

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

TONY KNOWLES, GOVERNOR

Division of Spill Prevention and Response
Contaminated Sites Remediation Program
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<http://www.state.ak.us/dec/home/htm>

13 November 02

Mr. Jim Shew, Manager
Cook Inlet Pipeline Company
2000 W. International Airport Road, D-6
Anchorage, Alaska 99502

RE: Drift River Terminal, Record of Decision

Dear Mr. Shew,

Enclosed, please find the Record of Decision (ROD) in response to Cook Inlet Pipelines request for alternate cleanup levels (ACL's) based on a determination that the groundwater is not a drinking water source, under 18 AAC 75.350. While the Department finds that the shallow aquifer is not a drinking water source, it can be used as a transport medium for contamination. Therefore the Department is denying the request for ACL's based on 18 AAC 75.350. The draft ROD was discussed with your environmental staff and consultant in a recent meeting.

If you have any questions or need further assistance, please contact me at (907) 262-5210, ext. 233.

Sincerely,



Don Seagren
Project Manager

CC with enclosure:

Don Turner, Unocal/Anchorage
Dave Brailey, OilRisk Consultants/Anchorage

**ALASKA DEPARTMENT OF ENVIRONMENTAL
CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM**

**Cook Inlet Pipeline Company
Drift River Terminal
Cook Inlet, Alaska
November 13, 2002**

RECORD OF DECISION

I: INTRODUCTION

Site Name: Cook Inlet Pipeline Company, Drift River Terminal
Responsible Person: Jim Shew, Manager, Cook Inlet Pipeline Company, 2000 W.
International Airport Road, D-6, Anchorage, Alaska 99502; (907) 243-1166
Location: West Side of Cook Inlet at mouth of Drift River, approximately 85
miles southwest of Anchorage, Alaska
Database Record Key: 1968230109301; 1993230116601
Regulatory Authority: 18 AAC 75, Article 3

II: SITE INFORMATION

The Drift River Terminal is located at the southern terminus of the Cook Inlet Pipeline, approximately 85 miles southwest of Anchorage, Alaska. The Terminal is located in a roadless area on the west shore of Cook Inlet, accessible only by boat or aircraft. The facility is surrounded by state land, with scattered private in-holdings used primarily for hunting and fishing camps. Access to the facility is controlled by Cook Inlet Pipeline Co. and is generally limited to facility workers and contractors. The Terminal is located between the Drift River and Rust Slough, approximately one-mile inland from the shore of Cook Inlet (Figure 1). The topography is generally flat, with a gentle seaward gradient of less than 30 feet per mile. The depth to groundwater is approximately 5 feet near the airstrip, decreasing to between 1 and 3 feet in the Tank Farm.

The facility loads tankers with crude oil from production facilities along west Cook Inlet, including the Trading Bay and Granite Point fields. Terminal facilities include a crude oil tank farm, an offshore tanker loading platform, a ballast water treatment plant and a pump station (Figure 2). Incoming crude oil from the Cook Inlet pipeline is stored in the tank farm between tanker loadings, which normally occur once every 10 to 14 days. Prior to loading, ballast water is pumped onshore for treatment. Treated ballast water is discharged under a National Pollution Discharge Elimination System (NPDES) permit # AK 000039-6. Crude oil is pumped to the offshore loading platform through a 42-inch pipeline, which splits into twin 30 inch pipelines near the airstrip.

The Terminal's camp houses 10 to 15 full time employees on a week-on, week-off

schedule. Up to 30 additional workers may be present at the site during summertime construction projects. The Industrial Building is used for equipment maintenance, fabrication and mechanical work. Other facilities include an airstrip, heliport, an aircraft hangar and various storage buildings.

There are three water supply wells at the Drift River Terminal (Figures 2). Well A (87 feet deep) was installed during construction of the facility and is presently used only for non-potable wash water. Well B (58 feet deep) was installed in 1994 and provides the primary water supply for the facility. Well B is separated from the area of contamination by three confining clay layers at depths ranging from 5 to 40 feet below grade (Figure 3). The contaminated areas are not in the zone of influence of this well, and are primarily down-gradient of the well. Due to the naturally poor water quality, drinking water is treated by ozonation and activated carbon filtration prior to use. Well C (approximately 100 feet deep) was constructed in 1990 to provide water for cement mixing during construction of the facilities flood control dikes. Well C is not connected to the facilities water system and is not presently in use.

III: IDENTIFICATION OF CONTAMINANTS OF CONCERN (COC)

The COC at the Drift River Terminal are limited to the fuel constituents present in crude oil. With the exception of the AvGas spill from the helicopter re-fueling area, all releases at the Drift River Terminal are crude oil. The former burn pit creates particular cleanup challenges since the crude oil had been previously burned in open unlined pits.

Conceptual Site Model

Site workers might be exposed to contaminants via inhalation, ingestion and/or dermal contact during construction and remediation activities in contaminated areas of the facility. There are no completed ecological exposure scenarios.

Groundwater

The groundwater consists of two aquifers underlying the Drift River Terminal. The shallow, unconfined aquifer is initially encountered at about 5 feet below ground surface (bgs) near the airstrip and 1 to 3 feet bgs in the tank farm area. It is the shallow aquifer that is contaminated above Table C levels by releases at the facility. The deeper, confined aquifer is separated from the shallow aquifer by a continuous clay layer approximately 37 feet bgs. The facility's drinking water well is constructed (double cased into this confining clay layer) to prevent leakage into the deeper aquifer. There are other clay layers (above the 37 foot continuous layer) that were encountered during the site investigations but they do not appear to be continuous throughout the entire facility and appear to be thinner farther away from Cook Inlet. To date, the deeper confined aquifer has not been impacted by any releases at the facility.

The applicable groundwater cleanup levels for the facility are those found in 18 AAC 75.345 Table C. However, CIPL has requested the Department make a groundwater use determination under 18 AAC 75.350 that the shallow groundwater is not a drinking water

source. If it is determined that the groundwater is not a drinking water source, alternative cleanup levels (ACL's) of 10 times the cleanup levels in Table C would be the applicable for the facility.

Soil

The soil cleanup levels for the site are those found in 18 AAC 75.341, Tables B1 and B2, or an alternative level determined by the Department based on site specific conditions.

IV: DISCUSSION OF ISSUES

The facility has experienced various spills and releases over the past 33 years. The assessment and monitoring data indicates that the contaminant plume(s) is relatively stable and has not migrated significantly, either vertically or horizontally, over time.

There are six documented releases of crude oil and one of jet fuel at this facility that have impacted shallow groundwater and soil (Figure 2). Of the three releases in the tank farm, the Tank 3 release has been closed and the Tank 2 & 4 releases are in a No Further Action status. An impermeable secondary containment liner has been installed around these tanks. The jet fuel release is currently in long term monitoring (LTM) status, with additional soil excavation possible in the future. The remaining three crude oil releases are in various stages of remediation from long term monitoring to excavation and cell remediation.

Areas at the Drift River facility, such as the former burn pit area, are being addressed under the Federal Resource Conservation & Recovery Act (RCRA) program, which is administered by EPA/Region 10. ADEC reviews the federal oversight action for consistency with state laws. The RCRA Solid Waste Management Units (SWMU's) that do not contain a regulated hazardous waste(s) are managed by ADEC for investigation and closure whereas EPA regulates those SWMU's with RCRA regulated wastes.

No changes are anticipated to the current and expected future land use and use of groundwater at the facility.

V: ADEC Decision

The CIPL has requested ACL's for both soil and groundwater at the facility.

Groundwater

ADEC does not approve of alternative cleanup levels for the groundwater. The upper aquifer is not considered a drinking water source in accordance with 18 AAC 350 but must be evaluated as a transport medium. The groundwater in the lower aquifer must meet 18 AAC 75.345 Table C levels.

Soil

The soil cleanup levels are 18 AAC 75.340 Method Two (migration to groundwater) unless CIPL wishes to request alternative cleanup levels. The 18 AAC 75.340 Method

Three levels may allow cleanup levels to be established based on site specific information and fate & transport model information. The site specific conditions must verify that there is not a complete pathway to the deeper groundwater aquifer.

This decision is based on the following information:

1: The deeper, confined aquifer is used as a drinking water source and must meet the groundwater cleanup levels listed in 18 AAC 75.345, Table C. The shallow aquifer is not considered a drinking water source (18 AAC 75.350) but will be evaluated for its ability to serve as a transport medium for contamination.

2: The 18 AAC 70 water quality standards are applicable in Drift River, Rust Slough and Cook Inlet.

3: The 18 AAC 75.345, Table C groundwater cleanup levels must be met at the property boundaries and/or in areas where groundwater is hydrologically connected to surface water.

4: Alternative soil cleanup levels must be determined in accordance with 18 AAC 75.340(e) or Method Two (migration to groundwater) levels apply.

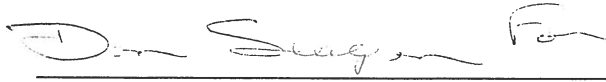
5: No further remedial action is required at this site if the soil cleanup levels are achieved or other alternative actions (ie natural attenuation; in-situ remediation; etc) are identified and approved for the site.

6: A long term groundwater monitoring plan will be developed for this facility that must demonstrate, to the satisfaction of the Department, that contaminant levels in the shallow aquifer do not exceed the Table C cleanup levels at the property boundary or where groundwater is closely connected to surface water. CIPL will also develop a monitoring plan for the major surface water bodies located on or adjacent to the facility.

7: This Record of Decision is conditional on CIPL submitting a free product recovery and a soil cleanup plan for the 1968 spill site.

8. In accordance with 18 AAC 75.375, an institutional control (IC) in the form of a Deed Notice will be required for this site. A draft copy of the IC shall be prepared by CIPL and submitted to the Department for approval. An approved version of the document must be recorded in the State Recorder's Office indicating the location and concentration of contamination remaining at the facility and any controls that may be necessary to ensure protection of human health, safety and the environment. A recorded copy of the IC document must be provided to ADEC within 60 days from the date of recordation. The IC may be removed once the contaminant levels at the site achieve the most stringent soil and groundwater cleanup levels.

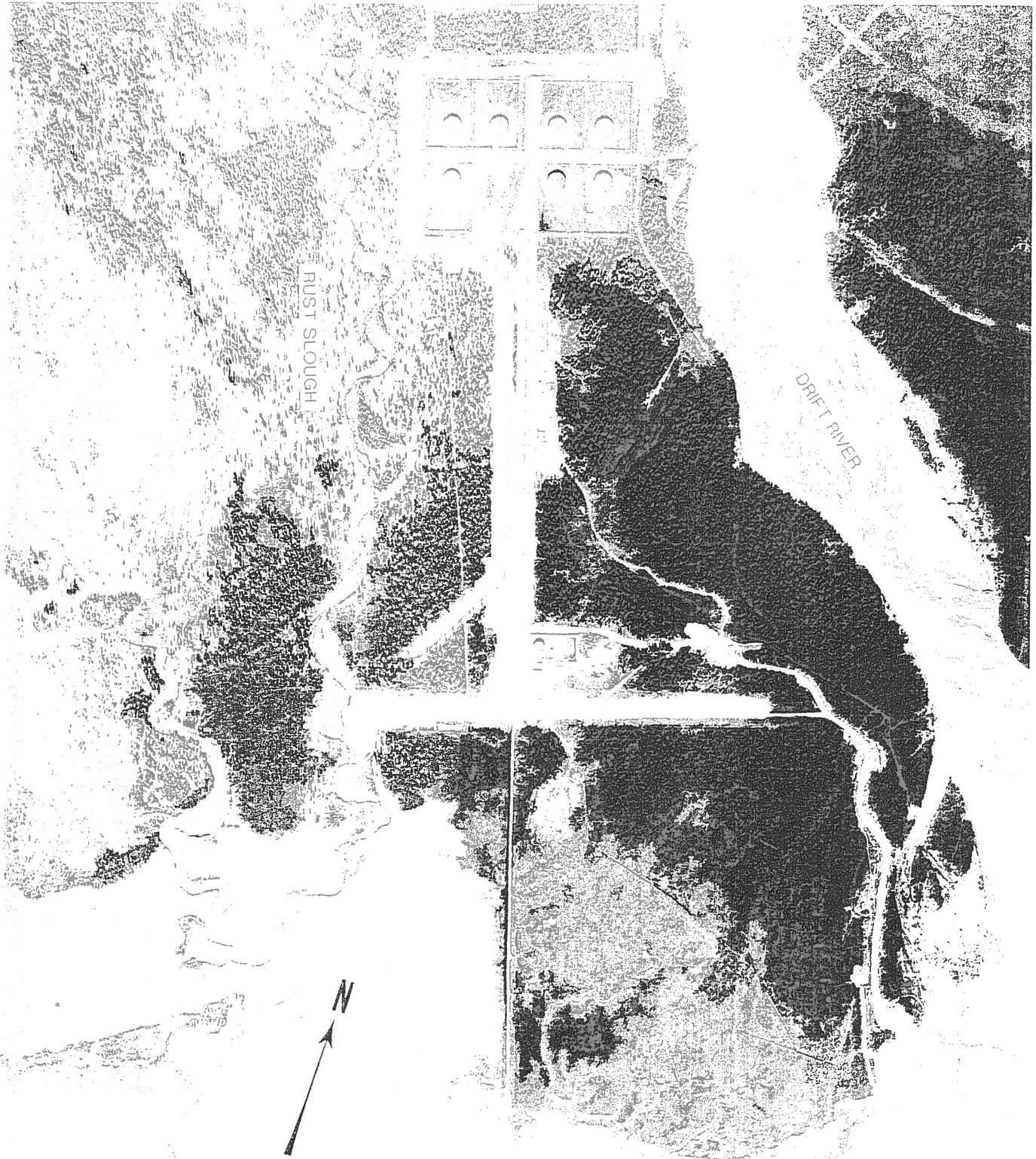
ADEC Approval:



Jim Frechione, Site Remediation Section Manager

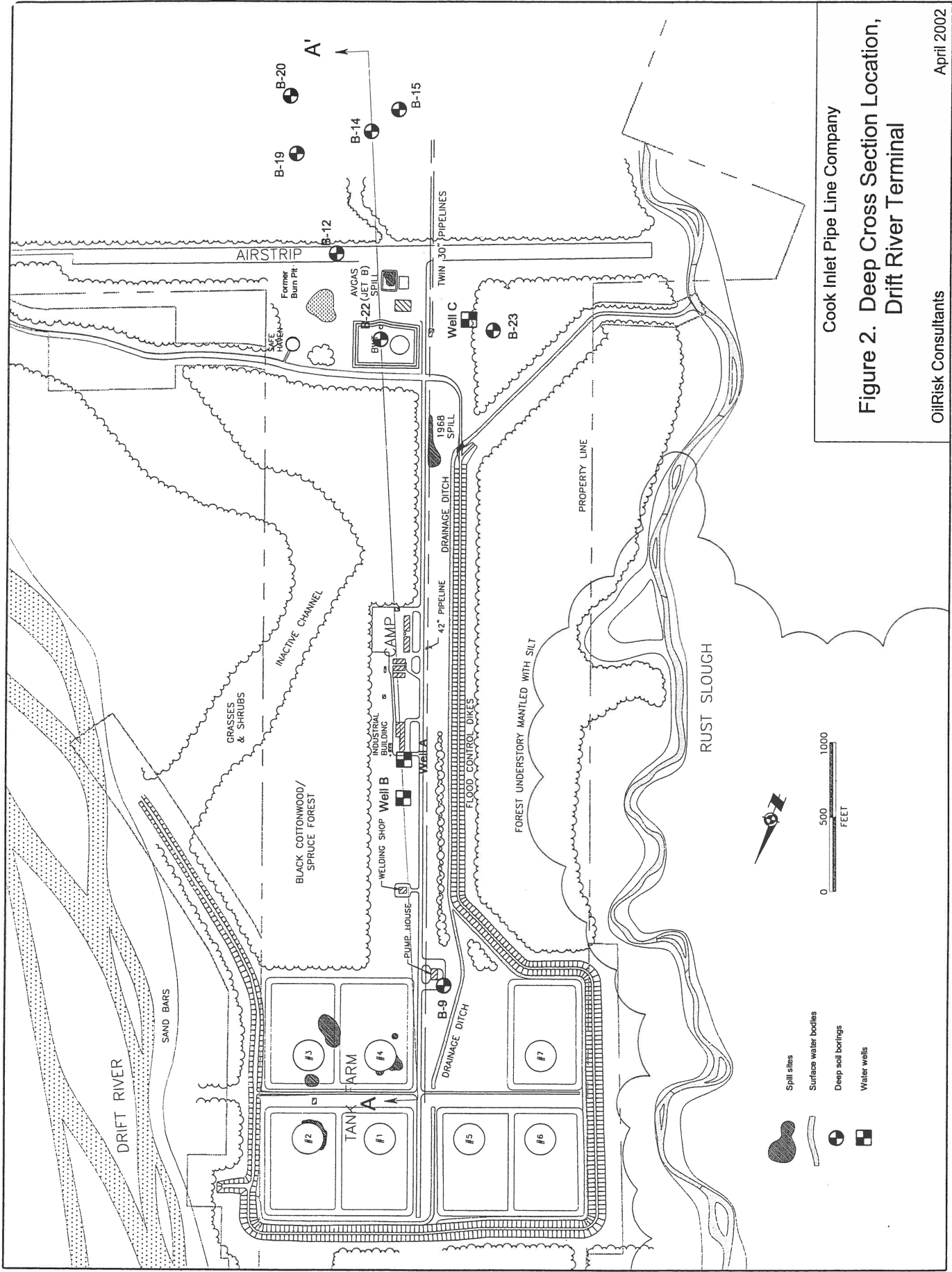
13 Nov 02

Date



1990 Aerial Photograph of the Drift River Terminal
(approximate scale: 1 in = 700 ft)

Figure 1



Cook Inlet Pipe Line Company

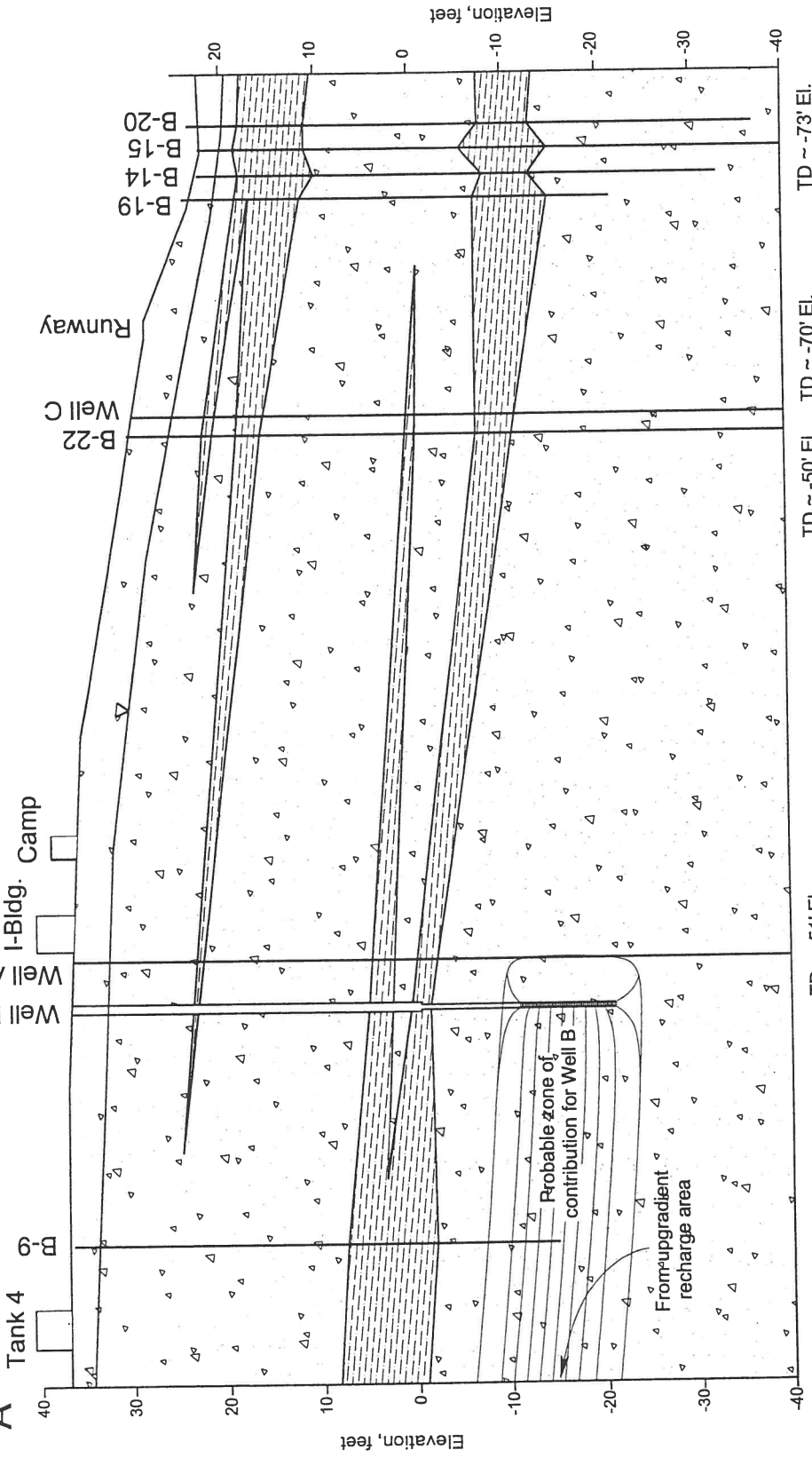
Figure 2. Deep Cross Section Location, Drift River Terminal



OilRisk Consultants




April 2002

A'

A



 Sand and silty sand
 Clay and silty clay

 Well screen (drinking water well)
 Deep soil boring or water well
 Double-cased well

Horizontal scale in feet
 0 1000 2000
 Vertical exaggeration 50X

Cross section location shown on Figure 2

Cook Inlet Pipe Line Company

Figure 3. Deep Cross Section A-A'
Drift River Terminal

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April 2002