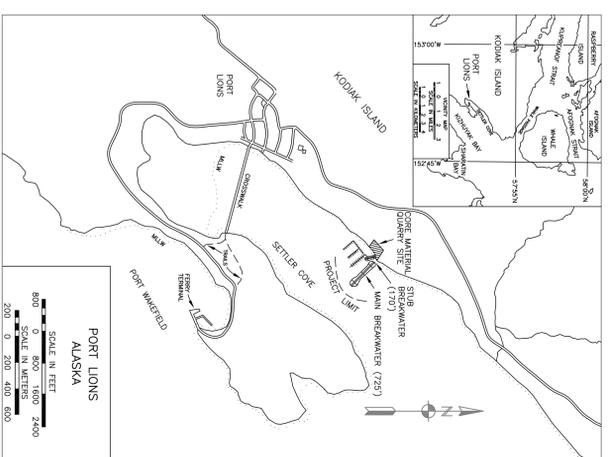
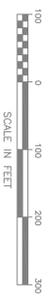


NOTE: CORNERS 1,2,3 AND 4 REPRESENT PROJECT LIMITS. PROJECT DEPTH IS -14 FEET MLLW.

VOLUME COMPUTATIONS	
Project Depth -14' MLLW, 150' Wide Channel	
MINIMUM PAY LINE (-14' MLLW)	56 (cubic yards)
MAXIMUM PAY LINE (-15' MLLW)	204 (cubic yards)
VOLUME AVAILABLE ALONG SIDE SLOPE (3:1, HV)	0 (cubic yards)
TOTAL	260 (cubic yards)



**NOTES**

- HORIZONTAL CONTROL IS ALASKA STATE PLANE ZONE 5, AND 83 (COORDS). IN U.S. FEET. HOLDING USACE SBC 1240-83-W-E AS N 1,416,623.26, E 1,861,301.14 AND USACE SBC 1240-83-E-E AS N 1,416,211.36, E 1,861,730.28.
- VERTICAL CONTROL IS IN FEET, REFERRING TO MEAN LOWER LOW WATER (MLLW-0.07).
- HOLDING USACE SBC 1240-83-W-E AS 21.33' MLLW.
- SOUNDINGS ARE IN FEET AND ARE MINUS UNLESS OTHERWISE INDICATED.
- DATA ACQUISITION WAS CONDUCTED ON JUNE 6-10, 2002. SOUNDINGS WERE OBTAINED WITH AN ODOM HYDROBATIC DEPTH SOUNDER WITH A 200MHz, 3" BEAM WIDTH, SINGLE BEAM TRANSDUCER. POSITIONING WAS PROVIDED BY A TRIMBLE T400S LOCAL BASE STATION SET AT DOCKED BC IN BEOCKROCK DOCK. DEPTHS WERE CORRECTED FOR THE USING READINGS TAKEN FROM A D.A.A. WATERLOG H-150 THE GAGE SET BY TERRA SURVEYS, LLC. NAVIGATION AND DATA COLLECTION WERE PERFORMED USING GARMIN 1800S GPS. SURVEY TECHNIQUES USED WERE REAL TIME KINEMATIC (RTK) USING STATIC AND REAL TIME KINEMATIC GPS TECHNIQUES. VERTICAL CONTROL WAS SUPPLIED USING OPTICAL INSTRUMENTS AND DIFFERENTIAL LEVELING TECHNIQUES.
- THIS SURVEY INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
- THIS SURVEY WAS CONDUCTED FROM MAP27 TO ALASKA STATE PLANE ZONE 5, AND 83 USING CORPCON VERSION 5.11.01. THE CONVERSION WAS FURTHER RETIRED USING A POST-PROCESSING STATIC GPS NETWORK HOLDING NOAA/NOS COGS RETIRED COORDINATES. KML PLATEAU FILES AND HOLDING MAPS COORDINATES WERE INCLUDED IN A FIXED-SCALE, LEAST SQUARES TRANSFORMATION USING CORPCON. CONVERSION WAS PERFORMED USING CORPCON. CORPCON PARAMETERS, GPS POST PROCESSING WAS PERFORMED USING CORPCON. CORPCON TRANSFORMATION WAS PERFORMED USING SURFACED CCS SOFTWARE.

**CONTROL DATA**

STATION	NORTHING	EASTING	ELEV.	DESCRIPTION
A-5, 1973	1,416,048.19	1,862,912.22	1.09	USACE SBC IN BOULDER
B-1, 1973	1,417,839.44	1,861,589.80	7.08	PK NAIL IN ROCK
B-2, 1973	1,417,972.61	1,861,416.95	3.10	USACE SBC IN BOULDER
1240-83-W-E	1,416,623.26	1,861,301.14	21.33	USACE SBC IN BOULDER
1240-83-E-E	1,416,211.36	1,861,730.28	21.33	USACE SBC IN BOULDER
PH-1, 1988	1,416,443.36	1,861,024.11	19.38	DOCKED BC IN CONCRETE DOCK
PH-2, 1988	1,416,825.46	1,861,024.11	34.99	DOCKED BC IN CONCRETE DOCK
PH-3, 2002	1,416,409.75	1,861,442.36	22.22	DOCKED BC IN CONCRETE
PH-4, 2002	1,415,555.55	1,862,524.75	6.87	DOCKED BC IN CONCRETE

**PROJECT LIMITS**

CORNER	NORTHING	EASTING	CORNER	NORTHING	EASTING
1	1,416,500	1,862,138	2	1,415,860	1,861,631
3	1,416,095	1,861,960	4	1,415,810	1,861,154

**NAVIGATION AIDS**

DESCRIPTION	USCG No.	NORTHING	EASTING
SETTLER COVE DAYBEACON 1	26530	1,416,178	1,862,087
SETTLER COVE BREAKWATER LIGHT 2	26535	1,416,218	1,861,725

CONTRACTOR: TERRA SURVEYS, LLC  
 CITY: FAIRMER  
 STATE: AK  
 CONTRACT NO.: DACM55-01-D-0001

APPROVED: [Signature]  
 DATE: [Date]

PROJECT: PORT LIONS, ALASKA  
 PORT LIONS HARBOR  
 PROJECT CONDITION SURVEY  
 JUNE 6-10, 2002

SURVEY NO. 1981-02  
 SCALE: 1" = 100'  
 SHEET 1 OF 1