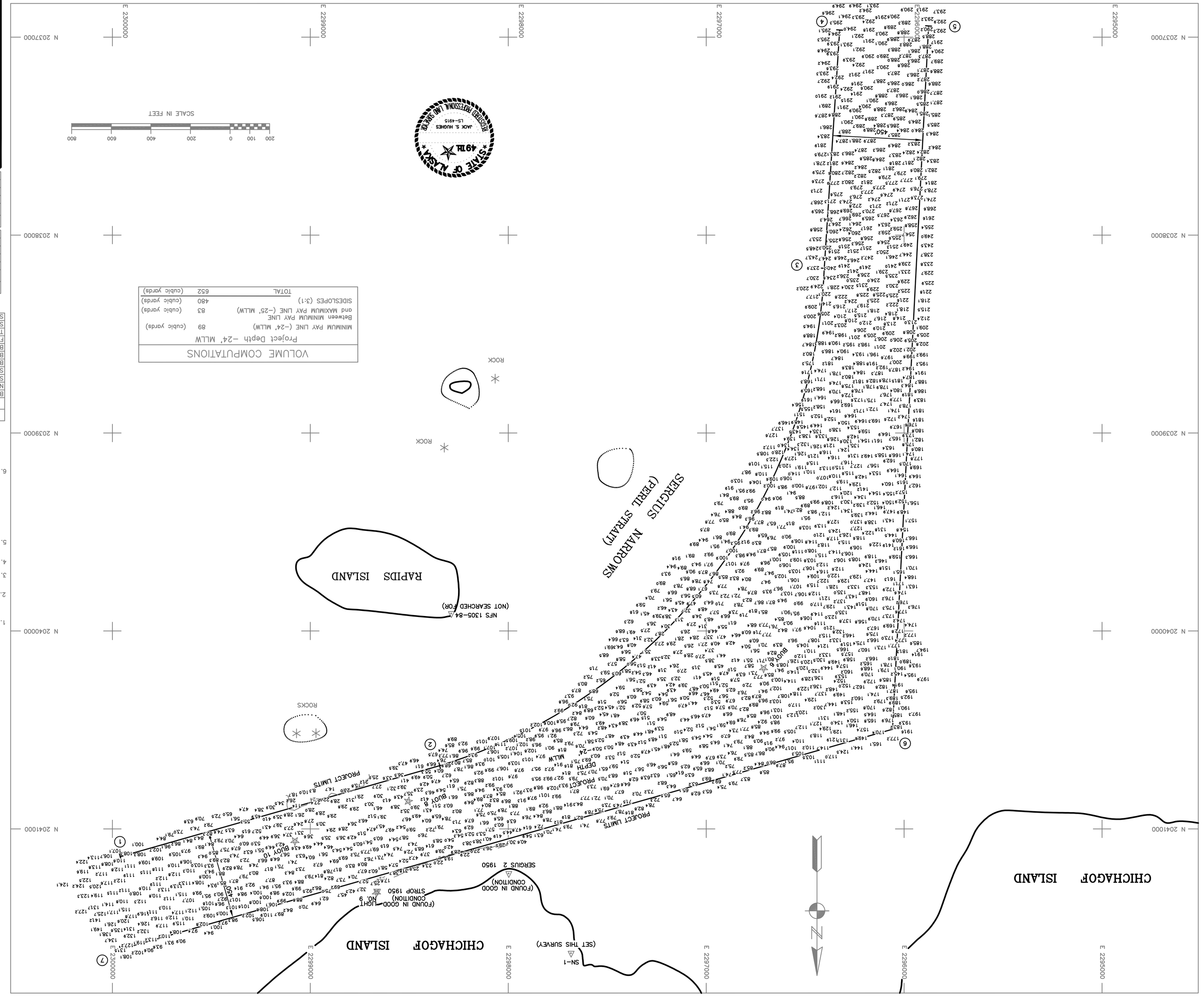
CORPS OF ENGINEERS

U. S. ARMY



VOLUME COMPUTATIONS

Project Depth –24', MLLW	
MINIMUM PAY LINE (–24', MLLW)	89 (cubic yards)
Between MINIMUM PAY LINE and MAXIMUM PAY LINE	83 (cubic yards)
SIDESLOPES (3:1)	480 (cubic yards)
TOTAL	652 (cubic yards)

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
BOON Z 1950	2,040,622.28	2,294,418.13	----	USCGS TRI STA SBC
NFS 1305-84	2,039,912.14	2,298,288.28	----	USACE SBC
SERGIUS 2 1950	2,041,225.33	2,297,998.06	12.20'	USCGS TRI STA SBC
STROP 1950	2,041,314.93	2,298,661.23	12.34'	USCGS TRI STA SBC
BM 4 (SHOAL 2 1950)	2,041,893.70	2,299,928.26	9.44'	USCGS TRI STA SBC
BM 5 (SHOAL 2 NO 2 1950)	------	------	13.78'	USCGS BENCHMARK SBC
BM 6 (SHOAL 2 NO 1 1950)	------	------	13.49'	USCGS BENCHMARK SBC
SN-1	2,041,628.09	2,297,683.31	14.51'	SET 3.5" DOMED BRASS CAP
TIDAL 2001	2,042,029.17	2,299,961.19	11.84'	3.5" DOMED BRASS CAP
FJENN 2001	2,037,864.14	2,293,139.34	----	3.5" DOMED BRASS CAP
SARAH	2,042,256.36	2,300,024.99	14.60'	SET 3.5" DOMED BRASS CAP

PROJECT LIMITS

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	2,041,141	2,299,961	6	2,040,497	2,296,058
2	2,040,681	2,298,347	7	2,041,609	2,299,961
3	2,038,168	2,296,403			
4	2,036,964	2,296,325			
5	2,036,944	2,293,878			

NAVIGATION AIDS

DESCRIPTION	USCG NO	NORTHING	EASTING
WEST FRANOS ROCK LIGHTED BUOY 6 – RED	23190	2,040,189	2,296,710
SERGIUS NARROWS BUOY 8 – RED NUN.	23195	2,040,880	2,298,505
SERGIUS NARROWS LIGHT 9 – SG	25200	2,041,322	2,298,666
WAYANDA LEDGE BUOY 10 – RED NUN.	25205	2,041,062	2,299,078

CONTRACT NO. W91KB-04-D-0007
CONTRACTOR HUGHES & ASSOCIATES
CITY PALMER CITY ALASKA

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

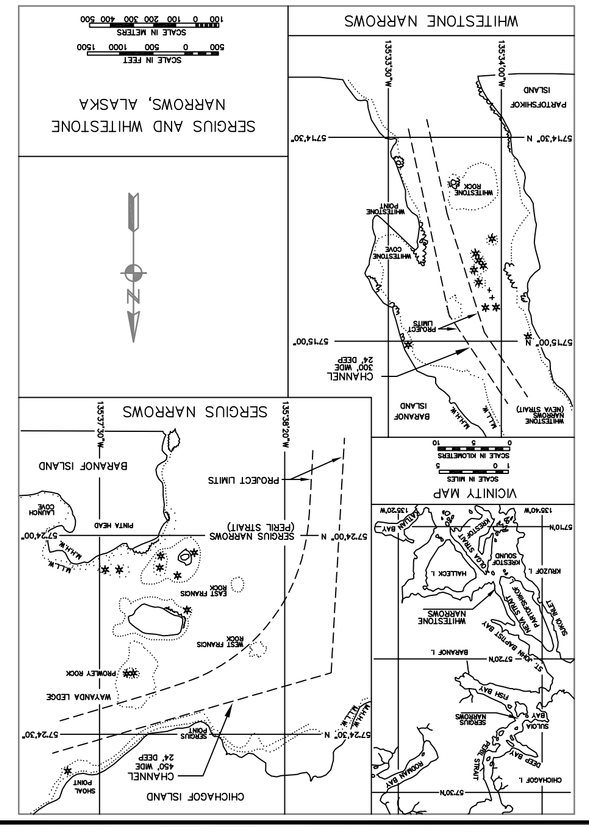
SURVEYED: CSH/BTH
DRAWN: CSH
CHECKED: JSH
SUBMITTED:

PEARL STRAIT, ALASKA
SERGIUS NARROWS
PROJECT CONDITION SURVEY
MAY 22–24, 2005

RECOMMENDED: APPROVED: DATE:
PROJECT MANAGER CHIEF OPERATIONS–READINESS BRANCH

SURVEY NO. 2246–05
SCALE: 1" = 200'
SHEET 1 OF 1

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FEET, HOLDING USACE SBC "SARAH" AS N 2,042,256.36, E 2,300,024.99 AND "SN–1" AS N 2,041,628.09, E 2,297,683.31.
2. VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLLW = 0.0'), HOLDING "SARAH" AT 14.60'.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
4. THE EXISTING PROJECT CONSISTS OF SERGIUS NARROWS LOCATED IN PEARL STRAIT IN SOUTHEAST ALASKA.
5. BATHYMETRY WAS COLLECTED MAY 22–24, 2005. SOUNDINGS WERE COLLECTED USING AN "INTERSPACE 448" SOUNDER WITH A 3° SINGLE BEAM TRANSDUCER. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN ODOM DIGIBAR PRO SOUND VELOCITY PROBE, AND VERIFIED WITH A MANUAL BAR CHECK AT 10' INCREMENTS TO PROJECT DEPTH. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A "TRIMBLE 5700 RTK" SYSTEM AND TSS MOTION REFERENCE UNIT. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION OCCUPYING "SARAH". DATA WAS COLLECTED AND FIELD PROCESSED USING "HYPACK MAX VERSION 02.12A" SOFTWARE. TIDE ELEVATIONS WERE MEASURED USING A TRIMBLE 5700 RTK" SYSTEM VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
6. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.



CORPS OF ENGINEERS

U. S. ARMY

NEVA STRAIT, ALASKA
WHITESTONE NARROWS
PROJECT CONDITION SURVEY
MAY 18-20, 2005

SURVEYED:	BTH/CSH
DRAWN:	BTH/CSH
CHECKED:	JSH
SUBMITTED:	
RECOMMENDED:	APPROVED:
PROJECT MANAGER	CHIEF OPERATIONS–REAL ESTATE DIVISION
DATE:	SCALE: 1"= 100'
SURVEY NO.	2247–05
	SHEET 1 OF 1

ALASKA DISTRICT
CORPS OF ENGINEERS
ANCHORAGE, ALASKA

CONTRACTOR HUGHES & ASSOCIATES CITY PALMER ALASKA
CONTRACT NO. W911KB-04-D-0007
CITY ALASKA

USCG No.	DESCRIPTION	NORTHING	EASTING
25025	ROCK LIGHTED BUOY 13	1,980,538	2,310,300
25100	WHITESTONE POINT LIGHT 14	1,981,296	2,310,568
25105	CHANNEL BUOY 15	1,982,270	2,309,856
25110	CHANNEL LIGHTED BUOY 17	1,982,821	2,309,733
25120	CHANNEL RANGE FRONT LIGHT	1,984,530.0	2,309,500.4
25115	WHITESTONE SANDSPIT BUOY 18	1,983,736	2,309,569
25125	CHANNEL RANGE REAR LIGHT	1,984,896.6	2,309,413.3

NAVIGATION AIDS

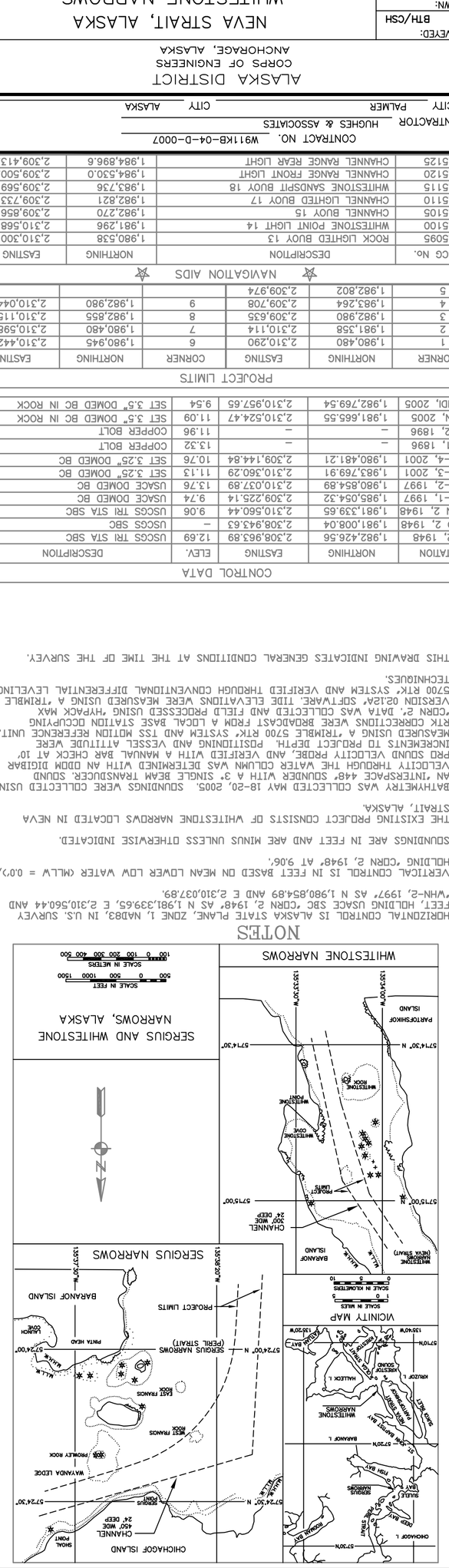
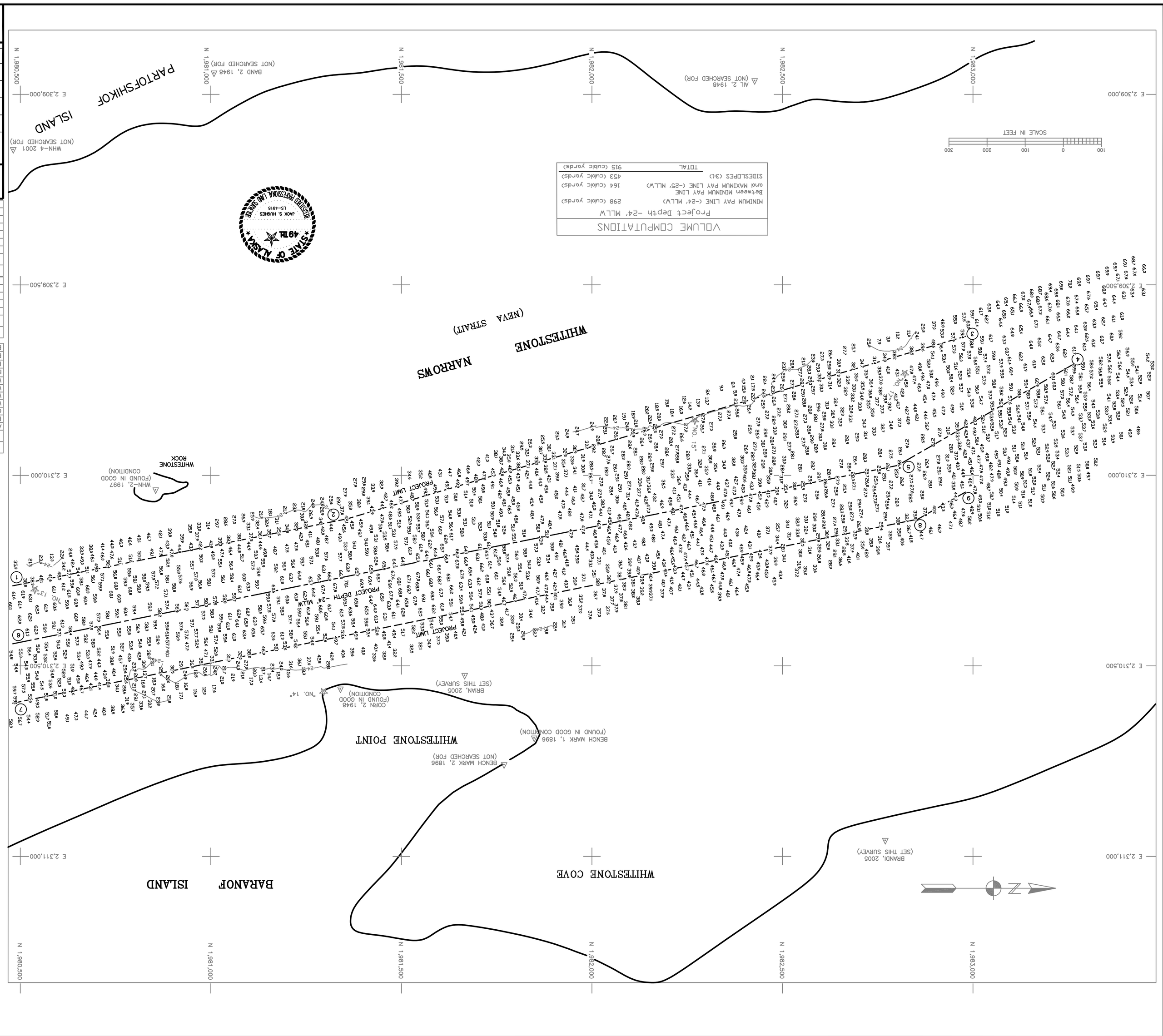
CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	1,980,480	2,310,290	6	1,980,945	2,310,442
2	1,981,358	2,310,114	7	1,980,480	2,310,598
3	1,982,980	2,309,635	8	1,982,855	2,310,115
4	1,983,264	2,309,708	9	1,982,980	2,310,044
5	1,982,802	2,309,974			

PROJECT LIMITS

BRAVO, 2005	1,981,666.55	2,310,524.47	11.09	SET 3.5" DOMED BC IN ROCK
BM-2, 1936	–	–	11.96	COPPER BOLT
BM-1, 1936	–	–	13.32	COPPER BOLT
MHN-4, 2001	1,980,481.21	2,309,144.84	10.76	SET 3.25" DOMED BC
MHN-3, 2001	1,982,769.91	2,310,360.29	11.13	SET 3.25" DOMED BC
MHN-2, 1997	1,980,854.89	2,310,037.89	13.76	USACE DOMED BC
MHN-1, 1997	1,983,054.32	2,309,225.14	9.74	USACE DOMED BC
CORN 2, 1948	1,981,339.65	2,310,560.44	9.06	USCGS TRI STA SBC
BAND 2, 1948	1,981,008.04	2,308,943.63	–	USCGS SBC
AL 2, 1948	1,982,426.56	2,308,963.89	12.69	USCGS TRI STA SBC

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION

NOTES

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FEET, HOLDING USACE SBC "CORN 2, 1948" AS N 1,981,339.65, E 2,310,560.44 AND "MHN-2, 1997" AS N 1,980,854.89 AND E 2,310,037.89.
2. VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLLW = 0.0'), HOLDING "CORN 2, 1948" AT 9.06'.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
4. THE EXISTING PROJECT CONSISTS OF WHITESTONE NARROWS LOCATED IN NEVA STRAIT, ALASKA.
5. BATHYMETRY WAS COLLECTED MAY 18-20, 2005. SOUNDINGS WERE COLLECTED USING AN "INTERSPACE 448" SOUNDER WITH A 3° SINGLE BEAM TRANSDUCER. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH AN OCEAN DIGIBAR PRO SOUND VELOCITY PROBE, AND VERIFIED WITH A MANUAL BAR CHECK AT 10' INCREMENTS TO PROJECT DEPTH. POSITIONING AND VESSEL ATTITUDE WERE MEASURED USING A TRIMBLE 5700 RTK SYSTEM AND TSS MOTION REFERENCE UNIT. RTK CORRECTIONS WERE BROADCAST FROM A LOCAL BASE STATION OCCUPYING "CORN 2". DATA WAS COLLECTED AND FIELD PROCESSED USING "HYPACK MAX VERSION 02.04". SOFTWARE. TIDE ELEVATIONS WERE MEASURED USING A "TRIMBLE 5700 RTK" SYSTEM AND VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
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