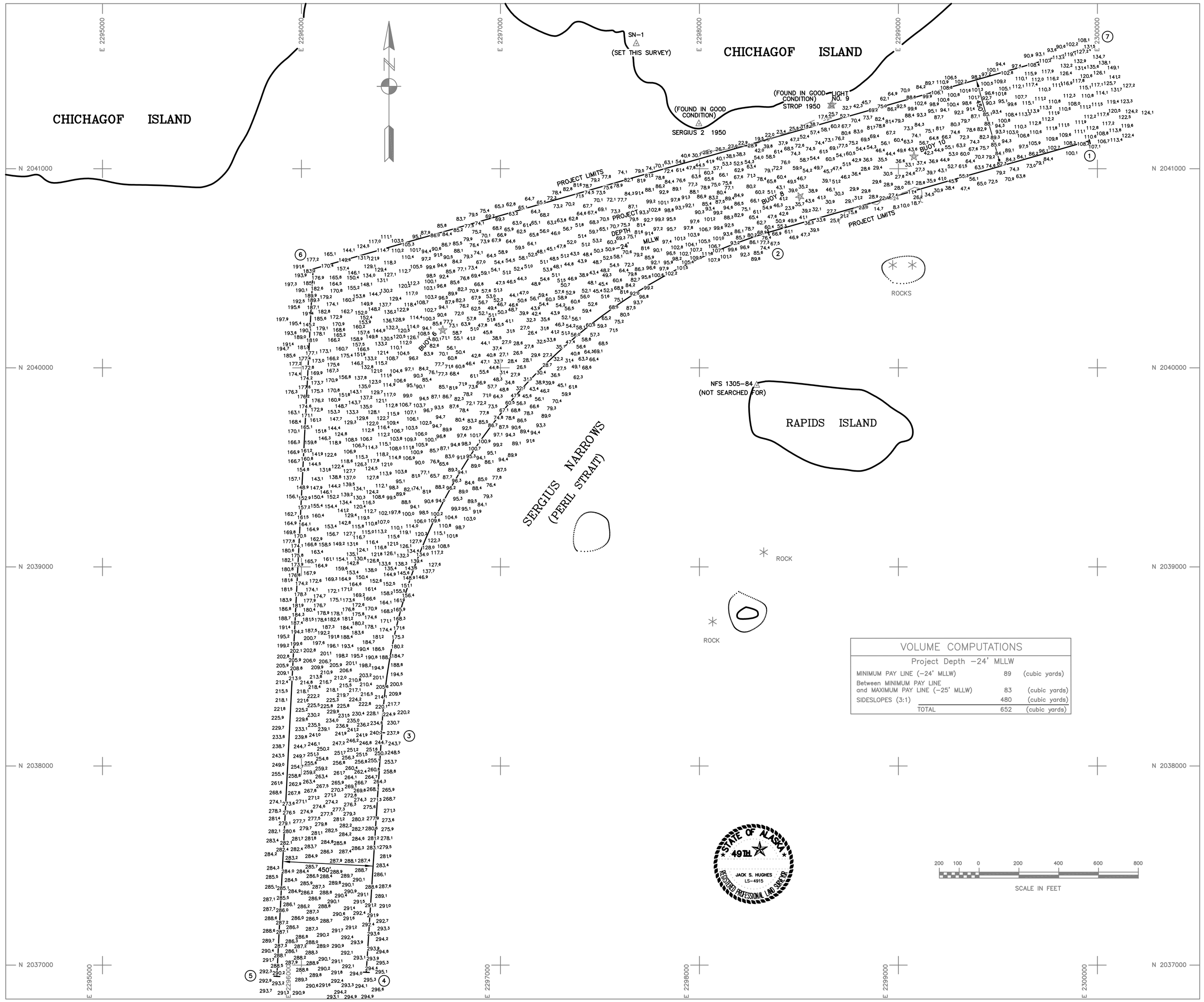

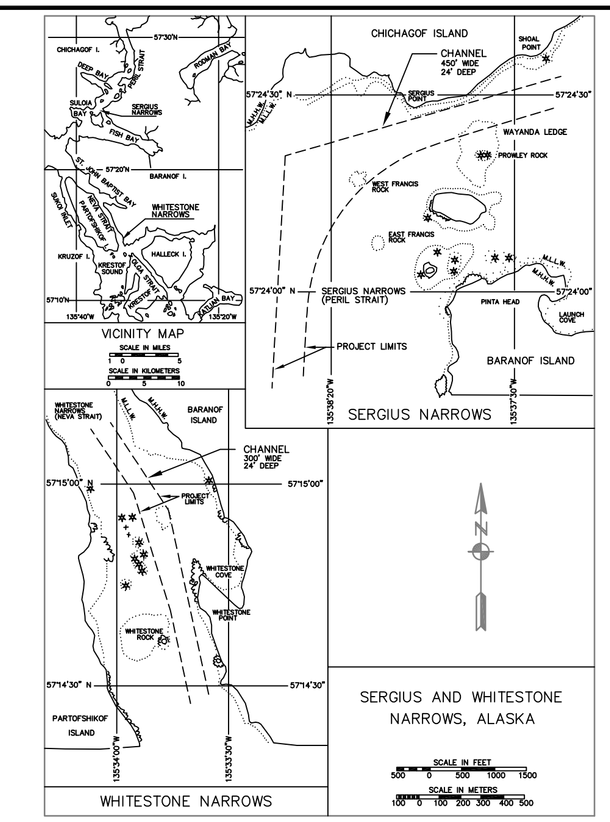

1. HORIZONTAL CONTROL IS ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FEET, HOLDING USACE SBC "SARAH" AS N 2,042,256.36, E 2,300,024.99 AND "SN-1" AS N 2,041,628.09, E 2,297,683.31.
2. VERTICAL CONTROL IS IN FEET BASED ON MEAN LOWER LOW WATER (MLLW = 0.0'), HOLDING "SARAH" AT 14.60'.
3. SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
4. THE EXISTING PROJECT CONSISTS OF SERGIUS NARROWS LOCATED IN PERIL 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 AND VERIFIED THROUGH CONVENTIONAL DIFFERENTIAL LEVELING TECHNIQUES.
6. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF THE SURVEY.

CONTROL DATA

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
BOON 2 1950	2,040,623.28	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)	2,041,993.70	2,299,928.28	9.44'	USCGS TRI STA SBC
BM 5 (SHOAL 2 NO 2 1950)	------	------	13.78'	USCGS REF. MARKER SBC
BM 6 (SHOAL 2 NO 1 1950)	------	------	13.49'	USCGS BENCHMARK SBC
FJERN 2001	2,037,804.14	2,293,139.34	----	3.25" DOMED BRASS CAP
TIDAL 2001	2,042,029.17	2,299,963.15	11.84'	3.25" DOMED BRASS CAP
SN-1	2,041,628.09	2,297,683.31	14.51'	SET 3.5" DOMED BRASS CAP
SARAH	2,042,256.36	2,300,024.99	14.60'	SET 3.5" DOMED BRASS CAP

VOLUME COMPUTATIONS

Project Depth -24' MLLW

MINIMUM PAY LINE (-24' MLLW)	89	(cubic yards)
Between MINIMUM PAY LINE and MAXIMUM PAY LINE (-25' MLLW)	83	(cubic yards)
SIDESLOPES (3:1)	480	(cubic yards)
TOTAL	652	(cubic yards)

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	2,295,876			

NAVIGATION AIDS

DESCRIPTION	USCG NO	NORTHING	EASTING
WEST FRANCIS ROCK LIGHTED BUOY 6 - RED	25190	2,040,189	2,296,710
SERGIUS NARROWS BUOY 8 - RED NUN.	25195	2,040,860	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

STATE OF ALASKA 49TH JACK S. HUGHES LS-4915 REGISTERED PROFESSIONAL LAND SURVEYOR

200 100 0 200 400 600 800
SCALE IN FEET

CONTRACT NO. W911KB-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:

PERIL STRAIT, ALASKA
SERGIUS NARROWS
PROJECT CONDITION SURVEY
MAY 22-24, 2005

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

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