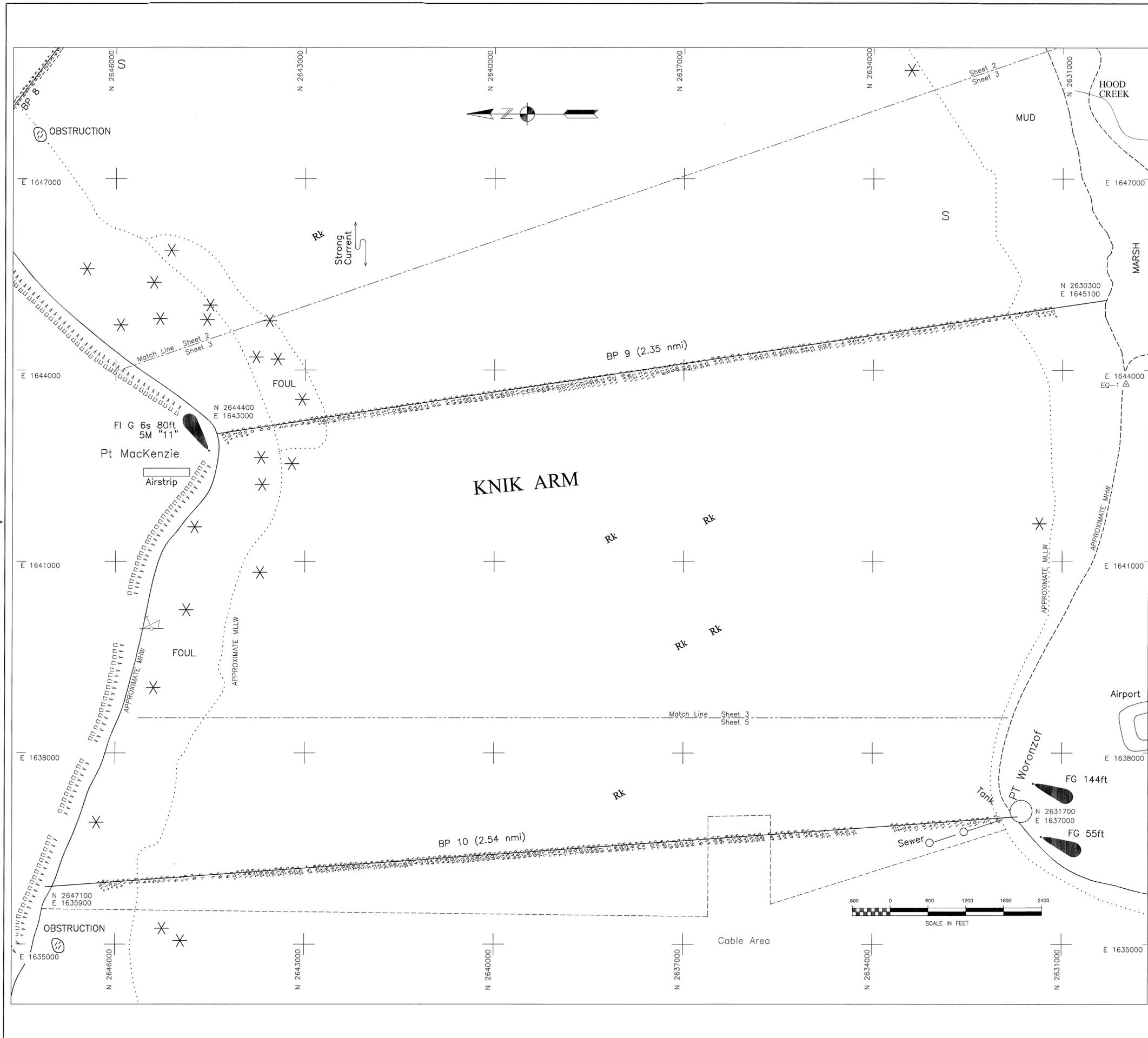
ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

ANCHORAGE, ALASKA
 ANCHORAGE BASELINE PROFILES
 SEPTEMBER 18-21, 2002

SURVEYED: CK/DM/LG
 DRAWN: LES
 CHECKED: TSN
 SUBMITTED: AD

RECOMMENDED: *Andrew H. Brown* APPROVED: *E. Allen Chausse* DATE: 1/9/03
 PROJECT MANAGER CHIEF OPERATIONS-REGIONS BRANCH

SURVEY NO. 2006-02 SCALE: 1" = 600'
 SHEET 2 OF 5



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET. HOLDING USACE STANDARD ALUMINUM CAP MONUMENT "PORT 1989" AS N 2,639,936.63, E 1,656,922.51.
- VERTICAL DATUM IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW = 0.0'), HOLDING USACE SAC "PORT 1989" AS 39.93' MLLW (EHT = 50.33') FOR BASELINES 1 THROUGH 10, AND HOLDING 3" ALUMINUM CAP "AWWU 1994" AS 70.40' MLLW (EHT = 78.93') FOR BASELINES 11 THROUGH 14. THE ELEVATION SHOWN FOR "AWWU 1994" REPRESENTS MLLW AT THE COOK INLET NAVIGATION CHANNEL AND SHOULD NOT BE USED AS A MLLW REFERENCE FOR OTHER PROJECTS OUTSIDE THIS AREA.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED ON SEPTEMBER 18-21, 2002. SINGLE-BEAM SOUNDINGS WERE OBTAINED USING AN ODOM 3200DF MKII PRECISION DEPTH SOUNDING WITH A 200kHz, 3° BEAM-WIDTH TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE DSM212L DGPS RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM THE USCG BEACON AT KENAI (310MHz). VESSEL ATTITUDE CORRECTIONS WERE APPLIED USING DATA FROM A TSS "HDMS320" HEADING AND DYNAMIC MOTION SENSOR. DATA WAS COLLECTED AND REDUCED USING HYPACK MAX INTEGRATED SOFTWARE.
- SOUNDINGS WERE CORRECTED FOR TIDE USING REAL-TIME KINEMATIC HEIGHT DATA RECORDED ABOARD THE VESSEL DURING THIS SURVEY. RTK HEIGHT DATA WAS LOGGED AT FIVE SECOND INTERVALS USING A TRIMBLE 4000SSI RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSI RECEIVER SET AT "PORT 1989" (BASELINES 1-10) AND AT "AWWU 1994" (BASELINES 11-14).
- THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
- THE DRAWING BACKGROUND IS NOAA CHART 16665, 6TH EDITION, DATED 5/31/97. A DIGITAL RASTER IMAGE OF THIS CHART WAS TRANSLATED INTO ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET USING BLUE MARBLE GEOGRAPHICS TRANSFORMATION SOFTWARE.

CONTROL DATA				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.29	USACE SBC 1978
S. END 1978	2,644,298.25	1,659,725.47	40.37	USACE SBC 1978
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC 1989
EQ-1	2,629,995.41	1,643,787.75	82.97	-
AWWU 1994	2,629,310.92	1,635,837.52	-	See Note 2

BASELINE PROFILE	BASELINE PROFILE COORDINATES			
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,648,200.00	1,656,700.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00
11	2,647,052.00	1,617,887.00	2,620,909.00	1,629,043.00
12	2,646,787.00	1,615,367.00	2,615,335.00	1,622,288.00
13	2,645,909.00	1,606,764.00	2,616,100.00	1,619,005.00
14	2,646,959.00	1,593,667.00	2,620,668.00	1,604,139.00

CONTRACT NO. DACW85-01-D-0001
 CONTRACTOR TERRA SURVEYS, LLC
 CITY PALMER STATE AK

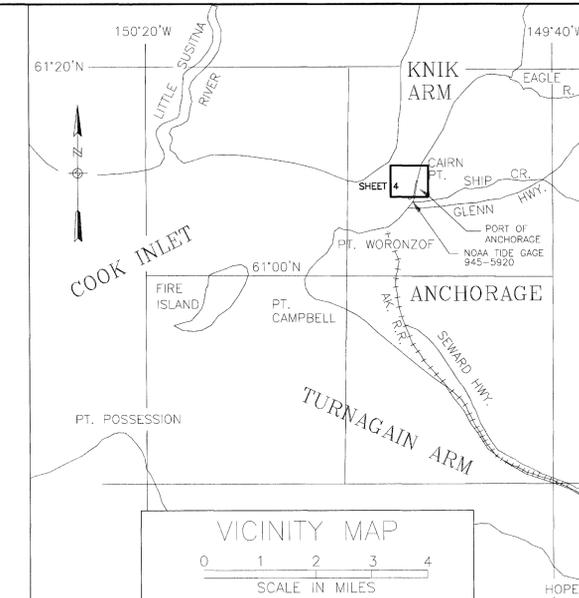
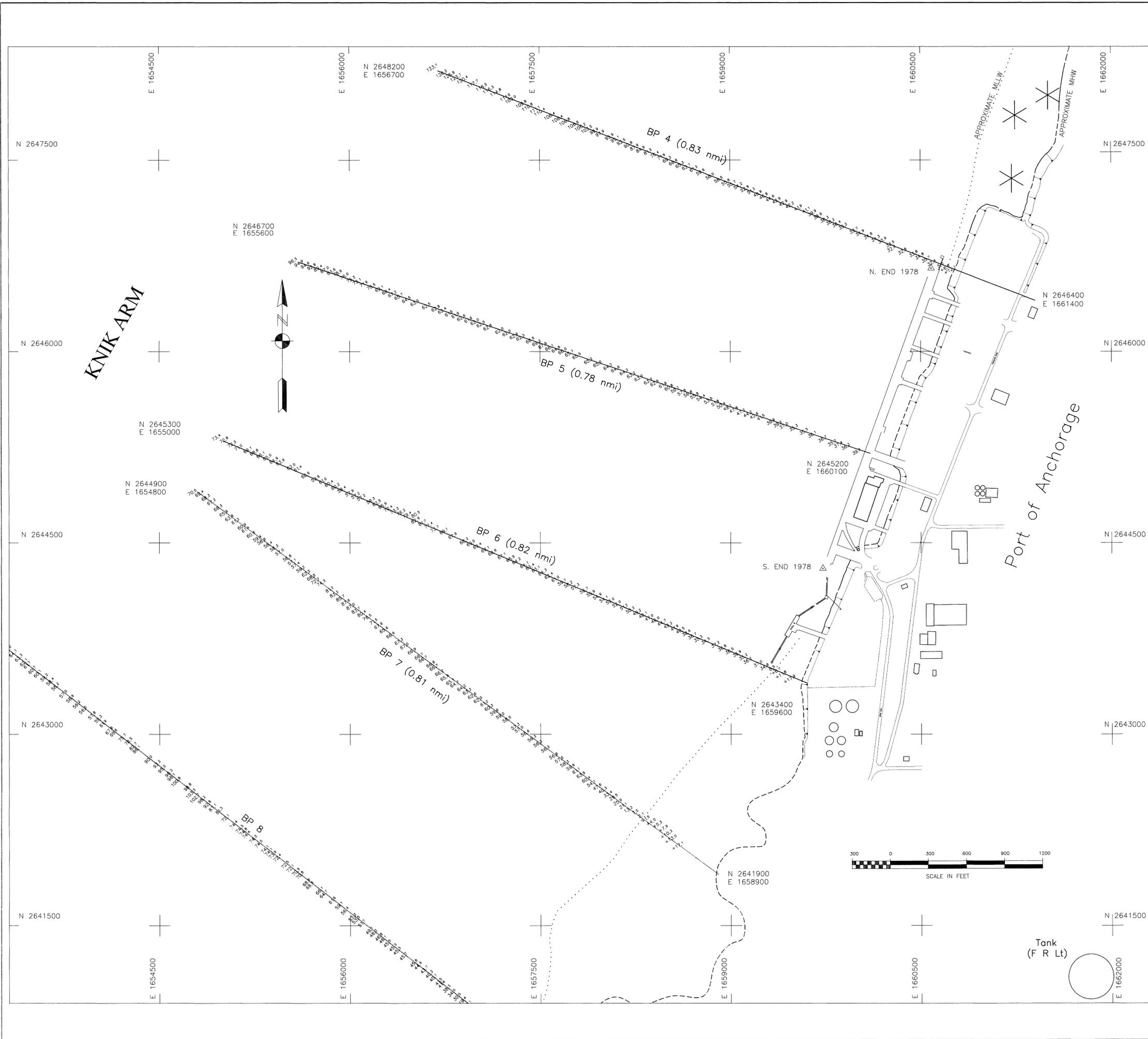
ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

SURVEYED: CK/DM/LG
 DRAWN: LES
 CHECKED: TSN
 SUBMITTED: AS

ANCHORAGE, ALASKA
 ANCHORAGE BASELINE PROFILES
 SEPTEMBER 18-21, 2002

RECOMMENDED: *John H. Buss* APPROVED: *John H. Buss* DATE: 1/10/03
 PROJECT MANAGER: *John H. Buss* SUPERVISOR: *John H. Buss*

SURVEY NO. 2006-02 SCALE: 1" = 600'
 SHEET 3 OF 5



- NOTES**
- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET, HOLDING USACE STANDARD ALUMINUM CAP MONUMENT "PORT 1989" AS N 2,639,936.63, E 1,656,922.51.
 - VERTICAL DATUM IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW = 0.0'). HOLDING USACE SAC "PORT 1989" AS 39.93' MLLW (EHT = 50.33') FOR BASELINES 1 THROUGH 10, AND HOLDING 3" ALUMINUM CAP "AWWU 1994" AS 70.40' MLLW (EHT = 78.93') FOR BASELINES 11 THROUGH 14. THE ELEVATION SHOWN FOR "AWWU 1994" REPRESENTS MLLW AT THE COOK INLET NAVIGATION CHANNEL AND SHOULD NOT BE USED AS A MLLW REFERENCE FOR OTHER PROJECTS OUTSIDE THIS AREA.
 - SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
 - HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED ON SEPTEMBER 18-21, 2002. SINGLEBEAM SOUNDINGS WERE OBTAINED USING AN ODOM 3200DF MKII PRECISION DEPTH SOUNDER WITH A 200kHz, 3" BEAM-WIDTH TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE DSM212L DGPS RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM THE USCG BEACON AT KENAI (310MHz). VESSEL ATTITUDE CORRECTIONS WERE APPLIED USING DATA FROM A TSS "HDM320" HEADING AND DYNAMIC MOTION SENSOR. DATA WAS COLLECTED AND REDUCED USING HYPACK MAX INTEGRATED SOFTWARE.
 - SOUNDINGS WERE CORRECTED FOR TIDE USING REAL-TIME KINEMATIC HEIGHT DATA RECORDED ABOARD THE VESSEL DURING THIS SURVEY. RTK HEIGHT DATA WAS LOGGED AT FIVE SECOND INTERVALS USING A TRIMBLE 4000SSI RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSS RECEIVER SET AT "PORT 1989" (BASELINES 1-10) AND AT "AWWU 1994" (BASELINES 11-14).
 - THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
 - THE DRAWING BACKGROUND IS NOAA CHART 16665, 6TH EDITION, DATED 5/31/97. A DIGITAL RASTER IMAGE OF THIS CHART WAS TRANSLATED INTO ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET USING BLUE MARBLE GEOGRAPHICS TRANSFORMATION SOFTWARE.

CONTROL DATA				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.29	USACE SBC 1978
S. END 1978	2,644,298.25	1,659,725.47	40.37	USACE SBC 1978
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC 1989
EQ-1	2,629,995.41	1,643,787.75	82.97	-
AWWU 1994	2,629,310.92	1,635,837.52	-	See Note 2

BASELINE PROFILE	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,648,200.00	1,656,700.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00
11	2,647,052.00	1,617,887.00	2,620,909.00	1,629,043.00
12	2,646,787.00	1,615,367.00	2,615,335.00	1,622,288.00
13	2,645,909.00	1,606,764.00	2,616,100.00	1,619,005.00
14	2,646,959.00	1,593,667.00	2,620,668.00	1,604,139.00

CONTRACT NO. DACW85-01-D-0001
 CONTRACTOR TERRA SURVEYS, LLC
 CITY PALMER STATE AK

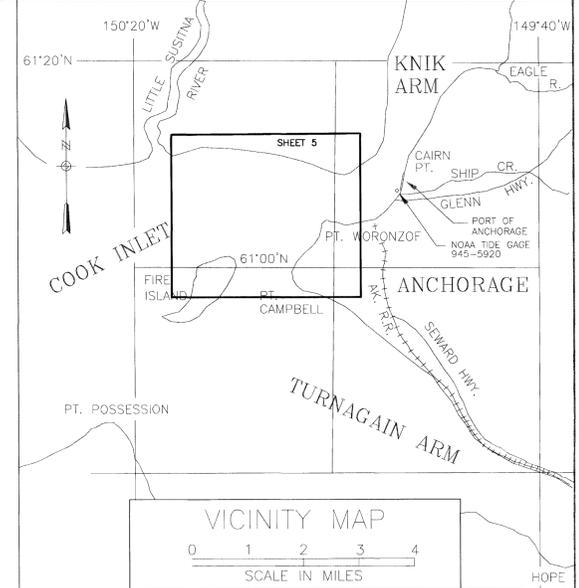
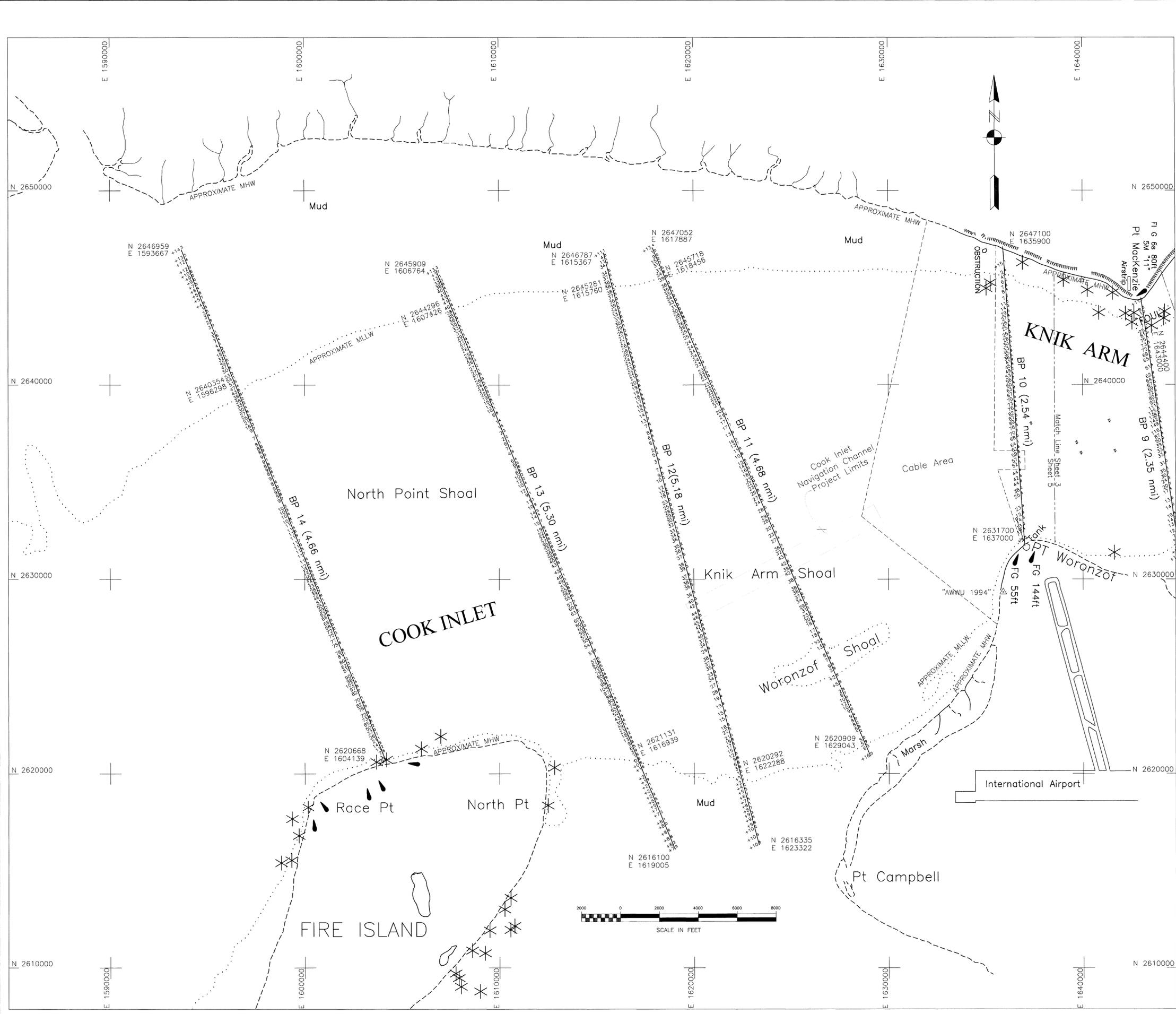
ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

ANCHORAGE, ALASKA
 ANCHORAGE BASELINE PROFILES
 SEPTEMBER 18-21, 2002

SURVEYED: CK/DM/LG
 DRAWN: LES
 CHECKED: TSN
 SUBMITTED: (42)

RECOMMENDED: Andrew H. Brown
 APPROVED: [Signature]
 PROJECT MANAGER: [Signature]
 DATE: 1/9/03

SURVEY NO. 2006-02
 SCALE: 1" = 300'
 SHEET 4 OF 5



NOTES

- HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET, HOLDING USACE STANDARD ALUMINUM CAP MONUMENT "PORT 1989" AS N 2,639,936.63, E 1,656,922.51.
- VERTICAL DATUM IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW = 0.0'), HOLDING USACE SAC "PORT 1989" AS 39.93' MLLW (EHT = 50.33') FOR BASELINES 1 THROUGH 10, AND HOLDING 3" ALUMINUM CAP "AWWU 1994" AS 70.40' MLLW (EHT = 78.93') FOR BASELINES 11 THROUGH 14. THE ELEVATION SHOWN FOR "AWWU 1994" REPRESENTS MLLW AT THE COOK INLET NAVIGATION CHANNEL AND SHOULD NOT BE USED AS A MLLW REFERENCE FOR OTHER PROJECTS OUTSIDE THIS AREA.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- HYDROGRAPHIC DATA ACQUISITION WAS CONDUCTED ON SEPTEMBER 18-21, 2002. SINGLEBEAM SOUNDINGS WERE OBTAINED USING AN ODOM 3200DF MKII PRECISION DEPTH SOUNDER WITH A 200KHZ, 3' BEAM-WIDTH TRANSDUCER. POSITIONING WAS PROVIDED USING A TRIMBLE DSM212L DGPS RECEIVER OPERATING ON RTCM CORRECTIONS BROADCAST FROM THE USCG BEACON AT KENAI (310MHZ). VESSEL ATTITUDE CORRECTIONS WERE APPLIED USING DATA FROM A TSS "HDMS320" HEADING AND DYNAMIC MOTION SENSOR. DATA WAS COLLECTED AND REDUCED USING HYPACK MAX INTEGRATED SOFTWARE.
- SOUNDINGS WERE CORRECTED FOR TIDE USING REAL-TIME KINEMATIC HEIGHT DATA RECORDED ABOARD THE VESSEL DURING THIS SURVEY. RTK HEIGHT DATA WAS LOGGED AT FIVE SECOND INTERVALS USING A TRIMBLE 4000SSI RECEIVER OPERATING ON KINEMATIC CORRECTIONS BROADCAST FROM A TRIMBLE 4000SSI RECEIVER SET AT "PORT 1989" (BASELINES 1-10) AND AT "AWWU 1994" (BASELINES 11-14).
- THIS DRAWING IS INDICATIVE OF CONDITIONS AT THE TIME OF SURVEY.
- THE DRAWING BACKGROUND IS NOAA CHART 16665, 6TH EDITION, DATED 5/31/97. A DIGITAL RASTER IMAGE OF THIS CHART WAS TRANSLATED INTO ALASKA STATE PLANE, ZONE 4, NAD83 IN US SURVEY FEET USING BLUE MARBLE GEOGRAPHICS TRANSFORMATION SOFTWARE.

CONTROL DATA				
STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
N. END 1978	2,646,652.19	1,660,582.43	41.29	USACE SBC 1978
S. END 1978	2,644,298.25	1,659,725.47	40.37	USACE SBC 1978
PORT 1989	2,639,936.64	1,656,922.51	39.93	USACE SAC 1989
EQ-1	2,629,995.41	1,643,787.75	82.97	-
AWWU 1994	2,629,310.92	1,635,837.52	-	See Note 2

BASELINE PROFILE	BASELINE PROFILE COORDINATES			
	BEGINNING		ENDING	
	NORTHING	EASTING	NORTHING	EASTING
1	2,662,100.00	1,654,500.00	2,658,100.00	1,666,600.00
2	2,653,900.00	1,653,900.00	2,651,000.00	1,661,600.00
3	2,650,700.00	1,657,200.00	2,648,500.00	1,661,700.00
4	2,648,200.00	1,656,700.00	2,646,400.00	1,661,400.00
5	2,646,700.00	1,655,600.00	2,645,200.00	1,660,100.00
6	2,645,300.00	1,655,000.00	2,643,400.00	1,659,600.00
7	2,644,900.00	1,654,800.00	2,641,900.00	1,658,900.00
8	2,648,500.00	1,647,000.00	2,639,300.00	1,659,000.00
9	2,644,400.00	1,643,000.00	2,630,300.00	1,645,100.00
10	2,647,100.00	1,635,900.00	2,631,700.00	1,637,000.00
11	2,647,052.00	1,617,887.00	2,620,909.00	1,629,043.00
12	2,646,787.00	1,615,367.00	2,615,335.00	1,622,288.00
13	2,645,909.00	1,606,764.00	2,616,100.00	1,619,005.00
14	2,646,959.00	1,593,667.00	2,620,668.00	1,604,139.00

CONTRACT NO. DACW85-01-D-0001
 CONTRACTOR TERRA SURVEYS, LLC
 CITY PALMER STATE AK

ALASKA DISTRICT
 CORPS OF ENGINEERS
 ANCHORAGE, ALASKA

SURVEYED: CK/DM/LG
 DRAWN: LES
 CHECKED: TSN
 SUBMITTED: [Signature]

ANCHORAGE, ALASKA
 ANCHORAGE BASELINE PROFILES
 SEPTEMBER 18-21, 2002

RECOMMENDED: [Signature] APPROVED: [Signature] DATE: 1/9/03
 PROJECT MANAGER: [Signature] SURVEY NO. 2006-02
 SCALE: 1" = 2000'
 SHEET 5 OF 5