Port of Anchorage Transitional & Maintenance Dredging



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Safety - Anchorage, AK

Anchorage, AK

Maintenance Dredging

Transitional Dredging



# Safety

#### Fall Temperatures

- October 2006 & 2010 the temperature dropped to single digits.
- Ice on the decks

#### Access

Boarding vessels from either a dock or an assist vessel

#### Water Temperature

Hypothermia can set in quickly

#### Silt in the Water

 Can get into your clothes and weigh you down

#### **Fast Currents**

- Landing barges
- Landing assist vessels
- If you fall overboard you could travel a long distance before rescue





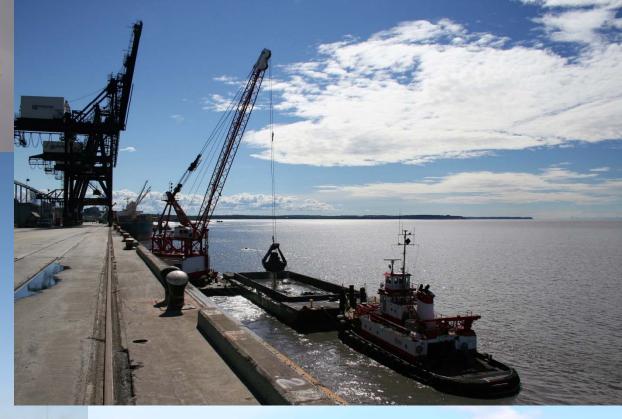


#### Extreme Tides



Tides can change from a -4.5 to a +34

# Stages of the Tide







### Winter 06 Tidal Change

Photo taken every 10 minutes throughout the tide cycle.



# Extreme & Unusual Currents

After the Port Expansion began there was a noticeable change in the directions of the currents.

The currents dictated the routes of the hopper dredge

Often times requiring mid load direction modifications.

There is a lot of current in the Transitional Dredge Area.







## Logistics

#### Sunday & Tuesday

- Horizon Lines
- Tote
- 2 Weeks on / 2 Weeks off
  - Cement Ships

#### As needed

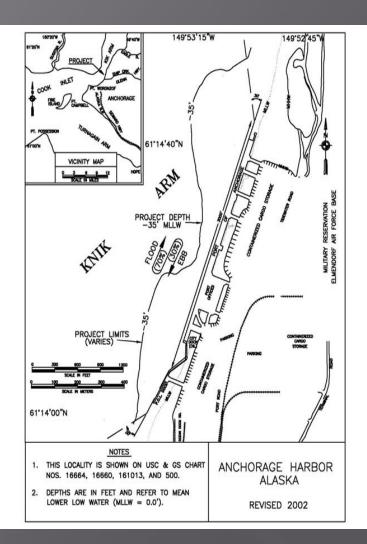
- Military Vessels
- Coastguard Training

#### Random

Fuel Barges

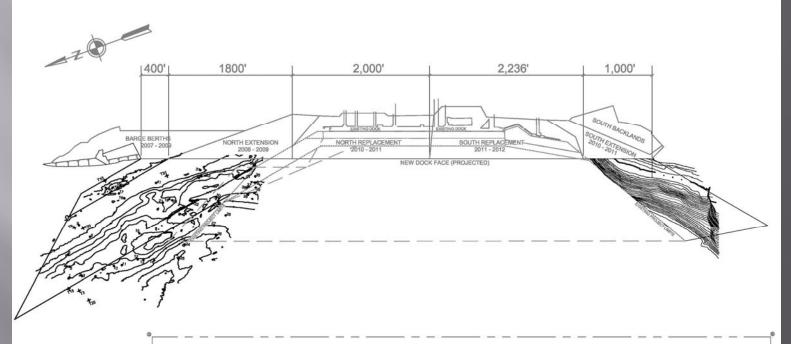
#### The Military Vessels require a large no entry zone

 Hopper dredging ceases while military vessels are in port.





### PORT OF ANCHORAGE BARGE BERTHS AND NORTH/SOUTH EXTENSIONS



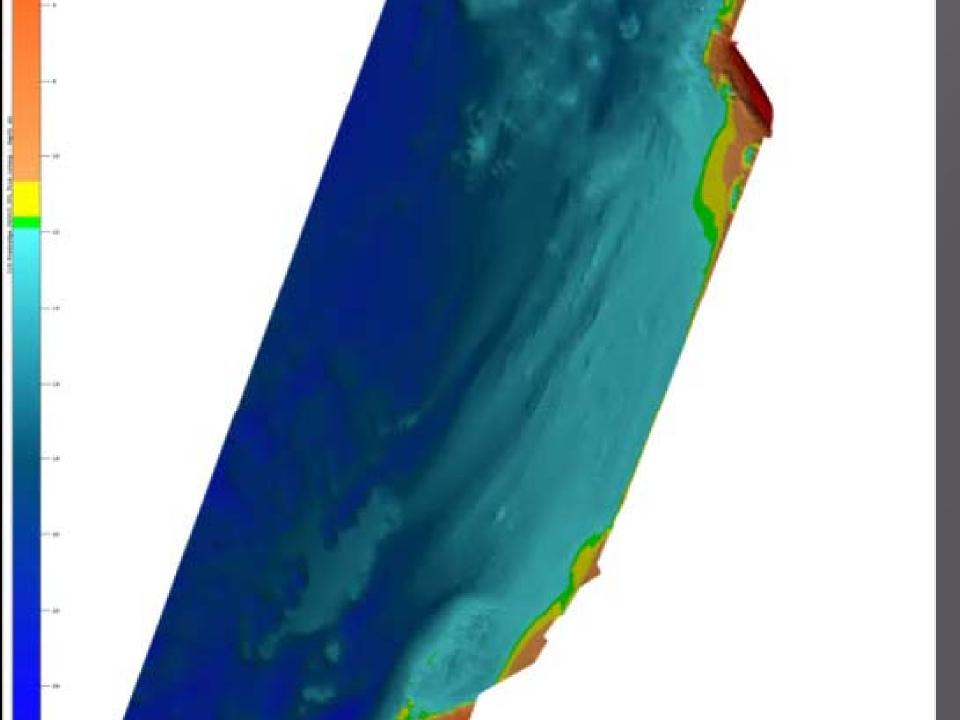
Disposal Site



## Infill – The Big Gamble

- Historically infill can be as high as 25,000 CY / day
- May be periodic
- The last 2 years have left the hopper on standby as much as it was dredging
- The decrease in infill seems to have coincided with the port expansion





## Westport Dredging





# Vulcan & Jeffrey M.



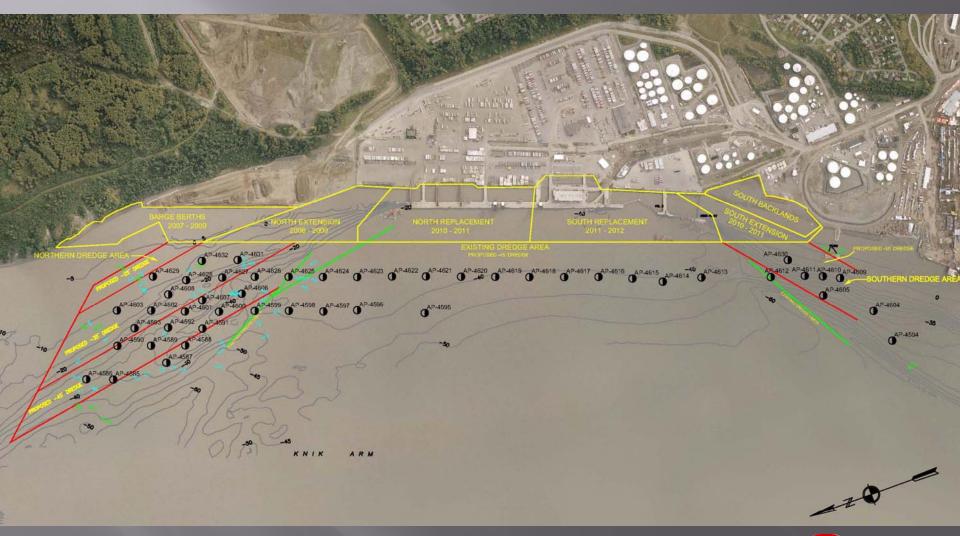


# Transitional Dredging COE Pre-Solicitation Preparation

- Extensive Borings Taken
- Pre-Solicitation Meeting Held
- Partnering Meeting Held after Award



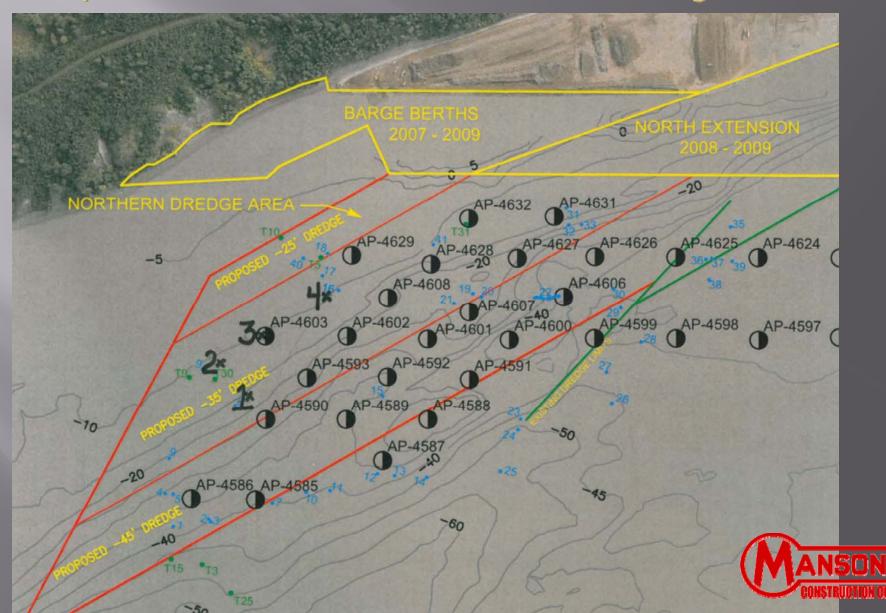
## **Extensive Borings**





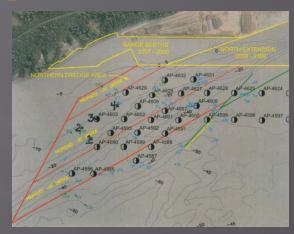
### Test Holes

Completed towards the end of the 2009 dredge season



## Test Hole #1

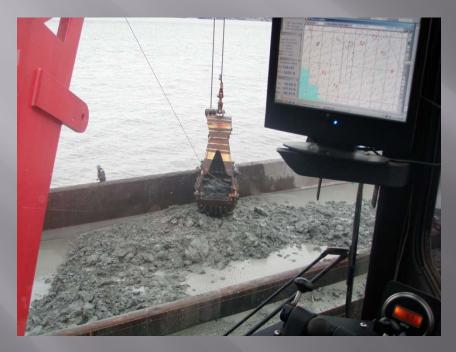








## Test Hole #2









# Test Hole #3 (boring 4603)



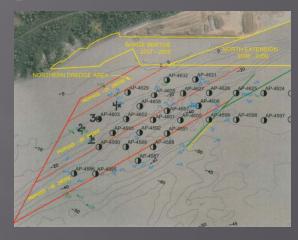






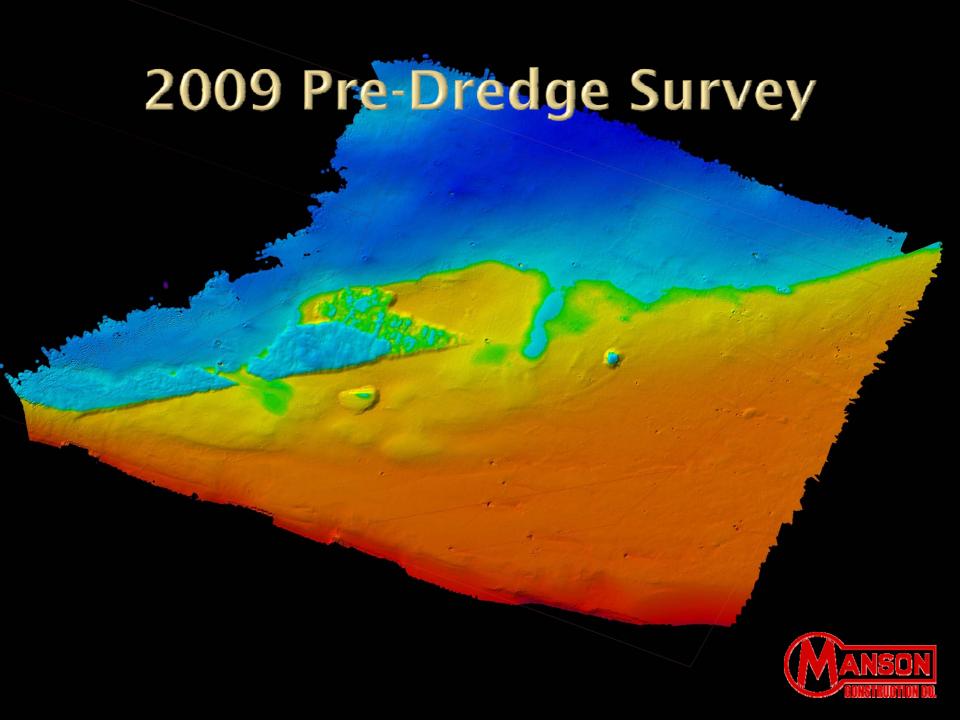
## Test Hole #4



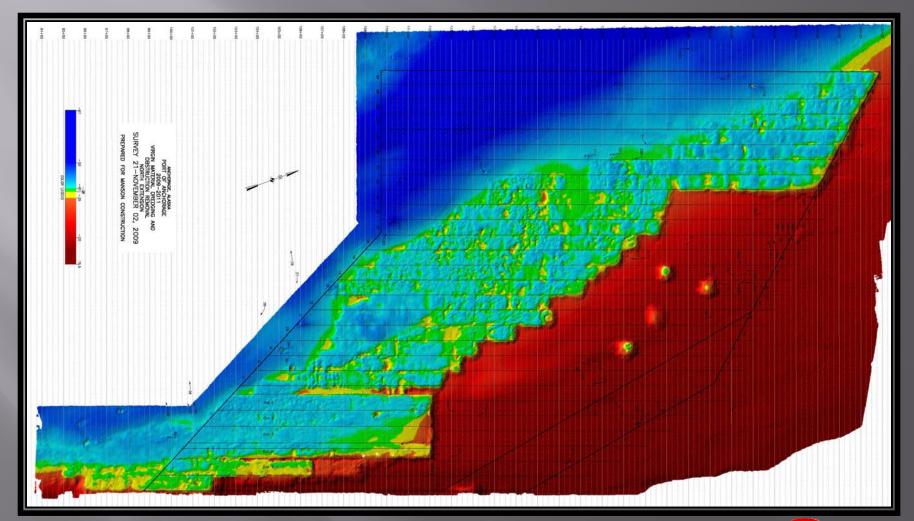






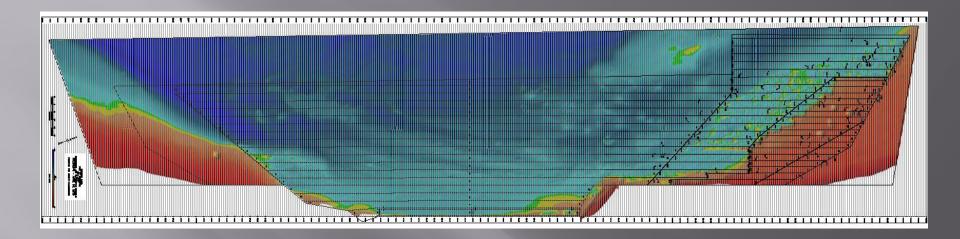


## 2009 Post Dredge Survey

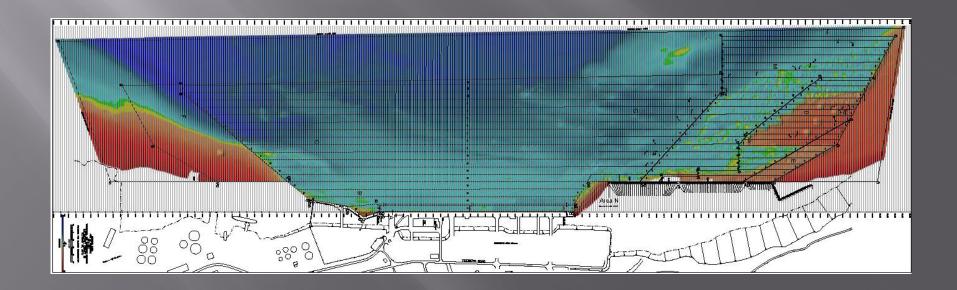




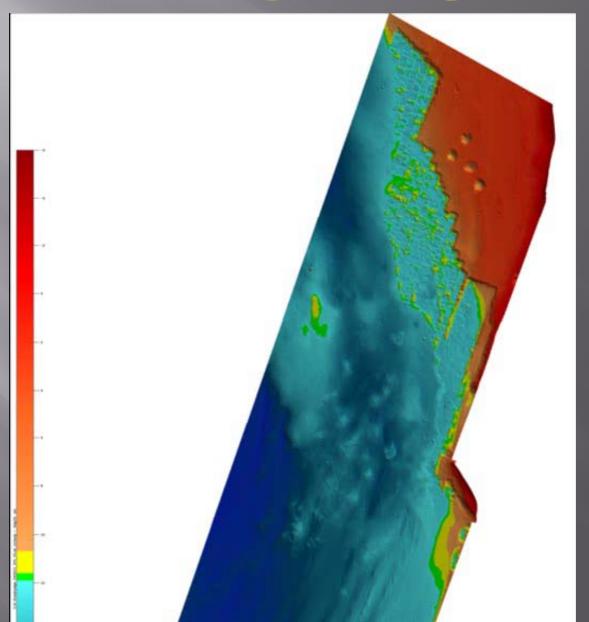
#### 2010 PRE-DREDGE SURVEY



#### 2010 OCTOBER 18 SURVEY

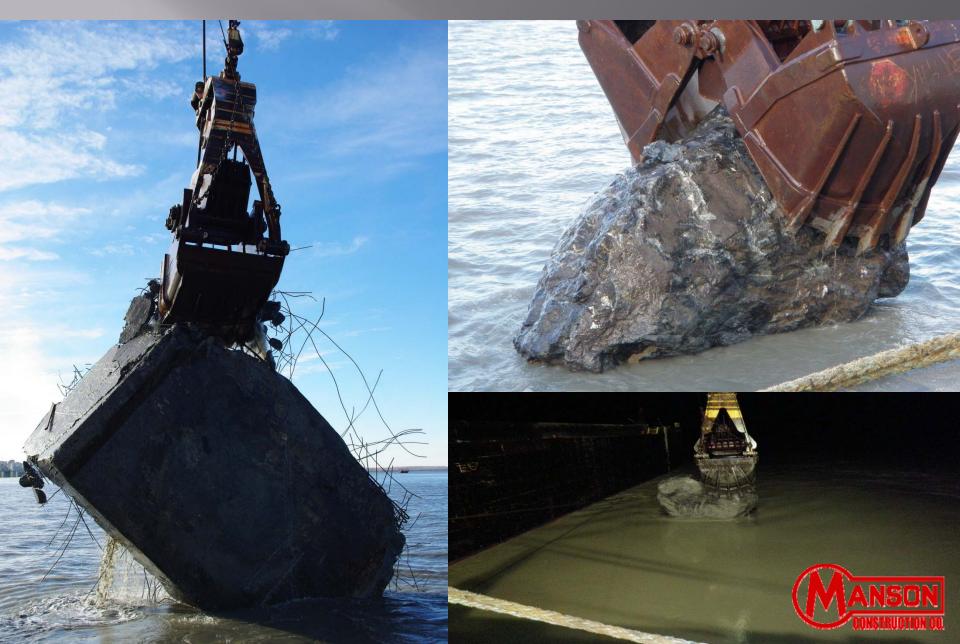


# 2010 Dredge Progression





# Obstructions



# Njord removing pill box from the North Expansion



# Sandy Gravel with Cobbles

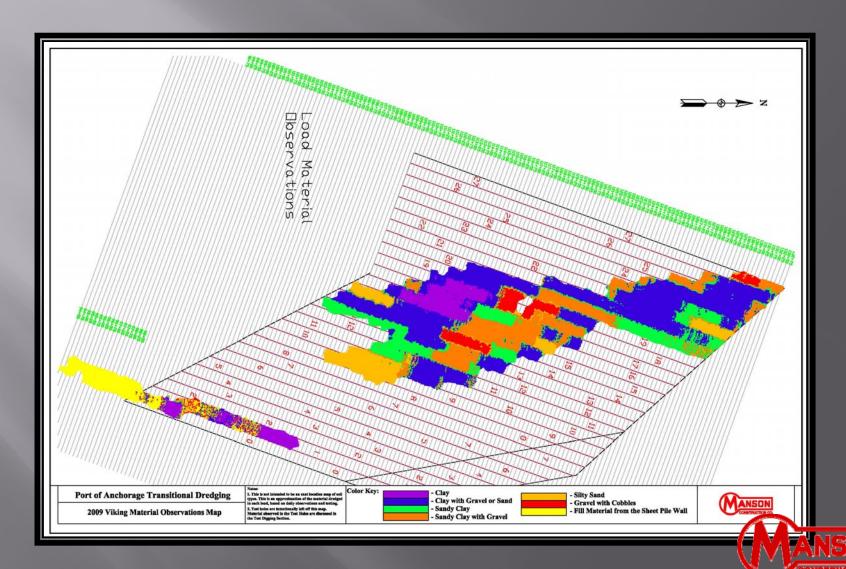


# Dense Clay

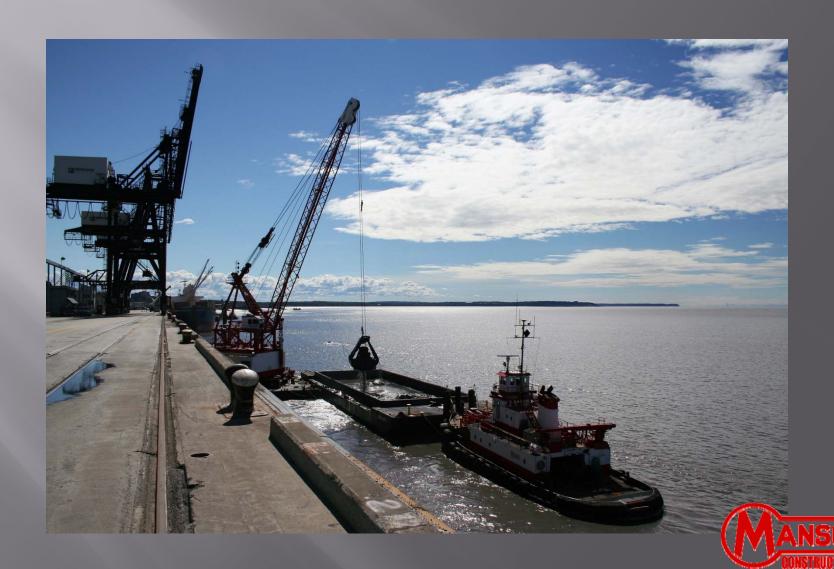


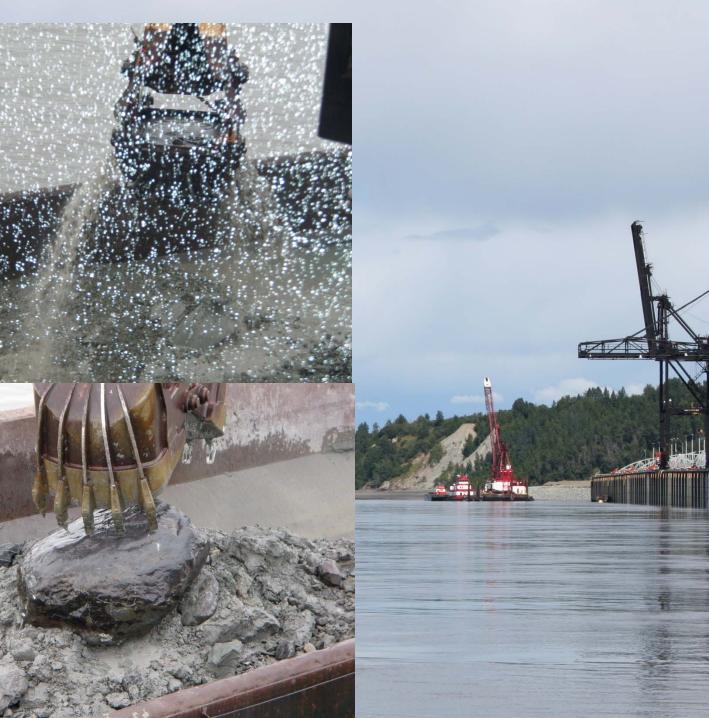


## Material Observed by Load



### Dock Pass at T-3





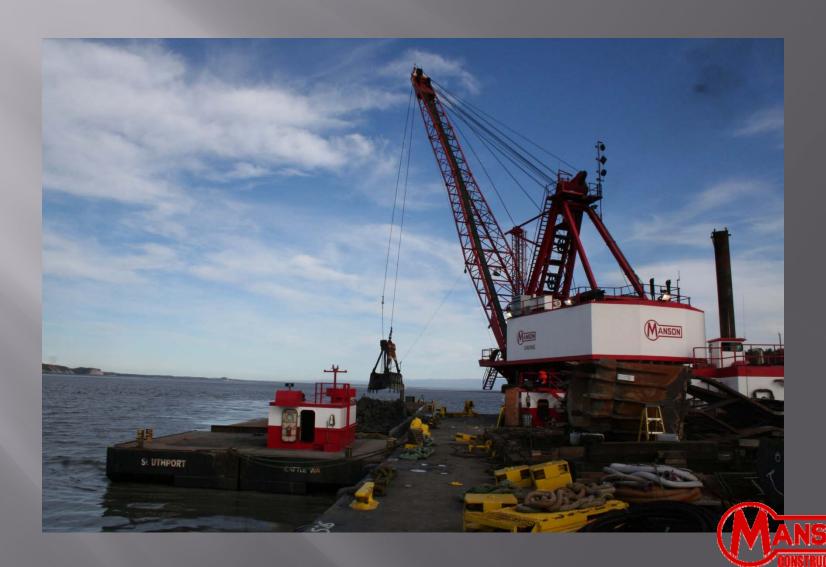


# Viking in North Expansion





## Viking in North Expansion



# Anchorage Not a Bad Place to Work







# The real reason everyone volunteers to go to Alaska

