



US Army Corps
of Engineers

Alaska District

Regulatory Branch (1145b)
Post Office Box 898
Anchorage, Alaska 99506-0898

Public Notice of Application for Permit

PUBLIC NOTICE DATE: **January 12, 2001**

EXPIRATION DATE: **Concurrent with the Liberty Development and Production Plan, Draft Environmental Impact Statement (DEIS) Public Review and Comment Period. The Mineral Management Service's DEIS 60-day public review and comment period ends on March 13, 2001.**

REFERENCE NUMBER: **6-981109**

WATERWAY NUMBER: **Foggy Island Bay 1**

Interested parties are hereby notified that an application has been received for a Department of the Army permit for certain work in waters of the United States, as described below and shown on the attached plan.

APPLICANT: BP Exploration (Alaska) Inc. (BPXA), P.O. Box 196612, Anchorage, Alaska 99510-1352. Point of Contact: George R. Snodgrass, Environmental Manager, HSE-Alaska, telephone (907) 564-5990, FAX (907) 564-5020.

LOCATION: Foggy Island Bay is located within the Beaufort Sea, about 10 miles east of the Prudhoe Bay Unit within the North Slope Borough, Alaska (Figure 1). The proposed Liberty Island would be located approximately 6.1 miles offshore, in Federal Outer Continental Shelf waters in about 22 feet deep water; inside the McClure islands, nearly midway between Point Brower and Tigvariak Island, and about 1.5 miles west of the abandoned Tern Island (Figure 2). A gravel mine would be located on an island in the Kadleroshilik River floodplain (Figure 3). Figures 1-3 indicate latitude and longitude coordinates for the island, pipeline points of origin and termination, and gravel pads. Sections 27, 28, 33, 34, T. 11 N., R.18 E.; Sections 4, 5, 8, 18, 19, 29 and 32, T. 10 N., R.18 E.; and Sections 12,13, 24, 25, 36, T. 10 N., R. 17 E., Umiat Meridian.

Corner location of proposed ocean dumping areas for disposal of excess trench dredged material.

Disposal Area	Latitude (North)	Longitude (West)
Zone 1	70°14'16.65"	147°40'24.76"
	70°14'02.82"	147°39'43.41"
	70°13'27.83"	147°41'25.49"
	70°13'41.65"	147°42'06.85"
Zone 2A	70°12'15.08"	147°41'34.63"
	70°12'16.36"	147°41'40.85"
	70°14'46.37"	147°37'03.21"
	70°14'47.47"	147°37'09.28"
Zone 2B	70°14'46.37"	147°37'03.21"
	70°14'47.47"	147°37'09.28"
	70°16'42.49"	147°33'42.55"
	70°16'41.20"	147°33'36.32"

WORK: BPXA proposes to:

- construct a gravel island;
- construct a pipeline system involving: dredging a pipeline trench; placement of pipeline bedding material; placement of fill material over the pipeline as back-fill, including 4-cubic yard gravel bags; and, disposal of dredged material in waters of the United States;
- construct two gravel pads on-shore;
- construct a shore-land transition zone for the pipeline;
- the long-term mooring of two interconnected barges serving as a camp for construction activities; and,
- temporary placement/storage of excavated material resulting from gravel mining activities
- placement of fill material for gravel pit rehabilitation.

Gravel Island: The 22.4-acre (seafloor footprint) island would require approximately 773,000 cubic yards of gravel fill material. The proposed island would have a surface dimension of 345 feet by 680 feet plus a 150 by 160-foot dock (Figure 4). The design seafloor footprint would be 635 feet by 970 feet. However, due to gravel falling through the water column to build the island structure up from the seafloor, not all gravel is expected to fall within the design footprint. To accommodate this construction uncertainty, BPXA has identified a seafloor construction footprint of 835 feet by 1,170 feet. The island would have a working surface elevation of 15 feet above mean lower low water (MLLW) with a perimeter berm rising up to 23 feet above MLLW. From the toe of the island to a bench located 6 to 7 feet above MLLW, the island would have 3H:1V side slopes. The 40-foot wide bench would be nearly level; slopes above the bench would be 3H:1V. A steel sheetpile dock on the south side of the island would serve as a dock head (Figures 5 and 6).



LIBERTY GRAVEL ISLAND	MAXIMUM DIMENSIONS (FEET)	FILL VOLUME CUBIC YARDS)	FILL AREA (ACRES)
seafloor footprint	835 x 1,170	773,000	22.4
surface dimensions	345 X 680		
dock size	150 X 160		
Gravel (4,200 bags for slope protection)		17,000	
Concrete blocks (17,000 for slope protection)		7,600	
Total		797,600	22.4

Slope Protection. The side slope protection design includes interlocking concrete mat armor and gravel filled polyester bags. 17,000 concrete mats at 4' x 4' x 9" and 4,200 gravel bags at 4-cubic yards will be used. The gravel bags will overlap at the top of the bench. (Figure 7) The concrete mats are composed of individual concrete blocks, linked together with stout chain and shackles (Figure 8). The concrete mats would be secured with anchors placed in the island gravel fill. Underlying the concrete matting and gravel bags, the island side-slope areas would be covered by a permeable filter fabric.

Pipeline Activities: The proposed 7.6-mile pipeline route (Figures 3 and 13) is divided into two segments: offshore and onshore. The offshore segment is approximately 6.1 miles in length and nearly follows a straight route from the proposed Liberty Production Island to the landfall. For jurisdictional purposes this offshore route is further divided into two areas: The Territorial Seas (land seaward to 3-mile limit); and the open ocean (waters seaward of the 3-mile limit). The 1.5-mile onshore route requires construction of a transition zone (pipeline from sea to land) and two valve pads.

Dredging the Pipeline Trench: The pipeline trench would have approximately 724,000 cubic yards of material dredged or excavated (Figures 9 and 10). At the pipeline trench length of 8,000 feet (seaward of the 3-mile limit to the island), approximately 179,000 cubic yards of material would be excavated. At the pipeline trench length of 24,000 feet (inside the 3-mile limit, including the pipeline shoreline transition), approximately 545,000 cubic yards of material would be dredged and/or excavated. The variable top width of the trench would be 61 feet to 132 feet for both lengths. The depth of the trench is 8 feet in water depths up to -8' MLLW to -21' MLLW. The trench depth would vary from -8' MLLW to -12' MLLW having a design slope of 3H:1V and excavation limits of 5H:1V (depending on substrate composition). Bottom of the trench would vary between 10 feet to 12 feet.

Placement of Pipeline Bedding and Backfill Material: An estimated 17,000 cubic yards (between the gravel island to the 3-mile limit) and 50,000 cubic yards (within the Territorial Seas to the 3-mile limit) of gravel fill material would be required as pipeline bedding material in various locations within the trench. These approximate quantities include the gravel material contained within the 4 cubic yard bags (~ 4,000 bags). The bags would be placed over the entire pipeline (Figure 11) and in intervals to cover approximately 50 percent of the pipeline route, prior to placement of backfill material. Backfill material would consist of trench dredged material. Approximately, 162,000 cubic yards (between the gravel island to the 3-mile limit) and 495,000 cubic yards (within the Territorial Seas to the 3-mile limit) of trench dredged material would be used as backfill material. A minimum of 7 feet of fill would cover the pipeline.



In water depths of -8' MLLW, the cap of the backfill would be close to the original seafloor and would not exceed 1' higher than the surrounding seafloor. In water depths greater than -8' MLLW, the trench cap would not exceed 2' higher than the surrounding seafloor. The affected footprint including the trench cap (which could overlap trench excavation limits) is 18.2 acres (beyond the 3-mile limit) and 55.4 acres (within the 3-mile limit).

Disposal of Excess Dredged Material: Zones 1 and 2 are designated as proposed temporary storage of initial dredged material and potential disposal site of excess dredged material under Section 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA). A background study conducted for the applicant and concurred with by USDOJ-Minerals Management Service determined that these materials are uncontaminated marine sediments that would be disposed of in a similar environment, therefore meeting the exclusion criteria as stated in 40 CFR 227.13(b).

OCEAN DUMPING OF DREDGED MATERIALS (EXCESS OFFSHORE PIPELINE CONSTRUCTION SPOILS)	DISPOSAL SITE FOOTPRINT LIMITS (FEET)	VOLUME (CUBIC YARDS)	AREA (ACRES)
Disposal Zone 1 (limits)	2,000 x 5,000	up to 100,000	230
Disposal Zone 2 (limits)	32,300 x 200	up to 10,000	150

Notes: Up to 67,000 cubic yards of gravel backfill is planned for the offshore pipeline trench, some native material excavated during pipeline construction that was replaced with gravel fill would require ocean disposal. BPXA intends to place as much material as possible back into the trench. However, the final volume of spoils for ocean disposal will depend on a number of site specific circumstances, with a reasonably expected range up to 110,000 cubic yards used for planning.

Zone 1: The Zone 1 storage/disposal site is located on the west side of the pipeline right-of-way on grounded sea ice and seaward/outside of the -5-foot MLLW. Maximum dimensions of the site are 5,000 feet by 2,000 feet (230 acres). Zone 1 would serve as a temporary storage area of initial trenching excavation/dredging operations and for dredged material that cannot be directly transported for backfill along the pipeline. BPXA intends to reuse dredged material as pipeline trench backfill to the maximum extent practicable. For dredged spoils that cannot be used as backfill, Zone 1 would serve as the designated disposal site (not to exceed 100,000 cubic yards). Spoils placed in Zone 1 for disposal would be groomed to an average depth of approximately one-foot to minimize the potential for mounding on the sea floor. Assuming that up to 100,000 cubic yards of spoils could be disposed of on the site to a height of one-foot, about 27 percent of Zone 1 (about 62 acres) would be used for actual disposal.

Zone 2: The second disposal site (Zone 2) is a 200-foot wide section along the west side of the pipeline trench from Liberty Island to shore. Zone 2a is located in water depths less than approximately 16 feet; and Zone 2b is located on floating ice, in water depths greater than 16 feet. Spoils in Zone 2a would be groomed to maintain an approximate height not to exceed one foot. Spoils placed in Zone 2b would be groomed to a maximum height of less than 2 feet. It is BPXA's intent to clear Zone 2 of all dredged material/spoils by the end of construction. This would be accomplished by scraping the ice with heavy equipment leaving, at most, a veneer of dirty ice (a small amount of sediment remaining in the frozen matrix).

Landfall Pipeline Transition: Near the coastline, the pipeline would begin a transition from the buried mode to an elevated mode. About 100 feet of the transition trench would lie below MLLW at the shoreline and about 150 feet would lie landward of MLLW (Figures 15 and 16). After laying the pipeline, the transition trench would be backfilled with 2,800 cubic yards of thaw stable gravel material. The 0.3 acre



onshore transition area (Figure 17) would be capped with 400 cubic yards of native overburden that were excavated from the site. Excess excavated material from onshore trench construction would be used as fill material for the mine site rehabilitation.

LIBERTY PROJECT COMPONENT	MAXIMUM DIMENSIONS (FEET)	EXCAVATION (CUBIC YARDS)	FILL VOLUME (CUBIC YARDS)	FILL AREA (ACRES)
Onshore Transition Pipeline				
Trench (shoreline MLLW to landfall pad)	150 x 25 x 10.5	(2,200)		
Gravel backfill			2,500	0.2
Native backfill			400	0.1
total Onshore Transition			2,900	0.3
Landfall Pad	96.5 x 135		2,400	0.3
Badami Pipeline Tie-In Pad (approximate)	54-155 x 170		3,500	0.5

Valve Pads: Two gravel pads would be constructed. The landfall pad valve pad would be approximately 135 feet by 96.5 feet (0.3 acres), requiring approximately 2,400 cubic yards of gravel. The Liberty-Badami Pipeline tie-in pad would be approximately 170 feet by up to 155 feet (0.5 acres), requiring approximately 3,500 cubic yards of gravel.

Barge Camp: A construction barge camp “securely” moored near the end of the Liberty Island at the sheetpile dockhead would have camp facilities mounted on the barge deck. Two interconnected barges, approximately 150 feet by 380 feet, would overwinter at the site from August to the following summer.

Mine Site Rehabilitation: Overburden and unsuitable construction gravel would be stored within the cell footprint. If placed outside the footprint, the material would be stored on ice pads and would be removed before spring break-up. Overburden and unsuitable construction gravel would be placed inside the gravel pit as part of the rehabilitation efforts, as stated in the Gravel Mining and Rehabilitation Plan submitted to the Alaska Department of Natural Resources. The rehabilitation efforts are intended to create a 30-acre lake, 40-foot deep, with two islands from the dike between phase I and II (0.4 acres), and shelves along the side of the pit (0.5 to 2.0 acres) to form shallow water habitat.

LIBERTY PROJECT COMPONENT	MAXIMUM DIMENSIONS (FEET)	EXCAVATION (CUBIC YARDS)	FILL VOLUME (CUBIC YARDS)	FILL AREA (ACRES)
Mine Site				
Cell 1 Mine Site:	910 x 1,225	(800,000)		
Backfill = overburden + excess spoil from on-shore pipeline construction			Up to 115,500	Up to 2.0
Year 1 temporary stockpiling of overburden from Cell 1 on cell 2 footprint	910 x 240		Up to 100,000 (temporary)	5.0
Cell 2 Mine Site:	475 x 910	(100,000)		
Year 2 temporary stockpiling of overburden from cell 2 and on ice pad	110 x 200		15,500	0.5
Total Mine Site		31 acres disturbed	215,500	7.0



PURPOSE: BPXA's purpose for placement of fill material and disposal of dredged material is to construct a gravel island providing access for development of hydrocarbon resources (Liberty Island-drill site); provide a platform for support and processing facilities; and to transport sales quality oil from the Liberty reserve to the Badami Sales Pipeline, through the Trans-Alaskan Pipeline and ultimately to market. The proposed activities would result in the recovery and transportation of oil to market, which would fulfill BPXA's goal for economic benefit, and meeting its responsibility under the OCS Lands Act and OCS lease requirements to develop the Liberty reserves. The produced oil would help satisfy domestic demands as U.S. production is declining, and could help decrease dependency on foreign oil. Liberty production would also help keep the Trans-Alaska Pipeline System operating. Developing the estimated 120 million barrels of recoverable reserves would also provide economic benefits nationally, for Alaska, and for the North Slope Borough.

ADDITIONAL INFORMATION

Additional project information may be found in the Draft Environmental Impact Statement (DEIS) for the Liberty Project prepared by the US Department of Interior, Minerals Management Service (MMS), available at local libraries (attachment B) or by contacting MMS at Minerals Management Service, 949 East 36th Avenue, Room 308, Anchorage, Alaska 99508. Additional information is also available on the following web sites:

<http://www.mms.gov/alaska/cproject/liberty/>.

Phased Development and Schedule. The proposed Liberty development would be scheduled to proceed in three phases: construction, drilling, and production. Construction is proposed to occur over two winter seasons. To support this schedule, the gravel mine would be developed in two cells, with one cell mined (and rehabilitated) during each construction year. Drilling would begin as construction is nearing completion and is expected to conclude two years later. Production would begin late in the second year of construction and would continue for approximately 15 years, the estimated field life.

Phase 1. Year 1 Construction: Island construction would occur during the first winter season, using gravel from the proposed Kadleroshilik River Mine. Gravel would be mined in the winter and hauled from the mine to the island over an ice road. Access to the mine site, the island, and water sources would be via ice roads. Ice road construction is planned to begin in December to support mine site access, gravel hauling, and island construction.

Mining would be initiated in January - February. The gravel haul would continue for about 45 to 60 days, and by mid-April all gravel should be in place and mine site rehabilitation initiated. Installation of island slope protection would follow, beginning before breakup and continuing into early summer. A pile-driven sheetwall for the island dock would be installed by the open water season. Precast foundations would be poured at an off-site location and trucked to the island. Foundation installation would require approximately 30 days and would be complete by mid-August. Remaining island construction work would be completed in early to mid-August, prior to arrival of the sealift. Summer access would be by vessel and aircraft.

Year 2 Construction. Pipeline construction would begin in second year of construction with ice road building to support mine site access, gravel hauling, and pipeline installation. A 12-inch oil pipeline



pipelines is planned for the Liberty Development and would extend from the island to a tie-in with the Badami Pipeline system. Two gravel pads would be constructed to support pipeline valve operations and maintenance. Winter access would be by ice road, with some access by air. Pipeline and valve pad construction is expected to start in January and be completed in May. Hydrotesting of the pipeline would also be completed by May. The pipeline would be commissioned in year 3, prior to or during facility start-up.

Phase 2: Drilling and production start-up. The drilling rig and associated equipment would be mobilized in the summer of year 2 or moved by ice road in the winter of year 3. An infrastructure module would be sealifted to the island in July or August of year 2. Process modules would be sealifted to the island in July or August of year 3. Drilling start-up is scheduled in the first quarter of year 3. Oil shipment (production) would occur in the fourth quarter of year 3.

Phase 3: Long term operations. Proposed production operations are scheduled to commence on completion of the facilities installation, hook-up and commissioning activities in the fourth quarter of year 3. The economic life of the field is estimated at 15 years.

Ocean Disposal of Dredged Material: BPXA intends to minimize the amount of excess dredged material/spoil requiring ocean disposal by re-using this material as trench backfill material (fill material). In addition to disposal adjacent to the trench (Zone 2), portions of the trench ice slot could be reopened and excess spoils placed over the previously backfilled trench. BPXA claims that there are threshold conditions under which excess dredged material cannot be placed back into the trench and would require disposal. One case is where the quantity of excess spoil is greater than can be accommodated over the trench without substantial over-mounding. The amount of mounding over the pipeline is not a factor affecting pipeline integrity, but is of environmental concern. In the area of grounded ice construction (to about the 8-foot isobath), the cap of the backfill will be close to the original seafloor, and will not be greater than 1-foot higher than original seafloor. A criterion of 2-foot mounding (above original seafloor) has been set for waters outside to 8-foot isobath.

Situations requiring disposal of excess backfill may result due to several factors, including displacement by the pipeline, the use of select backfill (e.g. gravel), and bulking due to the natural swell of excavated materials placed back into the trench. Another case may result from uncontrolled circumstances (e.g., bad weather) that may force construction crews to abandon the site before all operations have been completed, leaving some excavated material on the ice surface. Depending on site-specific circumstances, ocean disposal not to exceed 110,000 cubic yards of dredged material/spoils could result (Zone 1, 100,000 cubic yards; Zone 2, 10,000 cubic yards).

A Section 103 Marine Protection, Research and Sanctuaries Act (commonly referred to as the Ocean Dumping Act, (ODA)) dredged material disposal site evaluation is included as Appendix H within the Liberty Project, DEIS. The site evaluation includes: a description of the proposed disposal site and an explanation as to why no previous designated disposal site is feasible; a description of dredged material discharges at the disposal site; existence and documented effects of other authorized disposals that have been made at the disposal area; an estimate length of time during which disposal would continue at the proposed site; and information on the characteristics and composition of the dredged material. The site evaluation applies the criteria established by the Administrator, EPA pursuant to section 102(a) of the



ODA. The site has not previously been designated for use by the Administrator, pursuant to section 102(c) of the Act.

Gravel Mine. Approximately 865,000 cubic yards of gravel would be required for island construction, for the pipeline landfall valve pad, for pipeline trench select backfill, and for the tie-in valve pad at the Badami pipeline. The proposed mine site is on an island in the Kadleroshilik River floodplain (Figures 22 and 24). Geological data collected in March 1998 indicate that over two million cubic yards of construction materials are available.

The mine site lies approximately 1.4 miles south of Foggy Island Bay on a partially vegetated gravel island in the Kadleroshilik floodplain. The ground surface elevation of this island is approximately six to ten feet above MSL. The development mine site is approximately 31 acres in size, with the primary excavation area developed as two cells. One cell would be developed each winter construction season. The Phase 1 cell would be approximately 19 acres to support gravel island construction, and the Phase 2 cell would be approximately 12 acres to support pipeline construction, for a total disturbed area of approximately 31 acres.

In preparation for mining, snow, ice, and unusable overburden (organic and inorganic materials) would be removed from the mine site. For Cell 1, up to 100,000 cubic yards of overburden will be temporarily stockpiled on a 5-acre portion of the Cell 2 mine area just south of Cell 1. Cell 2 overburden (up to 13,000 cubic yards) plus about 2,500 cubic yards of excess spoil from the onshore pipeline transition trench will either be directly placed into Cell 1 pit, or on the ice pad in a temporary stockpile area (about 0.5 acres) located just south of the Cell 2 pit.

Mining would not extend into the active river channel; a dike approximately 50 feet wide would be left in place between the mine site and the river channel while mining operations are underway. Gravel would be excavated by blasting, ripping and removing materials in two 20-foot lifts, to a total depth 40± feet below the ground surface. Some portion of the lower 20-foot lift may be left in place if all gravel available from the site is not needed to meet island requirements.

After useable gravel has been removed from the mine, materials unsuitable for construction (e.g. unusable materials stockpiled during mining) would be placed back into the mine excavation. Stockpiled snow and ice would also be pushed back into the pit to minimize effects on natural drainage patterns during spring breakup. These backfilled materials would be used to create a shelf (approximately mean water level) along one side of the mine to improve future habitat potential. The access ramp down into the mine would form the foundation of the constructed shelf, maximizing new surface area created. To complete construction, the adjacent edge of the pit would be beveled back a distance of 10-20 feet, creating a gradual slope to the shelf. The backfilled area would provide substrate and nutrients to support revegetation and improve future habitat potential of the constructed shelf along the mine wall.

After Phase I mining is complete, the dike between the mined site and the active channel of the Kadleroshilik River would be breached to approximately 6 inches below mean low water in the channel. During spring breakup, the mine site would flood with fresh water, forming a deep lake adjacent to the river. To avoid stranding fish in the lake during periods of low water, a short section of the breach would be lowered to river bottom level.



Development of the Phase 2 cell is expected to support construction of the offshore pipeline, the shoreline transition, and pipeline valve pads. The Phase 2 mine would disturb approximately 11.6 acres, to provide the estimated volume of gravel for pipeline and pad construction. An approximately 15-foot wide (0.4 acre) dike would be left between the two cells until mining has been completed.

Mining and rehabilitation plans for Phase 2 would be similar to those described above for Phase 1. After Phase 2 mining is completed, the dike separating the two mine cells would be breached, expanding the original flooded site to create a larger lake. Some portion of the breach would be at least as low as the river bottom, again, to avoid stranding fish during periods of low water. Backfill (e.g. materials stockpiled during Phase 2 mining and excess material from onshore pipeline construction) would be used to enhance the shallow area created during Phase 1 to improve the future habitat potential of that site.

Remnants of the dike between Phase I and Phase II cells would form islands (0.4± acres) in the deep lake, diversifying the aquatic habitat. The shelves constructed along the side of the mine (estimated to be 0.5 - 2.0 acres total) should evolve into shallow water habitat over time in conjunction with flooding the mine site. After a thaw season, it is expected that irregular settlement of the material comprising the shelf would create a surface mosaic of small shallow ponds, humps, and flats.

Based on data collected during 1998 and conditions found during Phase 1 mining, BPXA would prepare a detailed rehabilitation plan, based on final characterization of the site (e.g., post construction topography, microtopography, hydrology and drainage, salinity, surface soil type, and local vegetation).

Single Season Construction: In the event that BPXA is not able to proceed with a two-year construction schedule, construction would be planned for a single season. Several changes in the scope of work could result from this single season construction option, including a single season mining plan and the possible need for dredging at West Dock to allow drill rig mobilization by barge. Single season gravel mining would be conducted according to the same general mining and rehabilitation concepts as two-season mining, except there would be a single cell, slightly less affected acreage due to the single cell, and rehabilitation would be initiated after the single season of mining activity. In this case, the affected acreage would be 30 acres, and the fill volume associated with overburden placement from the mine site would be about 110,000 cubic yards. Under a single season option, the drill rig would be mobilized to the island via barge. In this case, there is a possibility that maintenance dredging could be required at West Dock to allow docking of the barge used to transport the rig. This dredging operation would probably consist of using a Crowley Screed barge to back-drag the area at a maximum 6-foot depth, with no over draft dredging.

Alternatives: A description of project alternatives including the proposed alternative is presented in Section II of the Liberty Development and Production Plan, Draft Environmental Impact Statement (DEIS), dated January 2001. [Note: According to the Applicant, a minimum of a 18-month delay would result should an alternative island location and resultant pipeline alignment be selected over the applicant's preferred alternative. A minimum 18-month delay would also occur if an alternative pipeline design is selected over the applicant's proposed single wall pipeline design. These delays are a result of additional engineering requirements and information needs.]



A list of the alternatives and their location within the DEIS are cited below:

Alternative	Name	DEIS, Section and Page Number	
1	Liberty Development and Production Plan (Applicant's preferred alternative)	II.A	II-3
2	No Action Alternative	II.B	II-22
3	Island and Pipeline Route alternatives	II.C.1.	II-23
	• III.A Southern Island & Eastern Pipeline Route	II.C.1.c	II-25
	• III.B Tern Island & Pipeline Route	II.C.1.d	II-26
4	Pipeline Designs alternatives	II.C.2	II-27
	• IV.A Steel Pipe-in-Pipe	II.C.2.c	II-30
	• IV.B Pipe-in-HDPE	II.C.2.d	II-31
	• IV.C Flexible Pipeline System	II.C.2.e	II-32
5	Upper Island Slope Protection alternative	II.C.3	II-33
	• Steel Sheet Pile	II.C.3.c	II-33
6	Gravel Mine site alternative	II.C.4	II-34
	• Duck Island Mine Site	II.C.4.c	II-35
7.	Pipeline Burial Depth alternative	II.C.5	II-36
	• 15-foot pipeline trench depth	II.C.5.c	II-38
	Description of Selected Alternative Combinations	II.D	II-38

Attachment A provides summary tables of the applicant's proposed plan, key project components for all alternatives, and summary comparison of trench excavation and backfill for the different pipeline designs.



MITIGATION: As a result of early project planning and pre-application coordination, the applicant (BPXA) has incorporated into the proposed project the following mitigation efforts to avoid or reduce impacts to the aquatic environment. These are delineated below as submitted by the applicant.

ACTION	BENEFIT
Developed the oil and gas reservoir from an island with subsea pipeline to the shore	Avoid potential effects on fish or nearshore oceanography. Minimize volume of gravel needed for development. Minimize benthic disturbance from gravel placement
Use gravel island for drilling platform	Reduce noise transmission into water column
Minimized facility size; reduced wellhead spacing to 9 feet, directional drilling	Minimize impacts associated with size of the offshore island
Designed facility for zero discharge of drilling wastes; no reserve pits	Reduce island size and impacts to benthos; eliminate potential for contaminant release from reserve pits
Designed for zero discharge of deck drainage	Reduced potential impact to water quality
Propose to locate new mine site in the Kadleroshilik floodplain	Minimize impacts to tundra wetlands; facilitate immediate rehabilitation of gravel source to wildlife habitat consistent with Alaska Department of Fish and Game guidelines
Develop and restore mine during winter	Minimize impacts to fish and wildlife; facilitate restoration
Optimized location of island site to avoid Boulder Patch locations. Locate island as close to shore as practicable	Minimize impacts of island footprint on known Boulder Patch areas. Reduce length of offshore pipeline, minimizing disturbance to the marine environment
Use filter fabric to reduce leaching of fine sediments from the gravel island following construction	Minimize redistribution of fine particulates into the water column; minimize effects to marine habitat
Fully considered all viable pipeline route alternatives based on potential impacts on Boulder Patch, marine, aquatic, and terrestrial habitats	Proposed project was selected to avoid the Boulder Patch and reduce the potential impacts on other marine and terrestrial habitats (lakes, salt marsh) and cultural resources
Coordinated with agencies to identify and mitigate potential impacts early (and often) during project planning and design	Minimize interactions with bears; avoid disturbance of denning bears; identify important fish resources in project area. Ensure protection of threatened species. Better protect fish and wildlife
Conducted baseline studies (acoustical data, seal survey, Boulder Patch survey, and archaeological survey) to optimize project siting and design	Optimal project siting and design
Use ice roads for access	Eliminate impacts to tundra wetlands. Reduce permanent access and right-of-way requirements
Construct island and pipeline during winter from ice roads and pads	Eliminate impacts to wildlife; reduce sediment input effects, eliminate dust effects, eliminate impacts to tundra wetlands from a permanent access road; minimize subsistence displacement
Use sea ice to support construction for island construction and pipeline placement. Install pipeline during winter when water currents are low	Avoid barge traffic in summer for gravel transport, reducing air emissions. Reduce sedimentation of disturbed materials from the pipeline trench on adjacent benthic environments. Reduce noise disturbance to marine mammals
Subsea burial of offshore pipelines. No flanges, valves or fittings in subsea section	Minimize potential for damage and/or failure; minimize spill potential
Select pipe materials that exceed standards	Reduce risk of pipe failure (e.g., thicker walled pipe)
Voluntary use of automated valve at landfall, leak detection system capable of detecting 0.15% of flow	Reduce potential spill volumes
Site ocean disposal of dredged materials in water deeper than 5 feet; avoid Boulder Patch	Minimize potential impacts to important local resources

WATER QUALITY CERTIFICATION: A permit for the described work will not be issued until a certification or waiver of certification as required under Section 401 of the Clean Water Act (Public Law 95-217), has been received from the Alaska Department of Environmental Conservation.

COASTAL ZONE MANAGEMENT ACT CERTIFICATION: Section 307(c) (3) of the Coastal Zone Management Act of 1972, as amended by 16 U.S.C. 1456(c) (3), requires the applicant to certify that the



described activity affecting land or water uses in the coastal Zone complies with the Alaska Coastal Management Program. A permit will not be issued until the Office of Management and Budget, Division of Governmental Coordination has concurred with the applicant's certification.

CULTURAL RESOURCES: The latest published version of the Alaska Heritage Resources Survey (AHRS) has been consulted for the presence or absence of historic properties, including those listed in or eligible for inclusion in the National Register of Historic Places. Historic resources in the project area have been identified and assessed (Foggy Island Bay Site #2, 49-XBP-024, and Foggy Island Bay Site #3, 49-XBP-026). The State Historic Preservation Officer (SHPO) issued clearance for the onshore pipeline corridor on May 2, 1998. Dr. Jack Lobdell surveyed the mine site in August 1998, and no historic resources were identified; a report on these findings will be submitted to the SHPO. An offshore archaeology survey report is in progress. This application is being coordinated with the State Historic Preservation Office (SHPO). Any comments SHPO may have concerning presently unknown archeological or historic data that may be lost or destroyed by work under the requested permit will be considered in our final assessment of the described work.

ENDANGERED SPECIES: The project area is within the known or historic range of the Steller's eider (*Polysticia stelleri*), and the spectacled eider (*Somateria fischeri*). The Western Arctic (Bering-Chukchi-Beaufort) stock of bowhead whales (*Balaena mysticetus*) is listed as endangered under the Endangered Species Act and is classified as a strategic stock by the National Marine Fisheries Service. No threatened or endangered species are known to use the project area. Preliminary, the described activity will not affect threatened or endangered species, or their critical habitat designated as endangered or threatened, under the Endangered Species Act of 1973 (87 Stat. 844). This application is being coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Any comments they may have concerning endangered or threatened wildlife or plants or their critical habitat will be considered in our final assessment of the described work.

ESSENTIAL FISH HABITAT: The proposed work is being evaluated for possible effects to Essential Fish Habitat (EFH) pursuant to the Magnuson Stevens Fishery Conservation and Management Act of 1996 (MSFCMA), 16 U.S.C. et seq and associated federal regulations found at 50 CFR 600 Subpart K. The Alaska District includes areas of EFH as Fishery Management Plans. We have reviewed the January 20, 1999, North Pacific Fishery Management Council's Environmental Assessment to locate EFH area as identified by the National Marine Fisheries Service (NMFS). We have determined that the described activity within the proposed area will not adversely affect EFH, including anadromous fish and federally managed fishery resources.

FLOOD PLAIN MANAGEMENT: Evaluation of the described activity will include conformance with appropriate State or local flood plain standards; consideration of alternative sites and methods of accomplishment; and weighing of the positive, concentrated and dispersed, and short and long-term impacts on the flood plain.

SPECIAL AREA DESIGNATION: None.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which *reasonably may be expected to accrue from the proposal must be balanced against its reasonably*



foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

For activities involving construction of artificial islands, installations and other devices in the outer continental shelf lands which are under mineral lease from the Department of the Interior, the decision as to whether a permit will be issued will be based on an evaluation of the impact of the proposed work on navigation and national security.

For activities involving the transportation of dredged material for the purpose of disposing of it in ocean waters, the decision as to whether a permit will be issued will be based on an evaluation to determine that the proposed disposal will not unreasonably degrade or endanger human health, welfare, or amenities or the marine environment, ecological systems, or economic potentialities. In making this determination, the criteria established by the Administrator, EPA pursuant to section 102(a) of the Ocean Dumping Act, will be applied. In addition, based upon an evaluation of potential effects which failure to utilize this ocean disposal site will have on navigation, economic and industrial development, foreign and domestic commerce of the United States, an independent determination will be made to dispose of the dredged material in ocean waters, other possible methods of disposal, and other appropriate locations.

For activities involving 404 discharges, a permit will be denied if the discharge that would be authorized by such permit would not comply with the Environmental Protection Agency's 404(b) (1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria (see Sections 320.2 and 320.3), a permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments will be used in the Preparation of the Final Environmental Impact Statement (FEIS) pursuant to the National Environmental Policy Act, being prepared by the USDOL, Minerals Management Service (Lead Agency) with the Corps of Engineers, Alaska District as a Cooperative Agency. The Corps will also issue a second public notice on the Liberty Development Project concurrent with the FEIS public review period. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

PUBLIC HEARING: PUBLIC HEARING: The U.S. Department of Interior, Minerals Management Service has scheduled public hearings on the Liberty Development and Production Plan, Draft Environmental Impact Statement at the following locations and times:

- February 15, 2001 Anchorage 12:00 Noon to 3: 00 PM and
7:00 PM to 9 PM Wilda Marston Theatre, Loussac Library
- February 19, 2001 Barrow 7:30 PM to 10 PM Inupiaq Heritage Center



- February 20, 2001 Kaktovik 7:00 PM to 10 PM Community Center
- February 21, 2001 Nuiqsut 7:00 PM to 10 PM Kisik Community Center
- February 22, 2001 Fairbanks 6:00 PM to 9 PM Alaskaland Exhibit Hall

Any person who has an interest or comments concerning the Applicant's proposed work in navigable water of the United States, including wetlands are encourage to attend and submit comments during the above public hearings. All comments concerning the proposed work in navigable waters and waters of the United States obtained from these meetings will be considered in the Department of Army's evaluation. For additional information concerning these public hearings, please contact Mr. Fred R. King at the address below or you may wish to access MMS's Liberty Project web page at:

<http://www.mms.gov/alaska/cproject/liberty>

Any person may request, in writing, within the 60-day comment period specified in this notice, that an additional public hearing be held to consider this application. Requests for public hearings shall state with particularity the reasons for holding additional public hearings.

Any person who has an interest, which may be affected by the disposal of this dredged material, may request a public hearing. The request must be submitted in writing to the district engineer within the comment period of this notice and must clearly set forth the interests, which may be affected, and the manner in which the interest may be affected by this activity.

Comments on the described work, with the reference number, should reach this office no later than the expiration date of this Public Notice to become part of the record and be considered in the decision. Please contact Mr. Mike Holley at 1-907-753-2716 or toll free in Alaska at 1-800-478-2712, if further information is desired concerning this notice. All comments received in response to this Public Notice shall be included as comments received for the Draft Environmental Impact Statement for the Liberty Project, prepared by the US Department of the Interior, Minerals Management Service. Questions and additional comments concerning the DEIS for the Liberty Project may be directed to Mr. Fred R. King, Minerals Management Service, 949 East 36th Avenue, Room 308, Anchorage, Alaska 99508.

AUTHORITY: This permit will be issued or denied under the following authorities:

- Perform work in or affecting navigable waters of the United States - Section 10 Rivers and Harbors Act 1899 (33 U.S.C. 403).
- Discharge dredged or fill material into waters of the United States - Section 404 Clean Water Act (33 U.S.C. 1344). Therefore, our public interest review will consider the guidelines set forth under Section 404(b) of the Clean Water Act (40 CFR 230).
- Transport dredged material for the purpose of dumping it into ocean waters - Section 103 Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413). Therefore, our public interest review will consider the criteria established under authority of Section 102(a) of the Marine Protection, Research and Sanctuaries Act of 1972, as amended (40 CFR Parts 220 to 229), as appropriate.



Project plans (26 sheets), Notice for Application for Certification of Consistency with the Alaska Coastal Management Program, and a list of libraries where the Liberty Development and Production Plan, DEIS are available are attached to this Public Notice.

District Engineer
U.S. Army, Corps of Engineers

Attachments



Attachment A

- Table 1a. Summary of Applicant's Preferred Alternative (Proposed Plan).
Table 1b. Summary of Applicant's Preferred Alternative (Ocean Water Disposal of Dredged Material)
- Table 2. Key Project Components Summary for Alternatives (DEIS Table II.A-1)
- Table 3. Comparison of Trench Excavations and Back Fill for Different Pipeline Designs and Routes (DEIS Table II.C-3)



Table 1a. Summary of Applicant's Preferred Alternative (Alternative 1).

LIBERTY PROJECT COMPONENT	MAXIMUM DIMENSIONS (FEET) ⁽¹⁾	EXCAVATION (CUBIC YARDS) ⁽²⁾	FILL VOLUME (CUBIC YARDS) ⁽²⁾	FILL AREA (ACRES) ⁽²⁾
Island				
Gravel Island ⁽³⁾	835 x 1,170		773,000	22.4
Gravel (4,200 bags for slope protection)			17,000	
Concrete blocks (17,000 for slope protection)			7,600	
Subtotal			797,600	22.4
Offshore Pipeline (Island to 3-mile limit)				
Trench Excavation (8,000' subsea pipeline)	8,000 (length) x 61-132 (variable trench top width)	(179,000)		
Select backfill ⁽⁴⁾ (including bags/mats)			17,000	
Native backfill (maximum)			162,000	18.2
Subtotal Offshore to 3-mile limit			179,000	18.2
Offshore Pipeline (3-mile limit to shoreline MLLW)				
Trench Excavation (24,300' subsea pipeline plus 100' transition pipeline below shoreline MLLW)	24,400 (length) x 61-132 (variable trench top width)	(545,000)		
Select backfill ⁽⁴⁾ (including bags/mats)			50,000	
Native backfill (maximum)			495,000	
Subtotal 3-mile to shoreline MLLW			545,000	55.4
Onshore Transition Pipeline				
Trench (shoreline MLLW to landfall pad)	150 x 25	(2,200)		
Select backfill ⁽⁴⁾			2,500	0.2
Native backfill ⁽⁵⁾			400	0.1
Subtotal Onshore Transition			2,900	0.3
Landfall Pad	96.5 x 135		2,400	0.3
Badami Pipeline Tie-In Pad (approximate)	54-155 x 170		3,500	0.5
Mine Site				
Cell 1 Mine Site:	910 x 1,225	(800,000)		
Backfill ⁽⁶⁾ = overburden + excess spoil from on-shore pipeline construction			Up to 100,000	Up to 2.0
Year 1 temporary stockpiling of overburden from Cell 1 on Cell 2 footprint	910 x 240		Up to 100,000 (temporary)	5.0
Cell 2 Mine Site:	475 x 910	(100,000)		
Year 2 temporary stockpiling of overburden from Cell 2 and on ice pad ⁽⁷⁾	110 x 200		15,500	0.5
Subtotal Mine Site		31 acres disturbed	215,500	7.0
TOTAL		1,626,200	1,745,900	104.1

Notes:

- For permitting, the maximum estimated case (size, number or range) is considered; all values are approximate.
- Values represent limits of excavation or fill (maximum estimated case), with a bulking factor; all values are approximate.
- Design dimensions of the island bottom are 635 x 970 feet. A 100 foot perimeter has been added to this design footprint to account for gravel spreading during construction.
- Select backfill is thaw stable granular material (e.g. gravel) and/or gravel-filled geotextile bags.
- Affected acreage includes fill material cap that overlaps trench excavation limits. Excess spoil goes to mine rehabilitation or to the transition trench.
- Backfill volume depends on site specific circumstances; values shown represent approximately 1- 2 feet of overburden across the mine available for backfill. The volume also includes excess spoil from onshore pipeline construction.
- Overburden will be temporarily stockpiled on ice pads as needed to protect vegetation from disturbance.



TABLE 1b. Section 103 Regulated Activities, Applicant's Proposed Plan

OCEAN DUMPING OF DREDGED MATERIALS (EXCESS OFFSHORE PIPELINE CONSTRUCTION SPOILS)	STORAGE/DISPOSAL SITE FOOTPRINT LIMITS (FEET)	VOLUME ⁽¹⁾ (CUBIC YARDS)	AREA (ACRES)
Disposal Zone 1 (limits)	2,000 x 5,000	up to 100,000	230
Disposal Zone 2 (limits)	32,300 x 200	up to 10,000	150

Notes:

- Up to 67,000 cubic yards of select backfill is planned for the offshore pipeline trench, so it is possible that some native material excavated during pipeline construction will be totally replaced by select fill and will require ocean disposal. BPXA intends to place as much material as possible back into the trench. However, the final volume of spoils for ocean disposal will depend on a number of site specific circumstances, with a reasonably expected range up to 100,000 cubic yards used for planning.



Table 2. Key Project Component Summary for All Alternatives¹ (DEIS, Table II.A-1)

	I Proposal	III.A Southern Island	III.B Tern Island	IV.A Pipe-In- Pipe	IV.B Pipe-In-HDPE	IV.C Flexible Pipe	V Steel Sheetpile	VI Duck Island, Gravel Mine	VII Bury Deeper
GRAVEL ISLAND									
a. Location	Liberty Island	Southern Island	Tern Island	Liberty Island	Liberty Island	Liberty Island	Liberty Island	Liberty Island	Liberty Island
b. Upper Slope Protection	Gravel Bags	Gravel Bags	Gravel Bags	Gravel Bags	Gravel Bags	Gravel Bags	Steel Sheetpile	Gravel Bags	Gravel Bags
c. Lower Slope Protection	17,000Cement Mats	16,000 Cement Mats	18,000 Cement Mats	17,000Cement Mats	17,000Cement Mats	17,000Cement Mats	22,500 Cement Mats	17,000Cement Mats	17,000Cement Mats
d. Amount of Gravel	797,600 cu yd	684,800 cu yd	599,500 cu yd	797,600 cu yd	797,600 cu yd	797,600 cu yd	855,000 cu yd	797,600 cu yd	797,600 cu yd
e. Maximum Footprint	835' * 1170'	825' * 1155'	850' * 1190'	835' * 1170'	835' * 1170'	835' * 1170'	905' * 1240'	835' * 1170'	835' * 1170'
f. Maximum Footprint Area	22.4 acres	21.9 acres	23.3 acres	22.4 acres	22.4 acres	22.4 acres	25.8 acres	22.4 acres	22.4 acres
g. Working Surface	345' * 680'	345' * 680'	345' * 680'	345' * 680'	345' * 680'	345' * 680'	345' * 680'	345' * 680'	345' * 680'
h. Water Depth at Island	22 feet	18 feet	23 feet	22 feet	22 feet	22 feet	22 feet	22 feet	22 feet
PIPELINE									
a. Pipe Design	1 Steel pipe	1 Steel pipe	1 Steel pipe	1 Steel pipe in a steel pipe	1 Steel pipe in an HDPE pipe	1 Flexible pipe	1 Steel pipe	1 Steel pipe	1 Steel pipe
b. Route	Liberty Route	Eastern Route	Tern Route	Liberty Route	Liberty Route	Liberty Route	Liberty Route	Liberty Route	Liberty Route
c. Average Trench Depth /Range in (Feet)	10.5 / (8 -12)	10.5 / (8-12)	10.5 / (8-12)	9 / (6.5-10.5)	10 / (7.5 - 11.5)	8.5 / (6-10)	10.5 / (8 -12)	10.5 / (8 -12)	15 feet
d. Quantity of Trench Dredge/Excavation Material ²	724,000 cu yds	499,025 cu yd	652,800 cu yd	557,300 cu yd	673,920 cu yd	498,960 cu yd	724,000 cu yd	724,000 cu yd	1,438,560 cu yd
e. Quantity of Trench Backfill Material ²	724,000 cu yds	499,025 cu yd	652,800,000 cu yd	557,300 cu yd	673,920 cu yd	498,960 cu yd	724,000 cu yd	724,000 cu yd	1,438,560 cu yd
f. Minimum Burial Depth	7 feet	7 feet	7 feet	5 feet	6 feet	5 feet	7 feet	7 feet	11 feet
g. Surface Area Disturbed by Trench	59 acres	37 acres	59 acres	52 acres	57 acres	49 acres	59 acres	59 acres	81 acres
h. Offshore Length	6.1 miles	4.2 miles	5.5 miles	6.1 miles	6.1 miles	6.1 miles	6.1 miles	6.1 miles	6.1 miles
i. Onshore Length	1.5 miles	3.1 miles	3.1 miles	1.5 miles	1.5 miles	1.5 miles	1.5 miles	1.5 miles	1.5 miles
j. Construction Seasons	Winter	Winter	Winter	Winter	Winter	Winter	Winter	Winter	Winter
k. Leak-Detection System	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPC, PPA, LEOS or Equiv.	MBLPCPPA, LEOS or Equiv.
l. Engineering Calculation of Pipeline Failure Rate but no oil released	3.1%	3.1%	3.1%	2.1%	3.2%	4.6%	3.1%	3.1%	2.2%
m. Engineering Calculation of Pipeline Failure Rate with oil released (any size spill)	0.001%	0.001%	0.001%	0.01%	0.01%	0.1%	0.001%	0.001%	0.0003%
n. Engineering Calculation of Probability of a Spill Larger than 1,000 bbls during project life ²	1.38%	1.38%	1.38%	0.234%	1.38%	1.38%	1.38%	1.38%	1.38%
GRAVEL MINE SITE									
a. Location	Kadleroshilik River	Kadleroshilik River	Kadleroshilik River	Kadleroshilik River	Kadleroshilik River	Kadleroshilik River	Kadleroshilik River	Duck Island Mine	Kadleroshilik River
b. Number of Haul Days	45-60	40-57	30-45	45-60	45-60	45-60	45-60	90 -120 or use more equipment	45-60
c. Distance from Island	6 miles	6 miles	6 miles	6 miles	6 miles	6 miles	6 miles	20 miles	6 miles

¹ Unless otherwise noted all information in this table is from INTEC (2000)

² Information from Fleet (2000)

Shading indicates components or quantities that are different from Alternative I – Proposal



Table 3 Comparison of Trench Excavation and Backfill for Different Pipeline Designs and Routes (DEIS, Table II.C-3 Source: BPXA (2000a))

Pipeline Design	Trench Characteristic	Island Location and Pipeline Route								
		Alternative I Liberty Island/Liberty Pipeline			Alternative III.A Southern Island Eastern Pipeline Route			Alternative III.B Tern Island Tern Pipeline Route		
		Gravel Island to 3- Mile Limit	3-Mile Limit to Shoreline	Onshore Transition Pipeline	Gravel Island to 3- Mile Limit	3-Mile Limit to Shoreline	Onshore Transition Pipeline	Gravel Island to 3- Mile Limit	3-Mile Limit to Shoreline	Onshore Transition Pipeline
Alternative I Single-Wall Pipe	a. Trench Length (ft)	8,000	24,400	150	2,376	19,900	205	11,616	17,524	205
	b. Trench Width (ft)	61'-132'	61'-132'	25	61'-132'	61'-132'	25	61'-132'	61'-132'	25
	c. Trench Excavation (yd ³)	(179,000)	(545,000)	(2,200)	(53,225)	(445,800)	(3,000)	(260,200)	(392,600)	(3,000)
	d. Select Backfill (yd ³)	17,000	50,000	2,500	5,800	40,800	3,450	24,250	36,050	3,450
	e. Native Backfill (yd ³)	162,000	495,000	400	47,425	405,000	550	235,950	356,550	550
	f. Total Trench Backfill (yd ³)	179,000	545,000	2,900	53,225	445,800	4,000	260,200	392,600	4,000
	g. Trench Fill Area (acres)	18.2	55.4	0.3	5.3	44.1	0.41	25.8	38.9	0.41
	h. Trench Depth (ft)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
Alternative III.A Pipe-in-Pipe	a. Trench Length (ft)	8,000	24,400	150	2,376	19,900	205	11,616	17,524	205
	b. Trench Width (ft)	53'-115'	53'-115'	25	53'-115'	53'-115'	25	53'-115'	53'-115'	25
	c. Trench Excavation (yd ³)	(137,600)	(419,700)	(1,875)	(40,900)	(342,300)	(2,570)	(200,000)	(301,500)	(2,570)
	d. Select Backfill (yd ³)	none	none	2,160	none	none	2,950	none	none	2,950
	e. Native Backfill (yd ³)	137,600	419,700	345	40,900	342,300	470	200,000	301,500	470
	f. Total Trench Backfill (yd ³)	137,600	419,700	2,505	40,900	342,300	3,420	200,000	301,500	3,420
	g. Trench Fill Area (acres)	15.4	47.1	0.3	4.6	38.4	0.36	22.4	33.8	0.36
	h. Trench Depth (ft)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Alternative III.B Pipe-in-HDPE	a. Trench Length (ft)	8,000	24,400	150	2,376	19,900	205	11,616	17,524	205
	b. Trench Width (ft)	59'-126'	59'-126'	25	59'-126'	59'-126'	25	59'-126'	59'-126'	25
	c. Trench Excavation yd ³	(166,400)	(507,520)	(2,090)	(49,420)	(413,920)	(2,850)	(241,615)	(364,500)	(2,850)
	d. Select Backfill (yd ³)	17,000	50,000	2,400	5,800	40,800	3,275	24,250	36,050	3,275
	e. Native Backfill (yd ³)	149,400	457,520	385	43,620	373,120	525	217,365	328,450	525
	f. Total Trench Backfill (yd ³)	166,400	507,520	2,785	49,420	413,920	3,800	241,615	364,500	3,800
	g. Trench Fill Area (acres)	17.0	51.8	0.3	5.1	42.3	0.39	24.7	37.2	0.39
	h. Trench Depth (ft)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Alternative III.C Flexible Pipe	a. Trench Length (ft)	8,000	24,400	150	2,376	19,900	205	11,616	17,524	205
	b. Trench Width (ft)	50'-110'	50'-110'	25	50'-110'	50'-110'	25	50'-110'	50'-110'	25
	c. Trench Excavation (yd ³)	(123,200)	(375,760)	(1,770)	(36,590)	(306,460)	(2,425)	(178,890)	(269,870)	(2,425)
	d. Select Backfill (yd ³)	17,000	50,000	2,035	5,800	40,800	2,790	24,250	36,050	2,790
	e. Native Backfill (yd ³)	106,200	325,760	325	30,790	265,660	445	154,640	233,820	445
	f. Total Trench Backfill (yd ³)	123,200	375,760	2,360	36,590	306,460	3,235	178,890	269,890	3,235
	g. Trench Fill Area (acres)	14.7	44.9	0.24	4.4	36.6	0.33	21.4	32.3	0.33
	h. Trench Depth (ft)	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Alternative VII Bury the Pipe Deeper	a. Trench Length (ft)	8,000	24,400	150	2,376	19,900	205	11,616	17,524	205
	b. Trench Width (ft)	120'-152'	120'-152'	25	120'-152'	120'-152'	25	120'-152'	120'-152'	25
	c. Trench Excavation (yd ³)	(355,200)	(1,083,360)	(3,125)	(105,500)	(883,560)	(4,275)	(515,750)	(778,070)	(4,275)
	d. Select Backfill (yd ³)	17,000	50,000	3,590	5,800	40,800	4,920	24,250	36,050	4,920
	e. Native Backfill (yd ³)	338,200	1,033,360	575	99,700	842,760	785	491,500	742,020	785
	f. Total Trench Backfill (yd ³)	355,200	1,083,360	4,165	105,500	883,560	5,705	515,750	778,070	5,705
	g. Trench Fill Area (acres)	24.9	76.1	0.4	60.6	62.0	0.59	36.2	54.6	0.59
	h. Trench Depth (ft)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0



ATTACHMENT B

LIBRARY DISTRIBUTION LIST

- Anaktuvuk Pass:** Nunamiut School Community Library, P.O. Box 21029, Anaktuvuk Pass, Alaska 99721
- Anchorage:** Alaska Resources Library, 222 West 7th, No. 36, Anchorage, Alaska 99513
Z.J. Loussac Library, 3600 Denali, Anchorage, Alaska 99503
University of Alaska Anchorage - Consortium Library, 3211 Providence Drive, Anchorage, Alaska 99508
Alaska Environmental Information and Data Center, Environmental and Natural Resources Institute - UAA, 707 A Street, Anchorage, Alaska 99501
- Atkasuk:** Meade River School Community Library, General Delivery, Atkasuk, Alaska 99791
- Barrow:** Tuzzy Consortium Library, P.O. Box 749, Barrow, Alaska 99723
- Bethel:** Kuskokwim Consortium Library, Pouch 1068, Bethel, Alaska 99559
- Dillingham:** Dillingham Public Library, D and Seward Streets, Dillingham, Alaska 99576
- Fairbanks:** Fairbanks North Star Borough Public Library, Noel Wien Library, 1215 Cowles Street, Fairbanks, Alaska 99701
University of Alaska Fairbanks, Elmer E. Rasmuson Library, P.O. Box 756800, Fairbanks, Alaska 99775
- Homer:** Homer Public Library, 141 W. Pioneer Avenue, Homer, Alaska 99603
- Juneau:** Alaska State Library, P.O. Box 110571, Juneau, Alaska 99811
Juneau Public Library, 292 Marine Way, Juneau, Alaska 99801
University of Alaska Southeast, William A. Egan Library, 111120 Glacier Highway, Juneau, Alaska 99801
- Kaktovik:** Kaveolook School Community Library, P.O. Box 10, Kaktovik, Alaska 99747
- Kenai:** Kenai Community Library, 161 Main Street Loop, Kenai, Alaska 99611
- Kodiak:** A. Holmes Johnson Memorial Library, 319 Lower Mill Bay Road, Kodiak, Alaska 99615
- Kotzebue:** Chukchi Consortium Library, P.O. Box 297, Kotzebue, Alaska 99752
- Nome:** Kegoayah Kozga Public Library, P.O. Box 1168, Nome, Alaska 99762
- Nuiqsut:** Trapper School Community Library, P.O. Box 167, Nuiqsut, Alaska 99789
- Point Hope:** Tikigaaq School Community Library, P.O. Box 148, Point Hope, Alaska 99766
- Point Lay:** Cully High School/Community Library, P.O. Box 148, Point Lay, Alaska 99759
- Seward:** Seward Community Library, P.O. Box 537, Seward, Alaska 99664
- Sitka:** Kattleson Memorial Library, 320 Harbor Drive, Sitka, Alaska 99835
- Valdez:** Valdez Consortium Library, P.O. Box 609, Valdez, Alaska 99686
- Wainwright:** Alak School Library, P.O. Box 10, Wainwright, Alaska 99782
- Wasilla:** Wasilla Public Library, 391 North Main Street, Wasilla, Alaska 99654



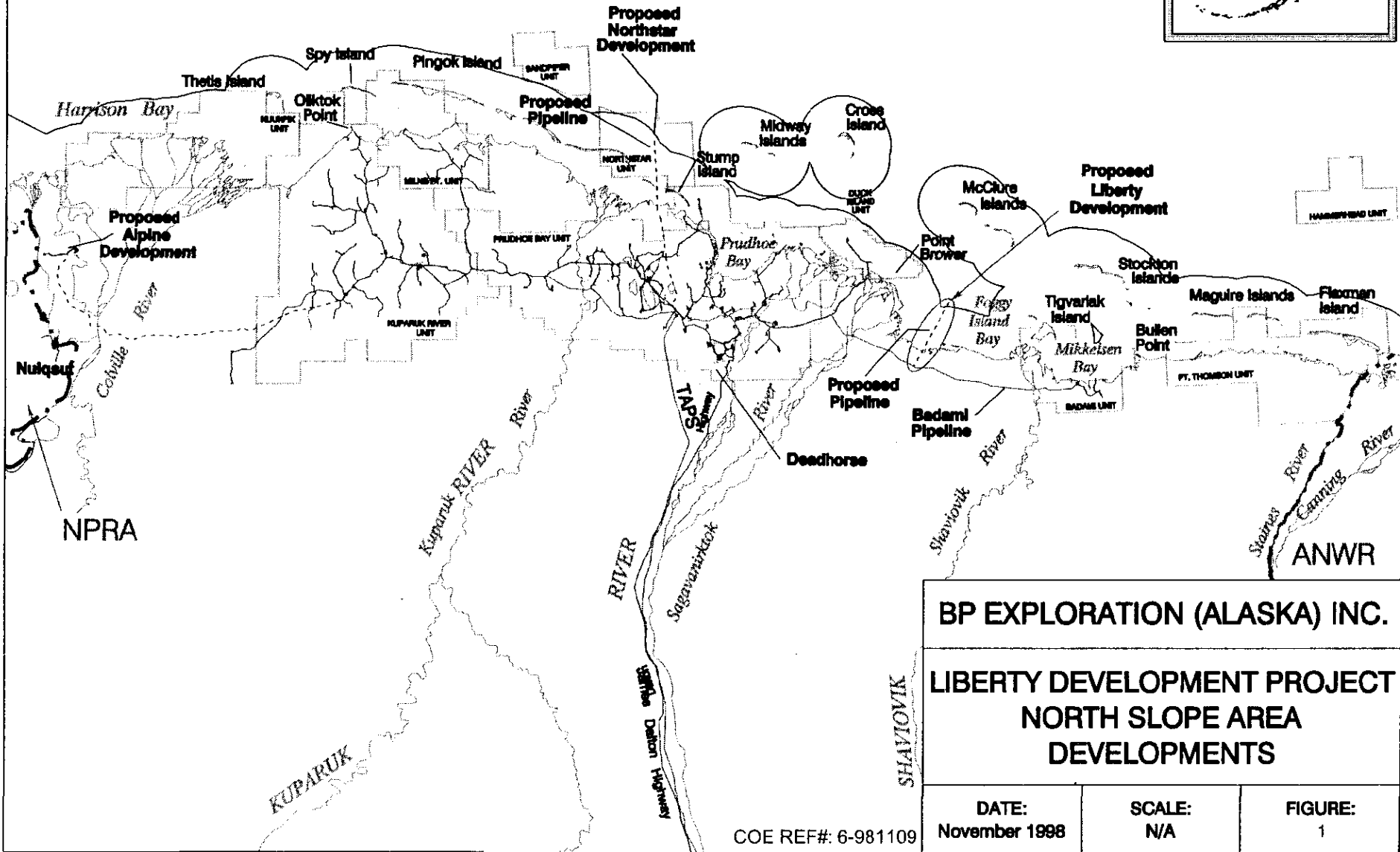
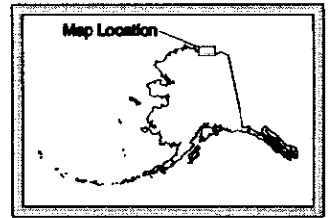
Attachment C

Applicant Submitted Figures

<u>Figure Number</u>	<u>Title – Liberty Development Project</u>
1.	North Slope Area Developments
2.	Vicinity Map
3.	Proposed Mine Site Location
4.	Liberty Island Layout
5.	Island Cross Section A-A'
6.	Island Cross Section B-B'
7.	Island Slope Protection Cross Section and Detail
8.	Island Slope Protection Concrete Mat Layout
9.	Trench Section Shallow Area 0-foot to 8-foot
10.	Trench Section Intermediate/Deep Area 8-foot to 21-foot
11.	Detail of Gravel Bag Placement Over Pipeline
12.	Island Approach Cross Section
13.	Proposed Dredged Material Site Zones 1 & 2
14.	Dredged Material Disposal Site Zone 1 Bathymetry
15.	Landfall Valve Pad Layout
16.	Landfall Pad Cross Sections A & B
17.	Typical Onshore Transition Backfill Trench Section – Cross Sections C, D, and E
18.	Badami Tie-in Pad Plan View
19.	Tie-In Pad Cross Sections
20.	Island Layout with Construction Camp (Optional Configuration)
21.	Island Cross Section A-A' with Construction Camp
22.	Proposed Mine Site Development Plan
23.	Proposed Mine Site Development Typical Cross Sections
24.	Proposed Mine Site Rehabilitation Plan
25.	Proposed Mine Site Rehabilitation Plan, Typical Cross Section
26.	Island Construction Footprint



Alaskan Beaufort Sea



BP EXPLORATION (ALASKA) INC.

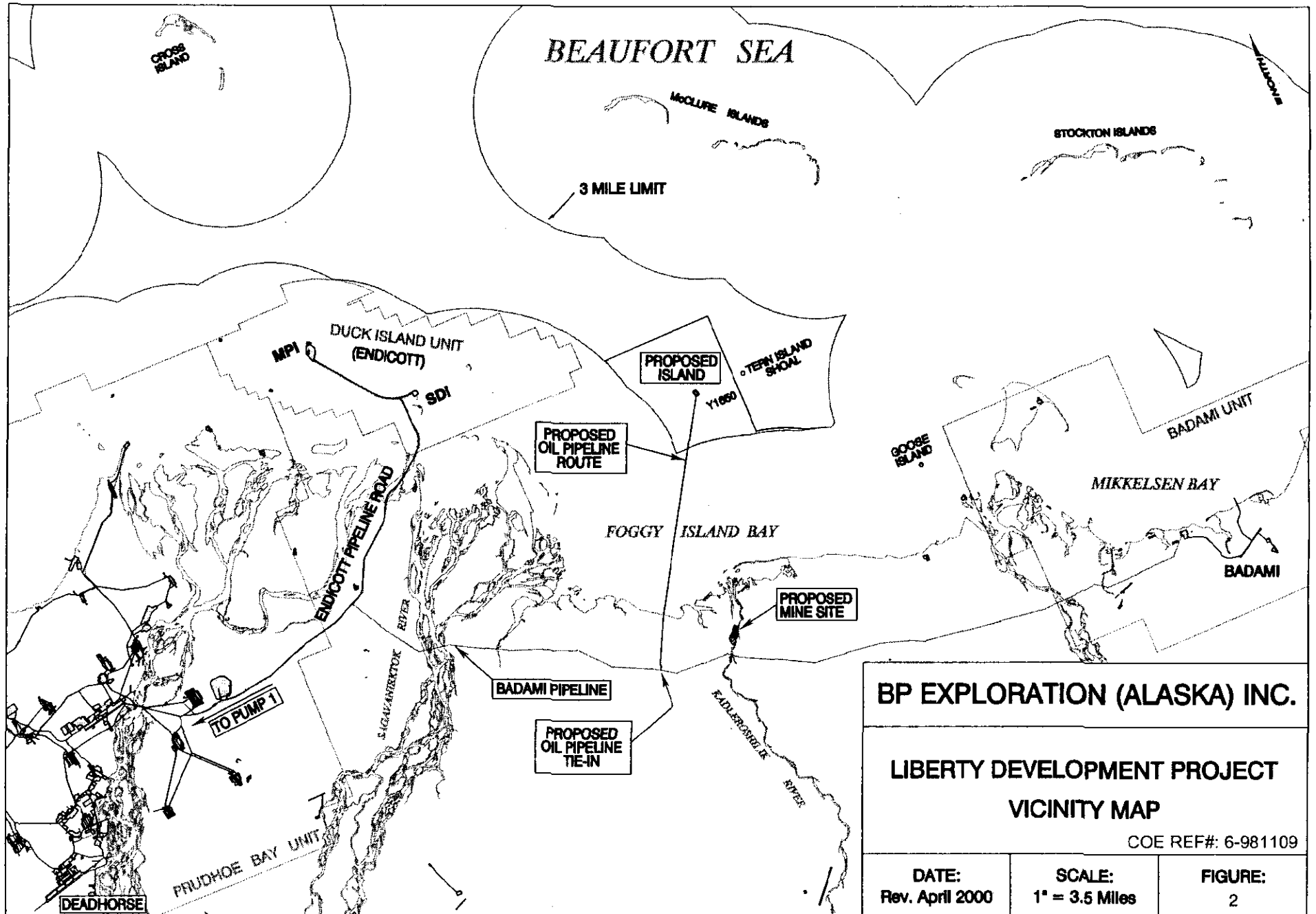
**LIBERTY DEVELOPMENT PROJECT
NORTH SLOPE AREA
DEVELOPMENTS**

DATE:
November 1998

SCALE:
N/A

FIGURE:
1

COE REF#: 6-981109



BP EXPLORATION (ALASKA) INC.

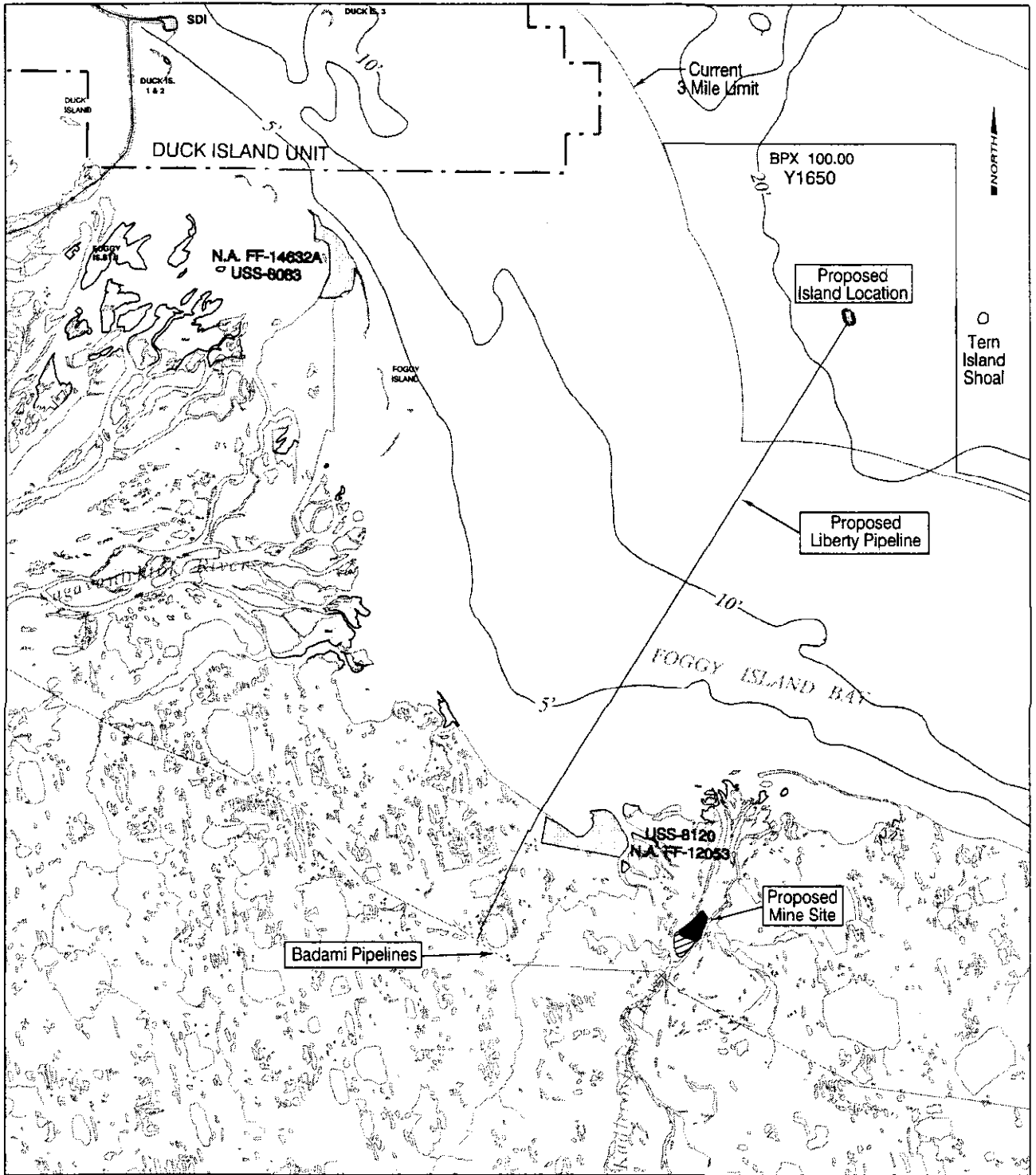
**LIBERTY DEVELOPMENT PROJECT
VICINITY MAP**

COE REF#: 6-981109

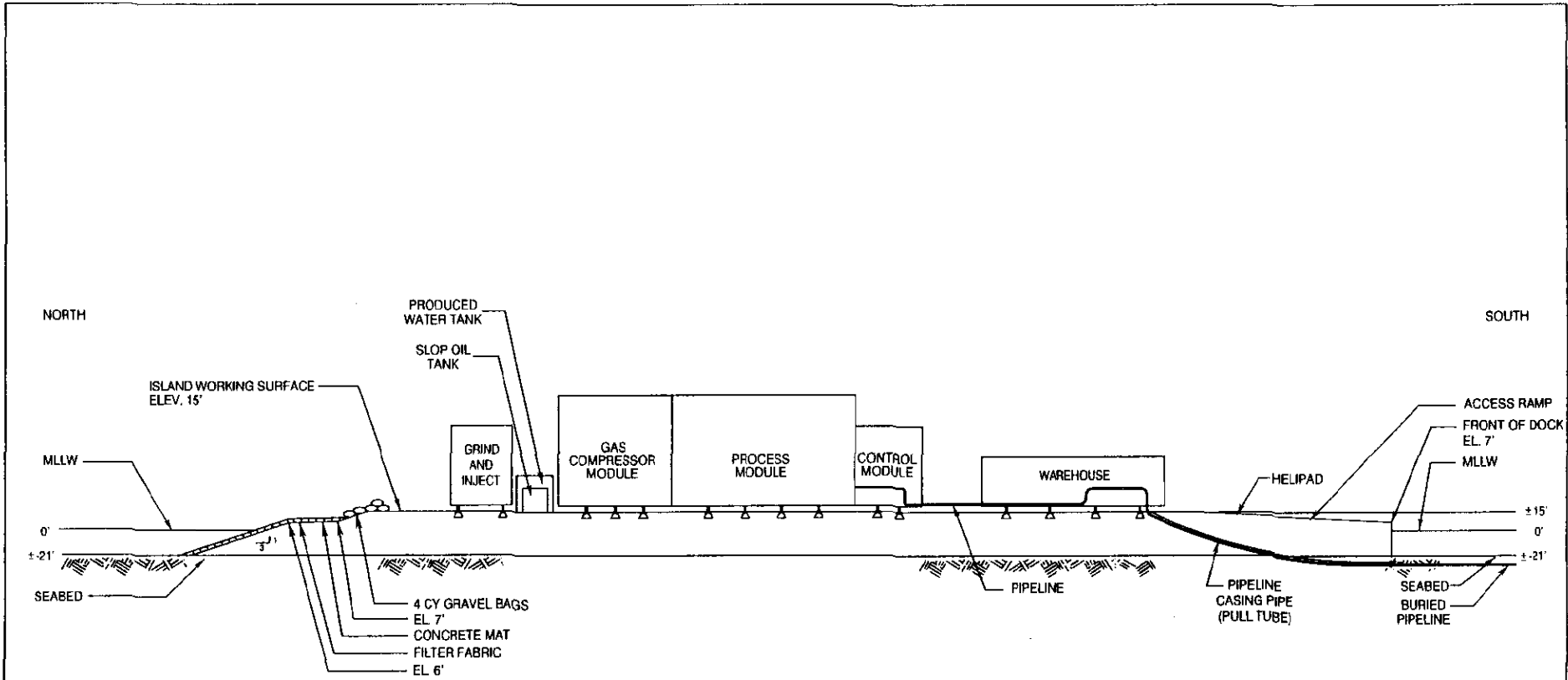
DATE:
Rev. April 2000

SCALE:
1" = 3.5 Miles

FIGURE:
2



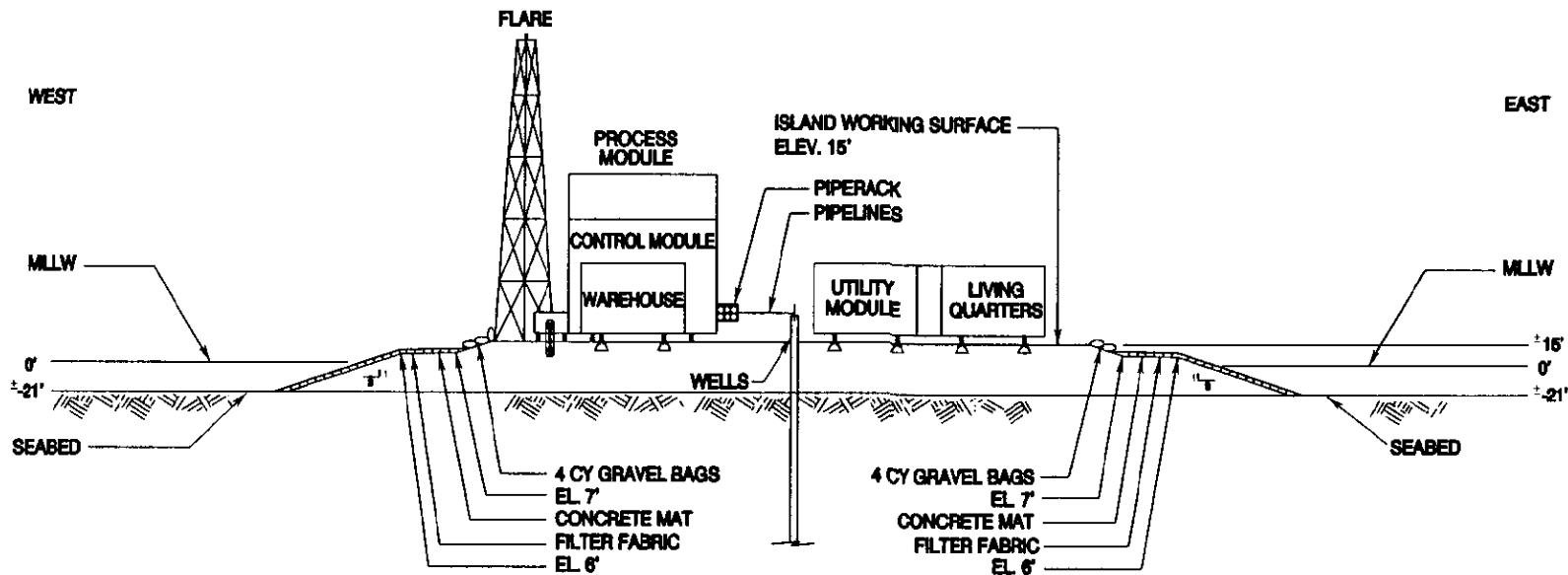
Proposed Pipelines	BP EXPLORATION (ALASKA) INC.	
	LIBERTY DEVELOPMENT PROJECT PROPOSED MINE SITE LOCATION	
	COE REF#: 6-981109	
DATE: Rev. April 2000	SCALE: 1" = 1.5 Mile	FIGURE: 3



CROSS - SECTION A-A'

BP EXPLORATION (ALASKA) INC.		
LIBERTY DEVELOPMENT PROJECT ISLAND CROSS SECTION A-A'		
COE REF#: 6-981109		
DATE: Rev. April 2000	SCALE: N/A	FIGURE: 5

ALL DIMENSIONS ARE APPROXIMATE



CROSS - SECTION B-B'

BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
ISLAND
CROSS SECTION B-B'

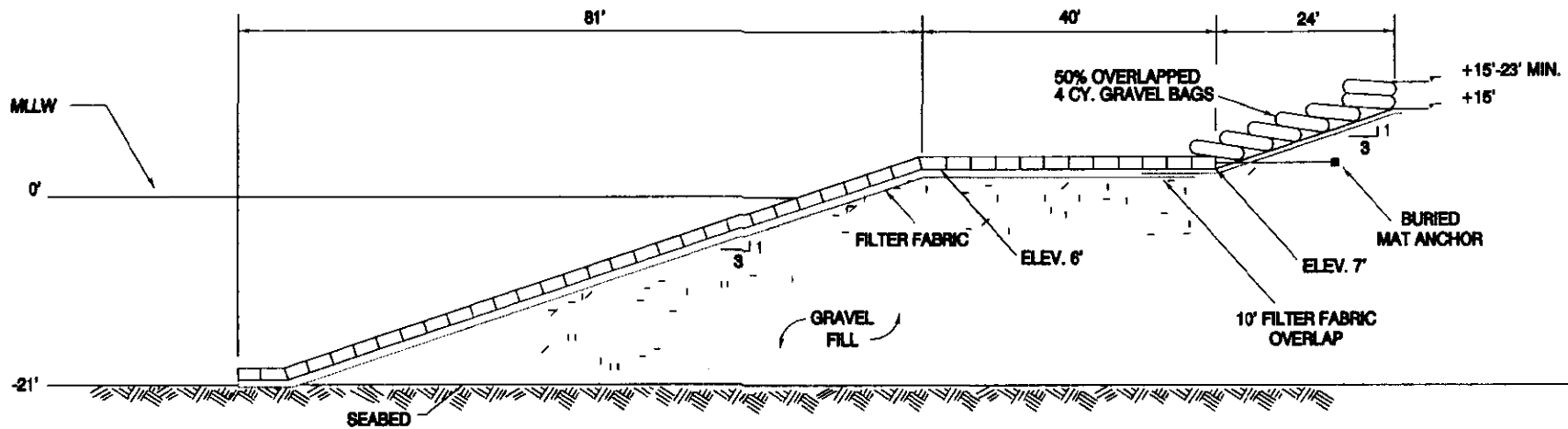
COE REF#: 6-981109

ALL DIMENSIONS ARE APPROXIMATE

DATE:
November 1998

SCALE:
N/A

FIGURE:
6



BP EXPLORATION (ALASKA) INC.

**LIBERTY DEVELOPMENT PROJECT
ISLAND SLOPE PROTECTION
CROSS SECTION AND DETAIL**

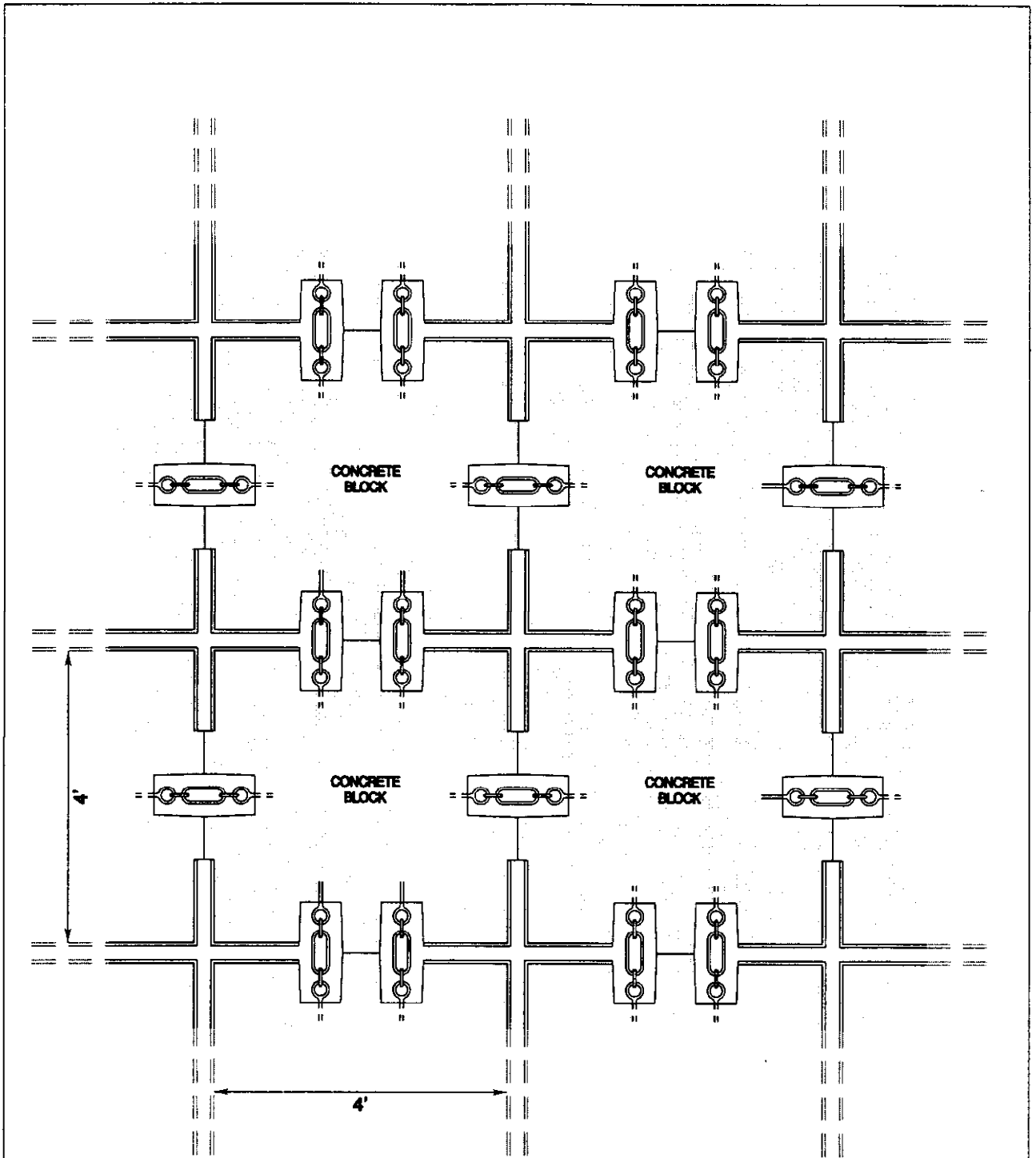
ALL DIMENSIONS ARE APPROXIMATE

COE REF#: 6-981109

DATE:
November 1998

SCALE:
N/A

FIGURE:
7



BP EXPLORATION (ALASKA) INC.

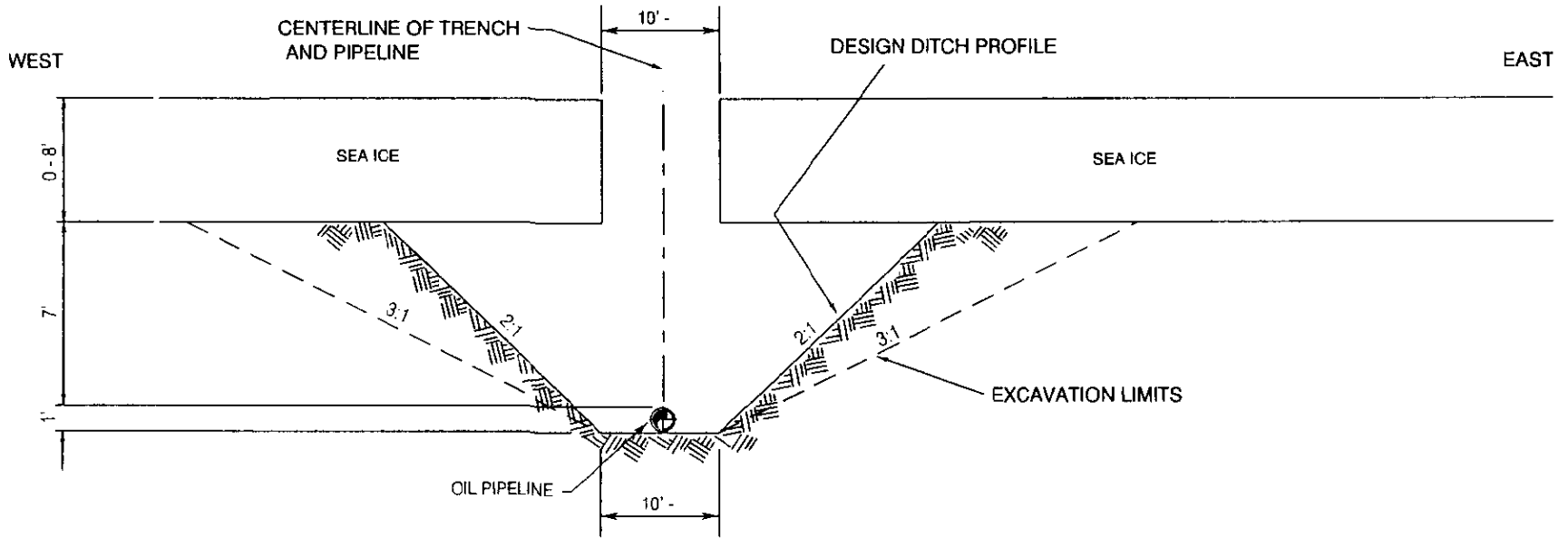
**LIBERTY DEVELOPMENT PROJECT
ISLAND SLOPE PROTECTION
CONCRETE MAT
LAYOUT**

DATE:
November 1998

SCALE:
N/A

FIGURE:
8

COE REF#: 6-981109



NOTES:

1. PIPELINE DEPTH OF COVER IS 7 FEET MINIMUM.
2. TRENCH SIDE SLOPES ARE VARIABLE, DEPENDING ON SOIL CONDITIONS.

ALL DIMENSIONS ARE APPROXIMATE

BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
TRENCH SECTION

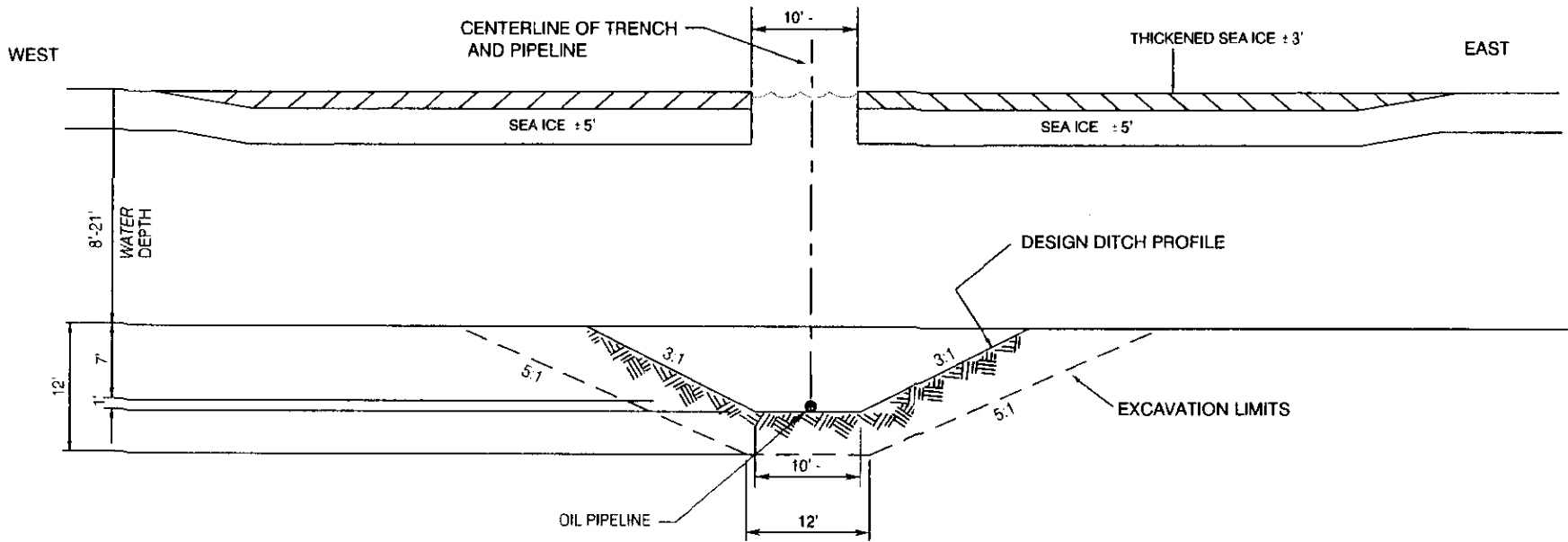
SHALLOW AREA 0' - 8'

COE REF#: 6-981109

DATE:
Rev April 2000

SCALE:
N/A

FIGURE:
9

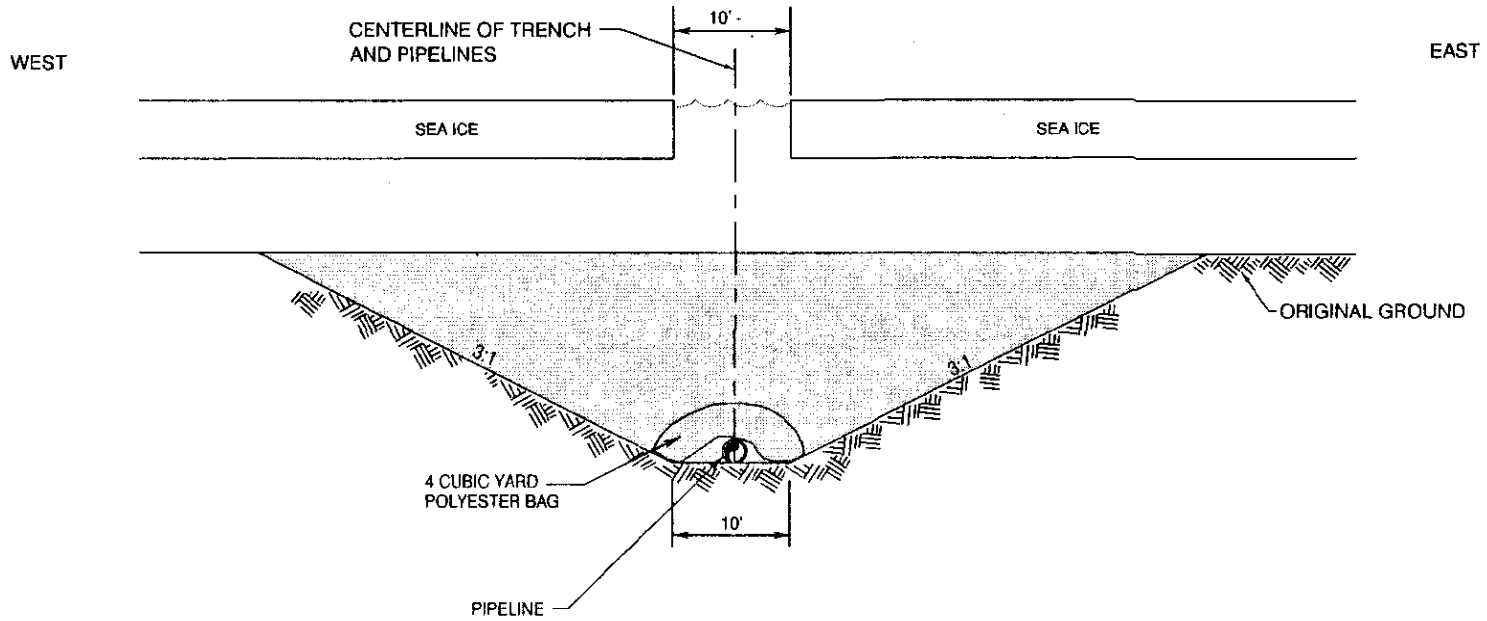


NOTES:

1. PIPELINE DEPTH OF COVER IS 7 FEET MINIMUM.
2. TRENCH SIDE SLOPES ARE VARIABLE, DEPENDING ON SOIL CONDITIONS.

ALL DIMENSIONS ARE APPROXIMATE

BP EXPLORATION (ALASKA) INC.		
LIBERTY DEVELOPMENT PROJECT DEEP TRENCH INTERMEDIATE / DEEP AREA 8' - 21' COE REF#: 6-981109		
DATE: Rev. April 2000	SCALE: N/A	FIGURE: 10

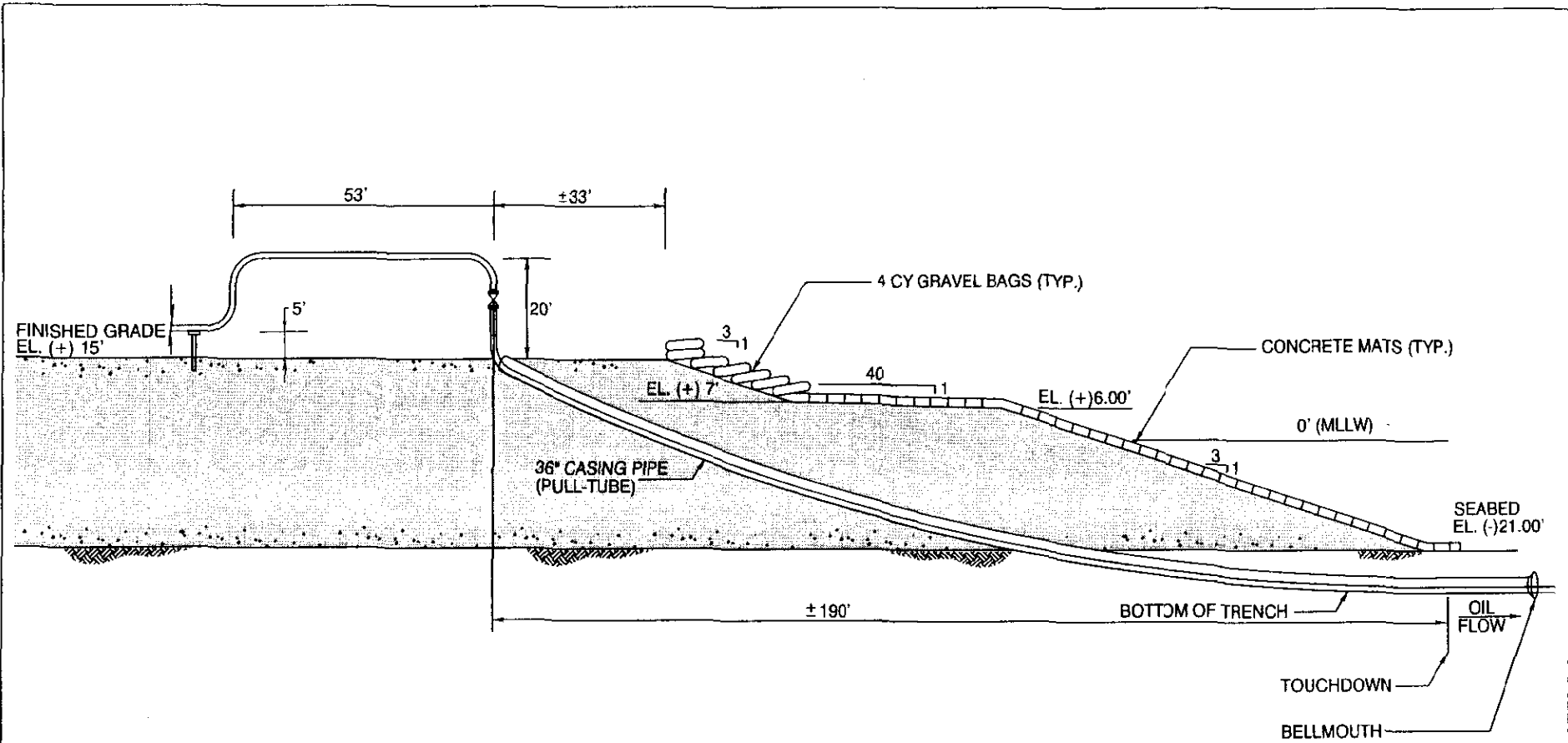


NOTES:

1. PIPELINE DEPTH OF COVER IS 7 FEET MINIMUM.
2. TRENCH SIDE SLOPES ARE VARIABLE, DEPENDING ON SOIL CONDITIONS.

ALL DIMENSIONS ARE APPROXIMATE

BP EXPLORATION (ALASKA) INC.		
LIBERTY DEVELOPMENT PROJECT DETAIL OF GRAVEL BAG PLACEMENT OVER PIPELINE		
COE REF#: 6-981109		
DATE: Rev. April 2000	SCALE: N/A	FIGURE: 11



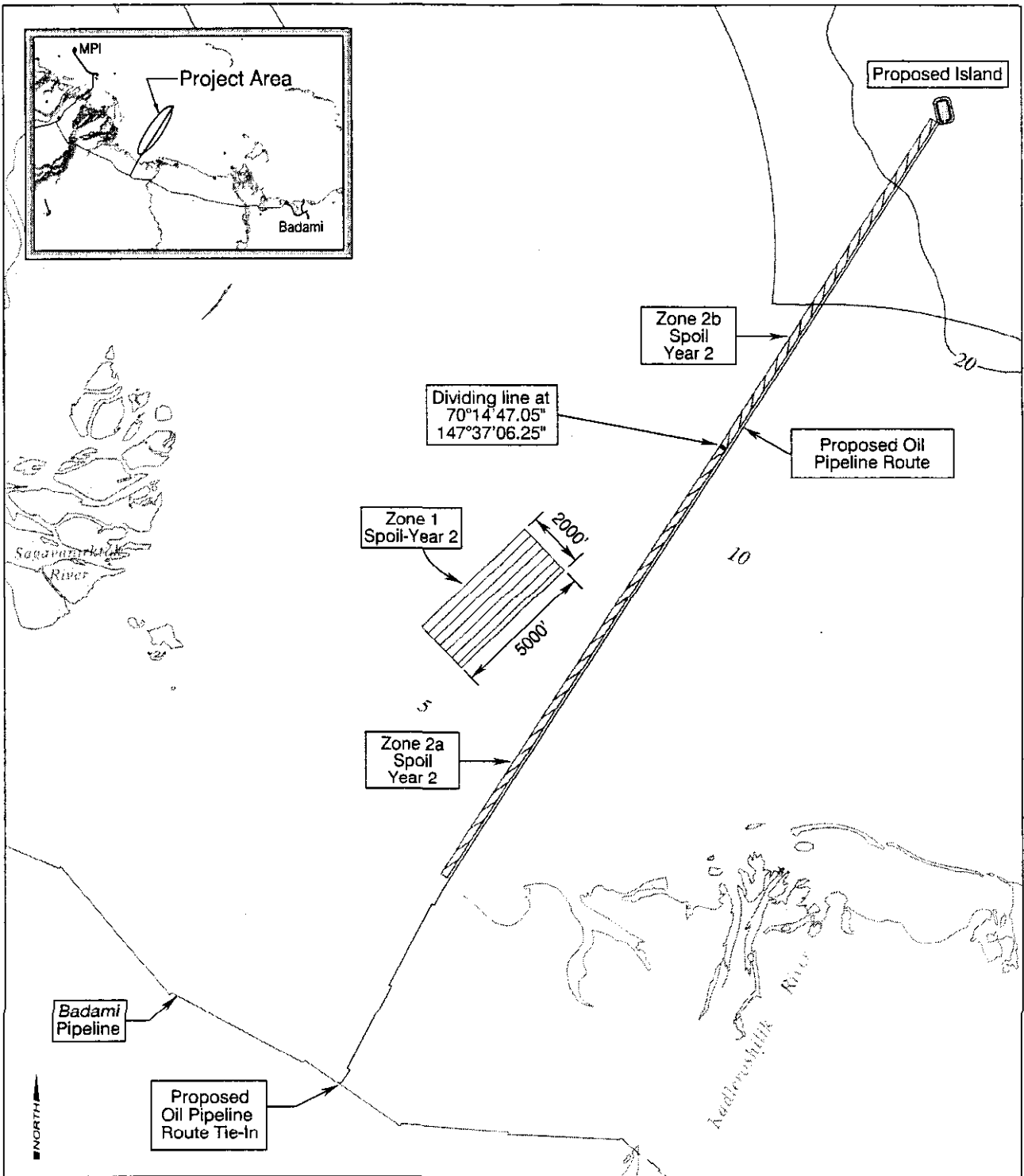
ALL DIMENSIONS ARE APPROXIMATE

BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
ISLAND APPROACH
CROSS - SECTION

COE REF#: 6-981109

DATE: Rev. April 2000	SCALE: NOT TO SCALE	FIGURE: 12
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BP EXPLORATION (ALASKA) INC.

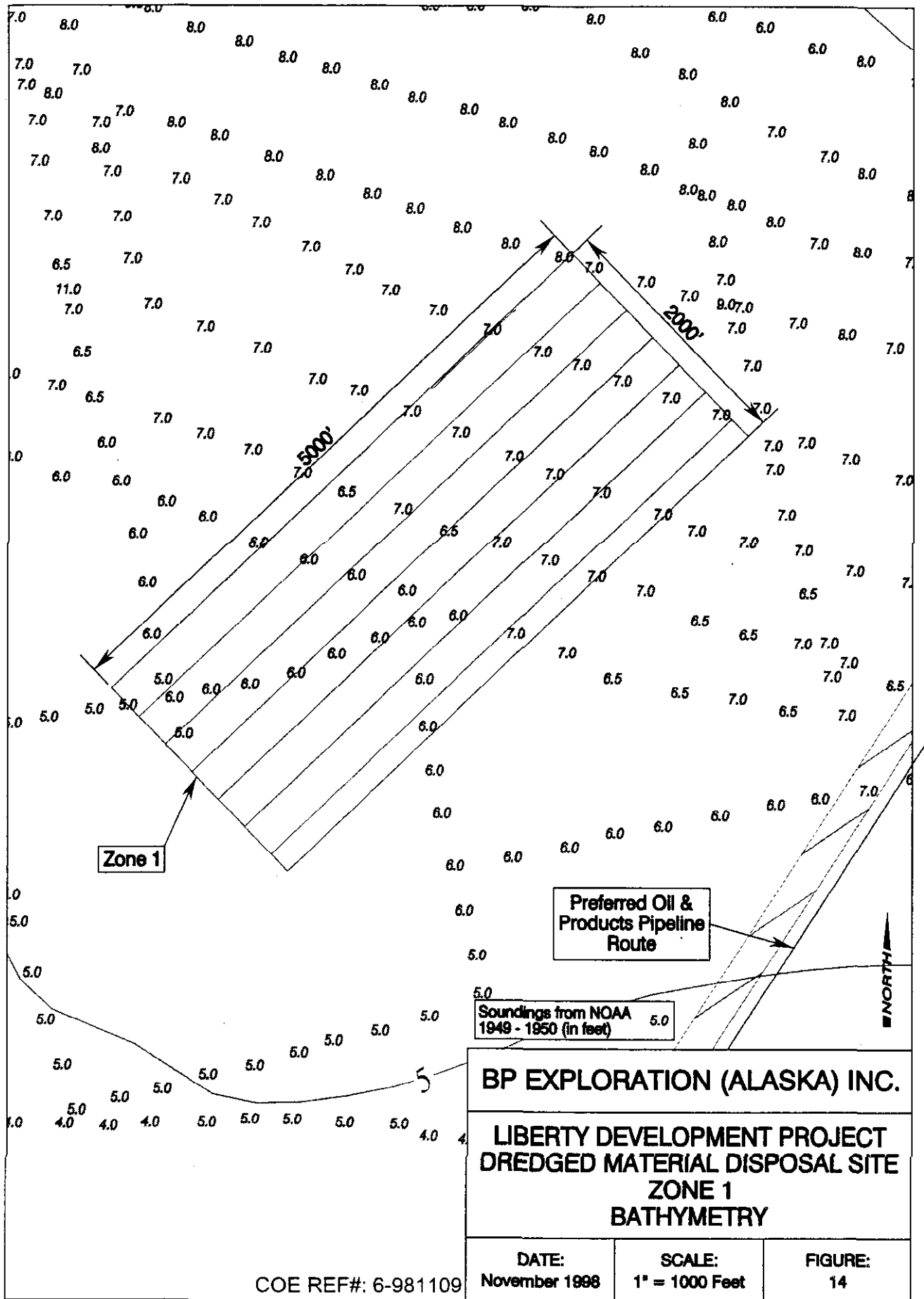
LIBERTY DEVELOPMENT PROJECT
 PROPOSED DREDGED MATERIAL
 SITES ZONES 1 & 2

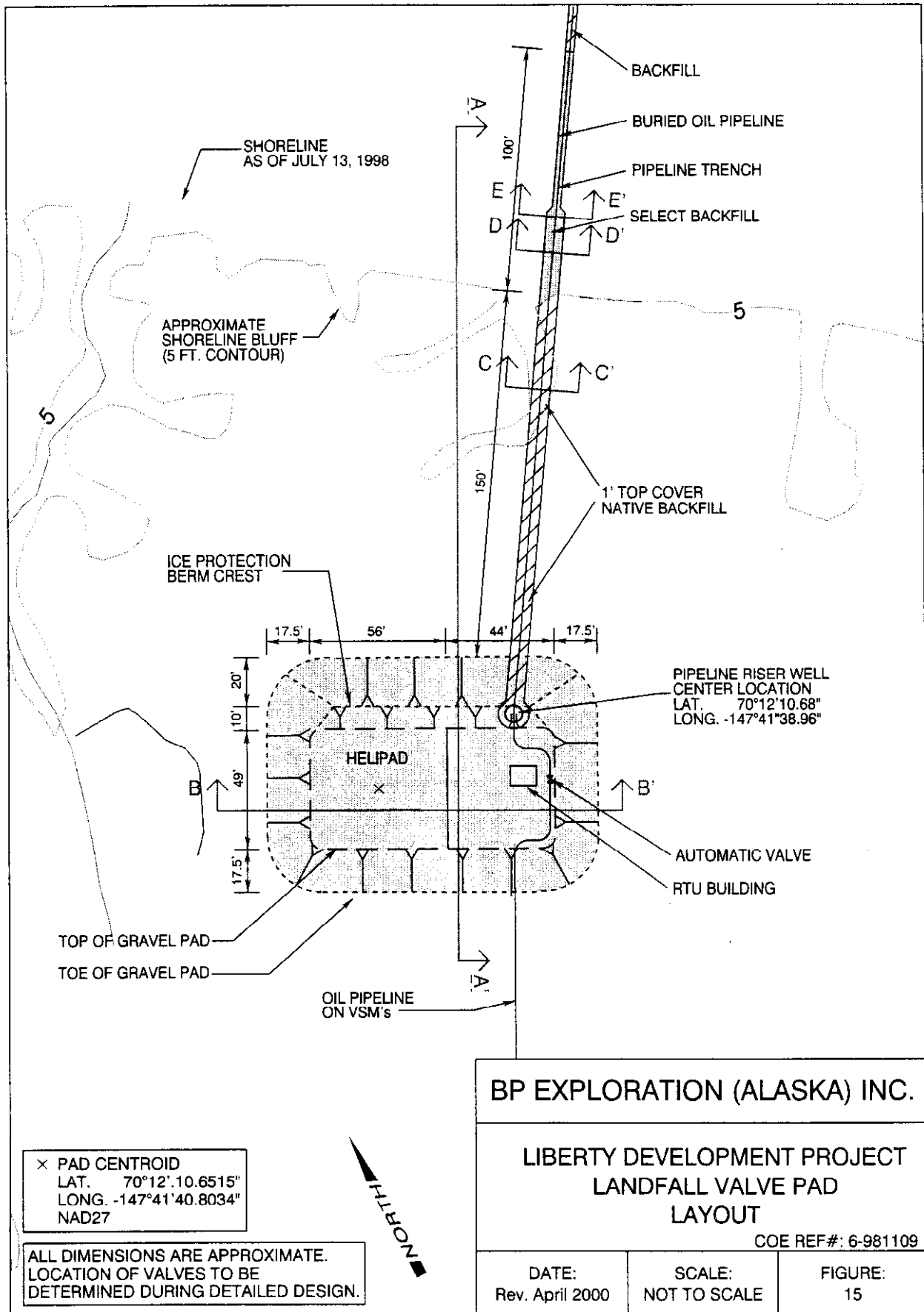
COE REF#: 6-981109

DATE:
 Rev. April 2000

SCALE:
 1" = 5,000 Feet

FIGURE:
 13





× PAD CENTROID
 LAT. 70°12'10.6515"
 LONG. -147°41'40.8034"
 NAD27

ALL DIMENSIONS ARE APPROXIMATE.
 LOCATION OF VALVES TO BE
 DETERMINED DURING DETAILED DESIGN.

BP EXPLORATION (ALASKA) INC.

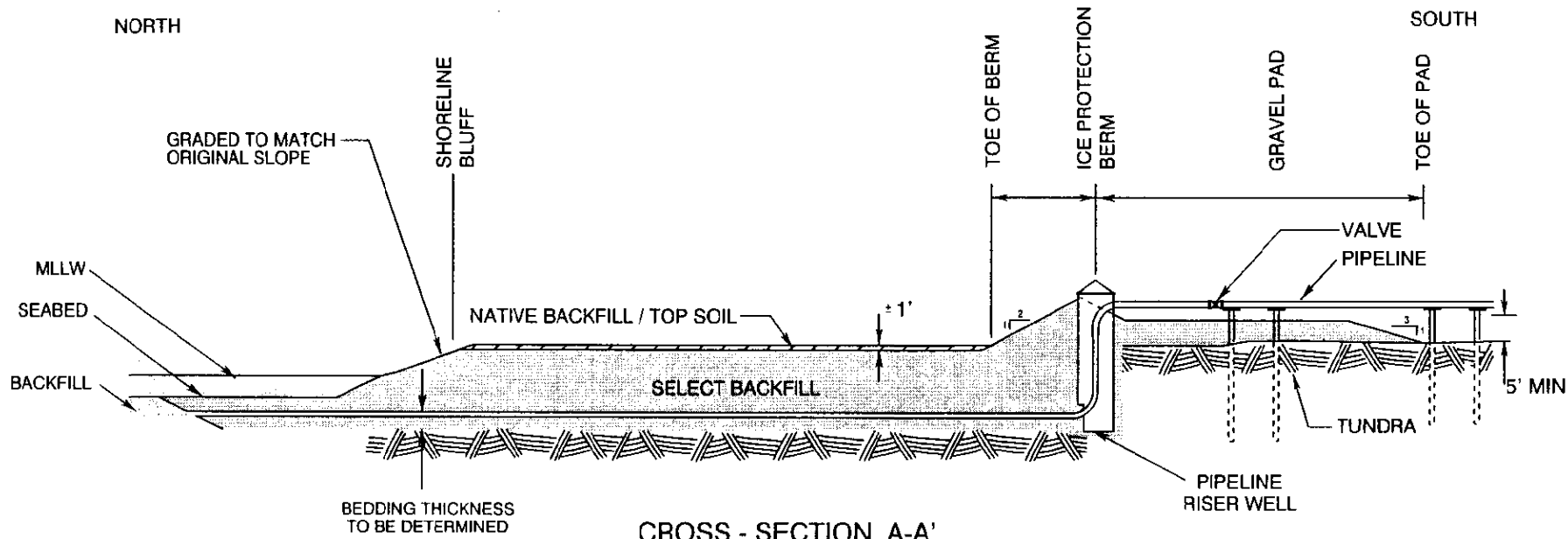
LIBERTY DEVELOPMENT PROJECT
 LANDFALL VALVE PAD
 LAYOUT

COE REF#: 6-981109

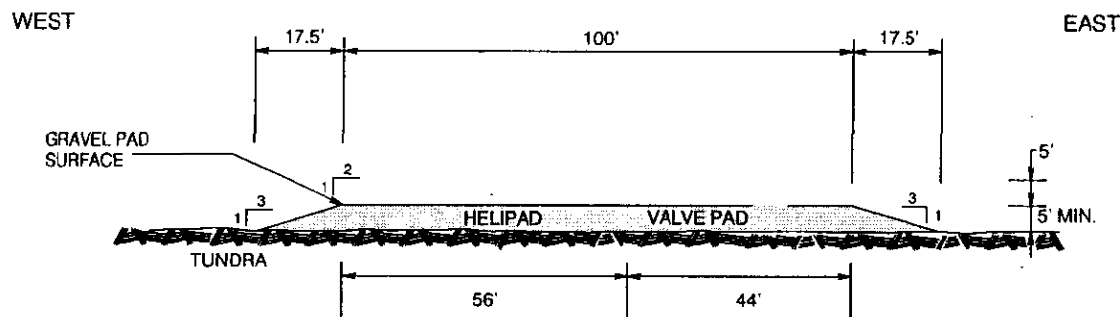
DATE:
 Rev. April 2000

SCALE:
 NOT TO SCALE

FIGURE:
 15



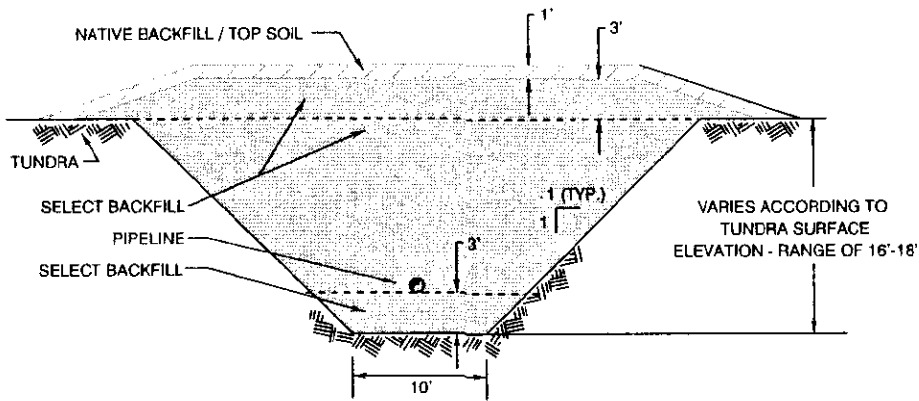
CROSS - SECTION A-A'



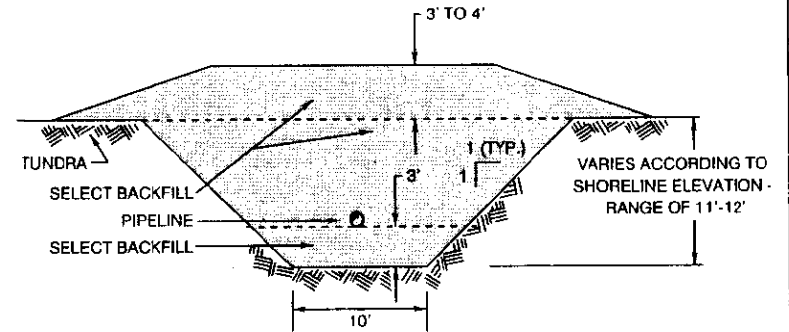
SECTION B - B'

ALL DIMENSIONS ARE APPROXIMATE.
 LOCATION OF VALVES TO BE
 DETERMINED DURING DETAILED DESIGN.

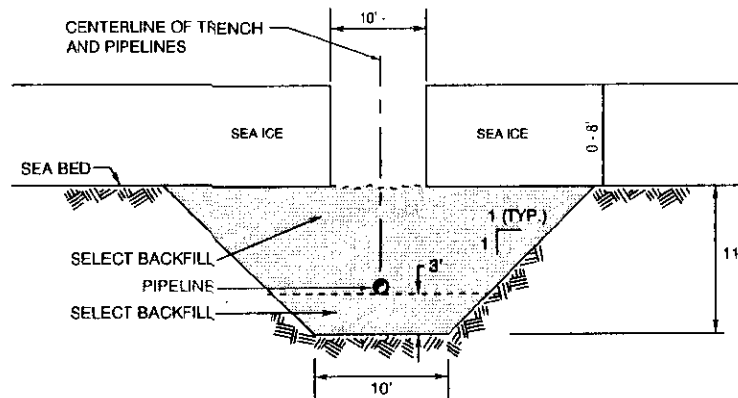
BP EXPLORATION (ALASKA) INC.		
LIBERTY DEVELOPMENT PROJECT LANDFALL VALVE PAD CROSS - SECTIONS		
COE REF#: 6-981109		
DATE: Rev. April 2000	SCALE: NOT TO SCALE	FIGURE: 16



CROSS - SECTION C-C'



CROSS - SECTION D-D'



CROSS - SECTION E-E'

ALL DIMENSIONS ARE APPROXIMATE

BP EXPLORATION (ALASKA) INC.

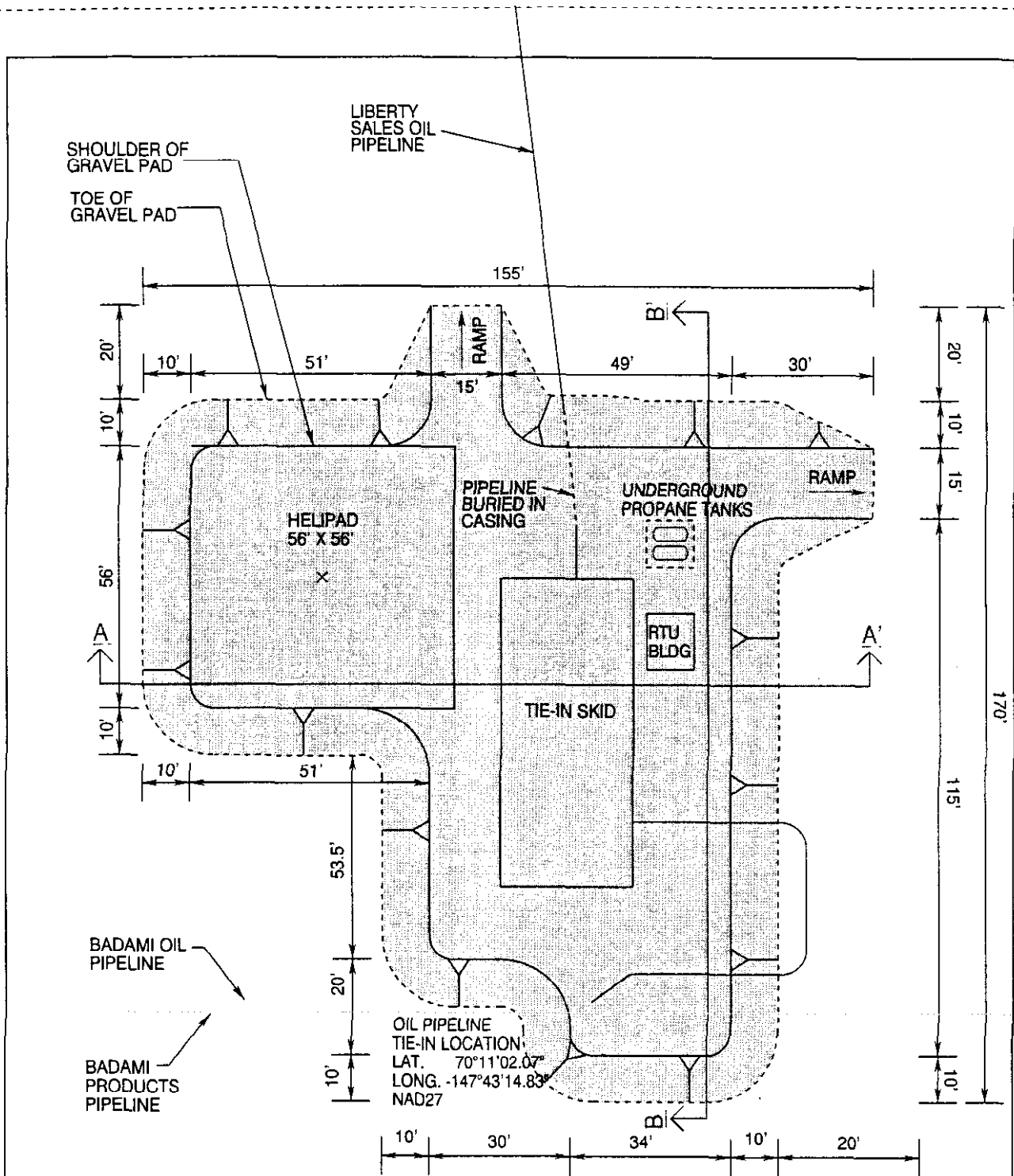
LIBERTY DEVELOPMENT PROJECT
 TYPICAL ONSHORE PIPELINE TRANSITION
 BACKFILLED TRENCH SECTION
 CROSS - SECTIONS C, D, E

COE REF#: 6-981109

DATE:
 Rev. April 2000

SCALE:
 N/A

FIGURE:
 17



× PAD CENTROID
 LAT. 70°11'03.1287"
 LONG. -147°43'14.8048"
 NAD27

ALL DIMENSIONS ARE APPROXIMATE.
 DIMENSIONS AND LOCATIONS OF
 FACILITIES TO BE DETERMINED
 DURING DETAILED DESIGN.



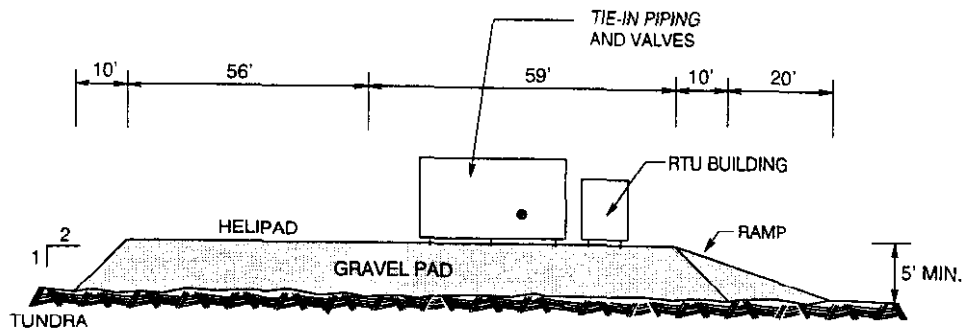
BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
BADAMI TIE-IN PAD
PLAN VIEW
 COE REF#: 6-981109

DATE: Rev. April 2000	SCALE: NOT TO SCALE	FIGURE: 18
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WEST

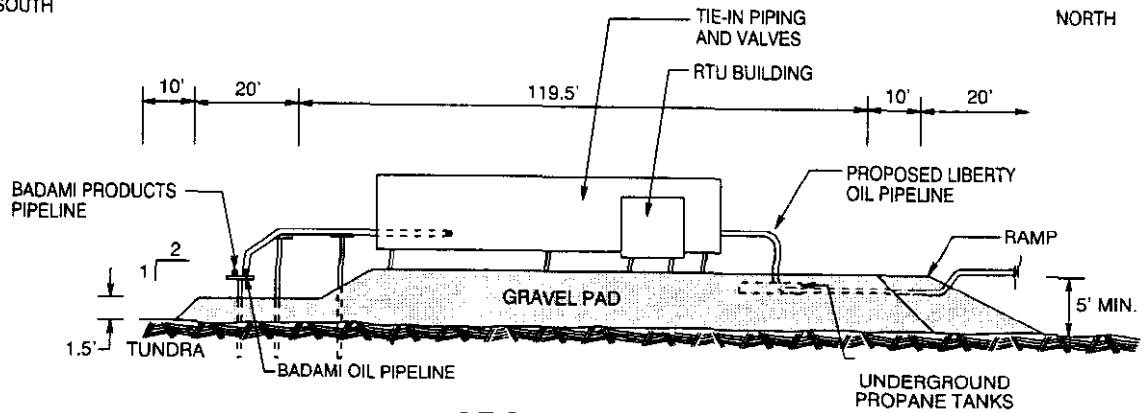
EAST



SECTION A - A'

SOUTH

NORTH



SECTION B - B'

BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
TIE-IN PAD
CROSS SECTIONS

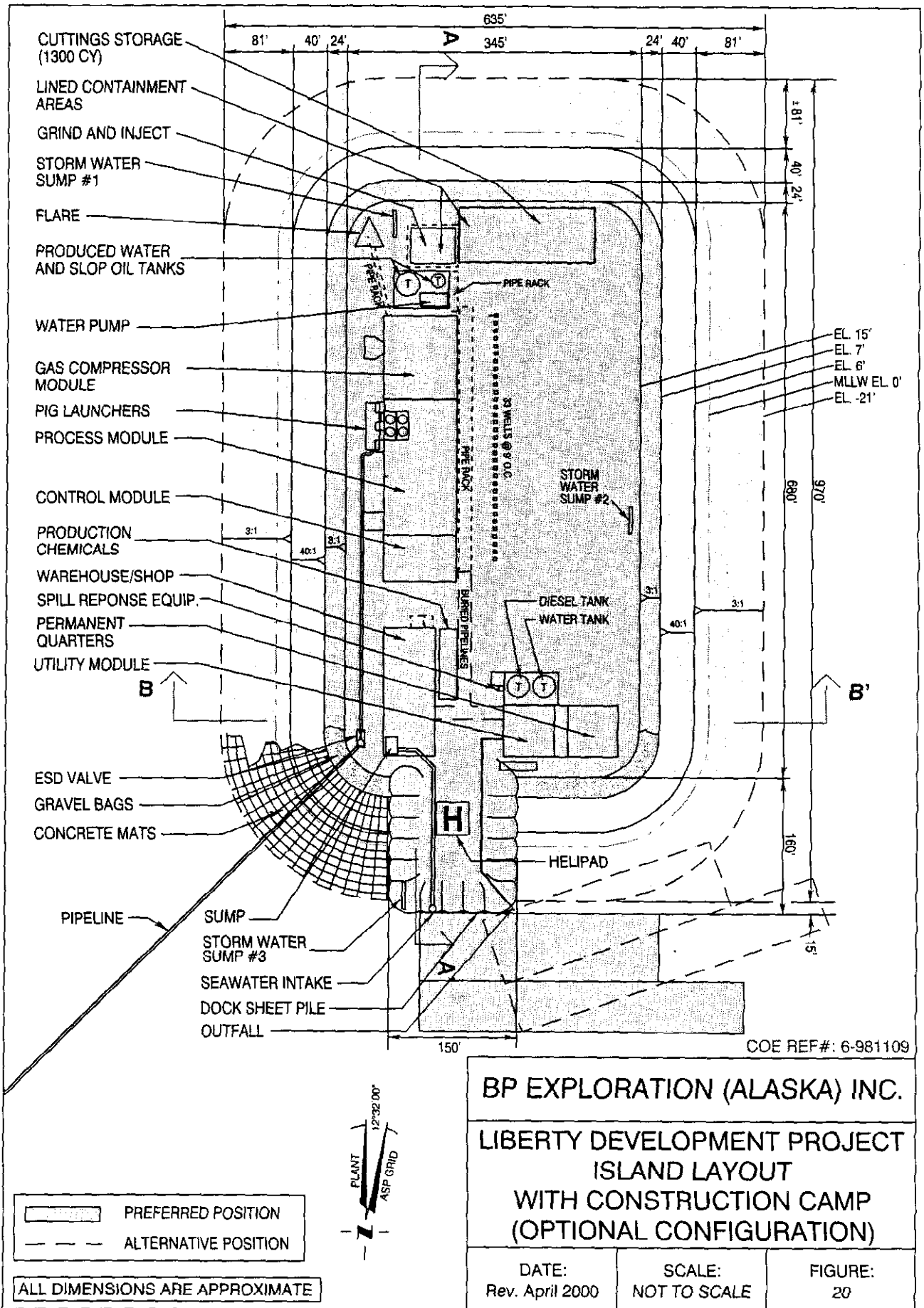
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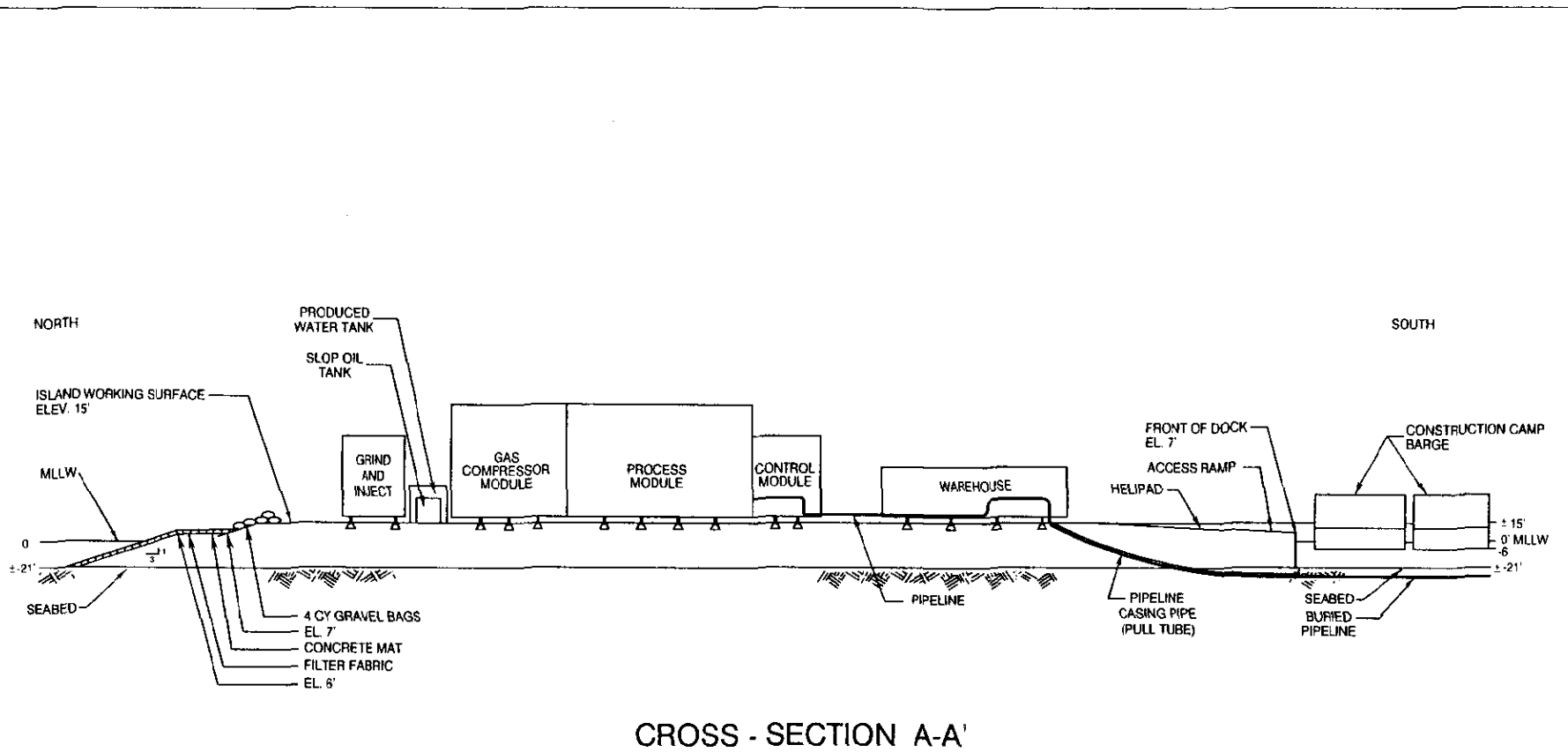
ALL DIMENSIONS ARE APPROXIMATE

DATE:
Rev. April 2000

SCALE:
NOT TO SCALE

FIGURE:
19





CROSS - SECTION A-A'

COE REF#: 6-981109

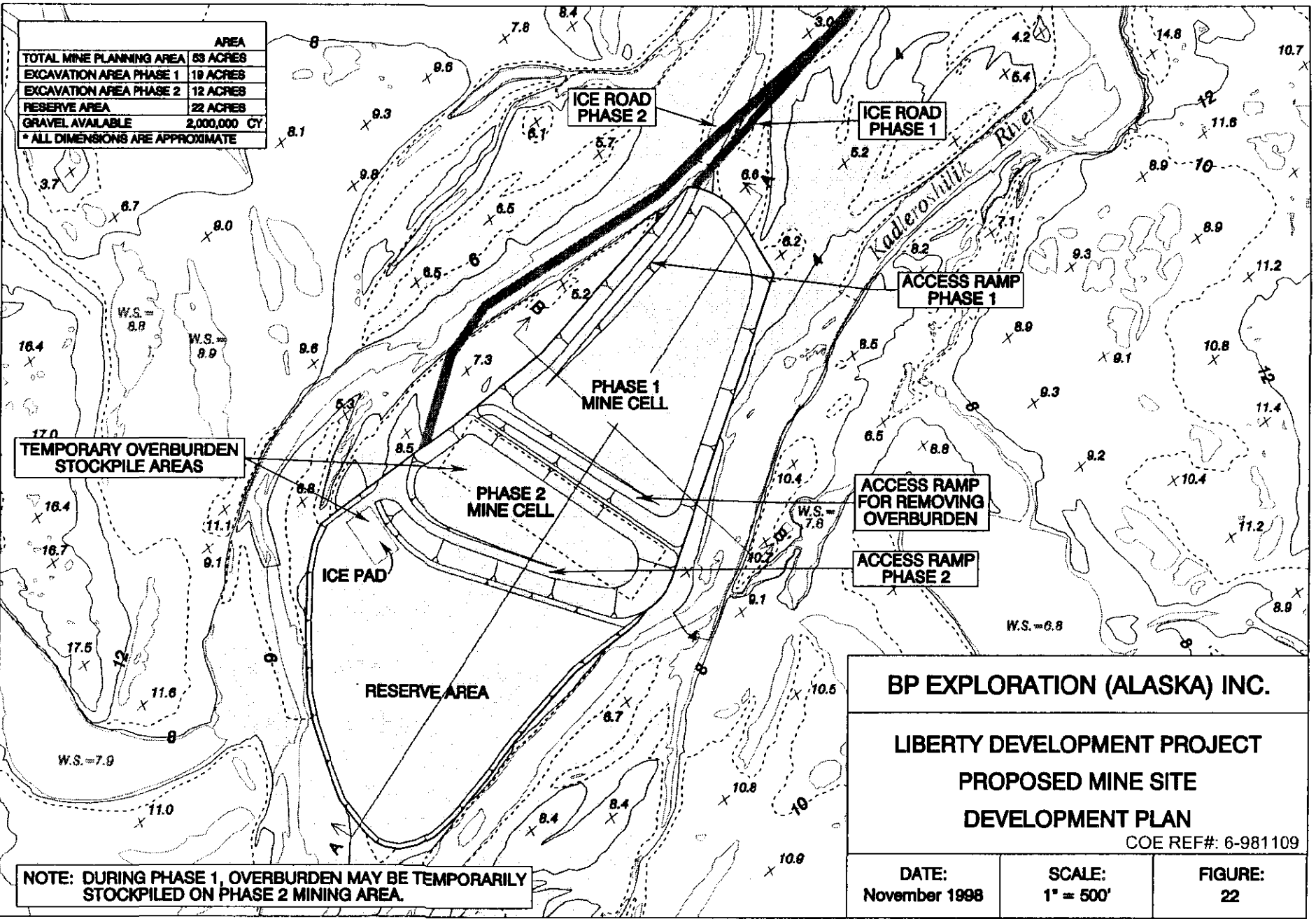
BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
ISLAND
CROSS SECTION A-A'
WITH CONSTRUCTION CAMP
(OPTIONAL CONFIGURATION)

ALL DIMENSIONS ARE APPROXIMATE

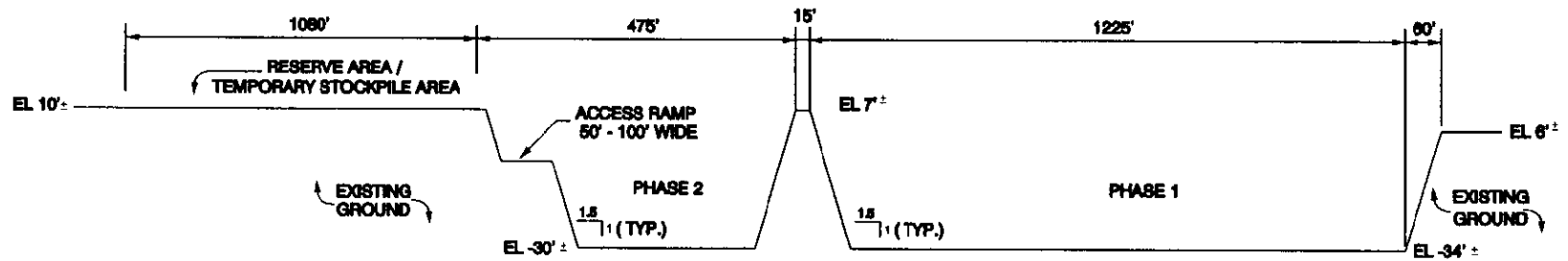
DATE: Rev. April 2000	SCALE: N/A	FIGURE: 21
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AREA	
TOTAL MINE PLANNING AREA	83 ACRES
EXCAVATION AREA PHASE 1	18 ACRES
EXCAVATION AREA PHASE 2	12 ACRES
RESERVE AREA	22 ACRES
GRAVEL AVAILABLE	2,000,000 CY
* ALL DIMENSIONS ARE APPROXIMATE	

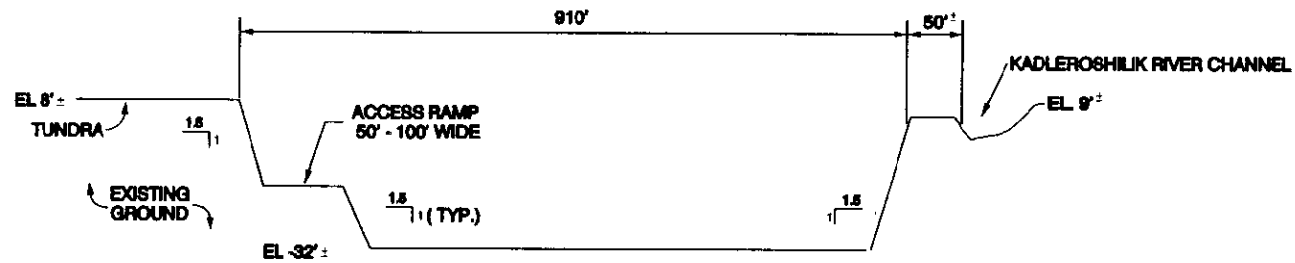


BP EXPLORATION (ALASKA) INC.		
LIBERTY DEVELOPMENT PROJECT PROPOSED MINE SITE DEVELOPMENT PLAN		
COE REF#: 6-981109		
DATE: November 1998	SCALE: 1" = 500'	FIGURE: 22

NOTE: DURING PHASE 1, OVERBURDEN MAY BE TEMPORARILY STOCKPILED ON PHASE 2 MINING AREA.



CROSS SECTION A-A'



CROSS SECTION B-B'

COE REF#: 6-981109

BP EXPLORATION (ALASKA) INC.

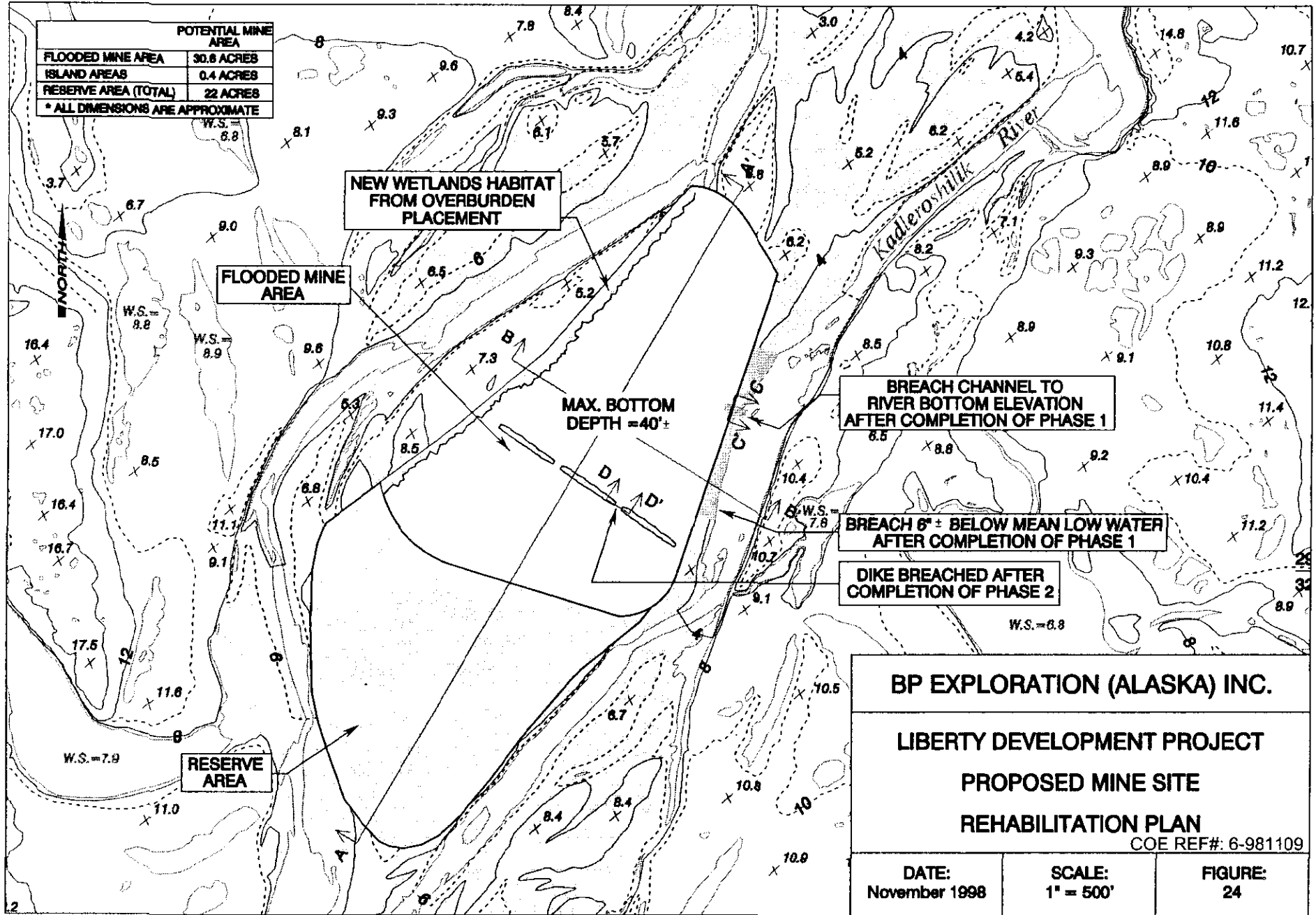
**LIBERTY DEVELOPMENT PROJECT
PROPOSED MINE SITE
MINING DEVELOPMENT
TYPICAL CROSS SECTIONS**

NOTE: ALL DIMENSIONS ARE APPROXIMATE

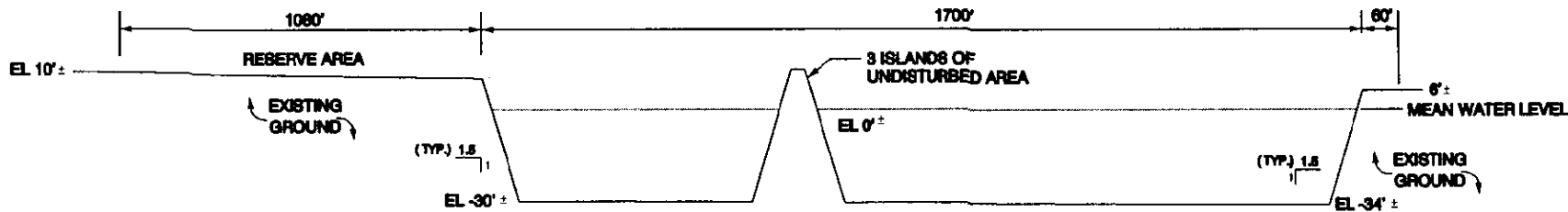
DATE:
November 1998

SCALE:
NOT TO SCALE

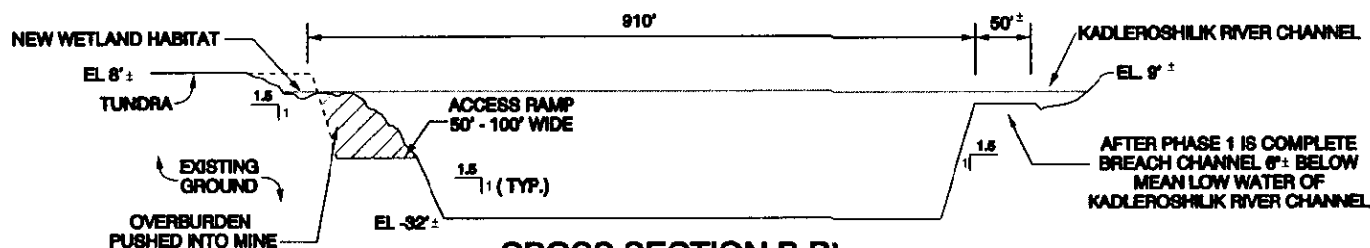
FIGURE:
23



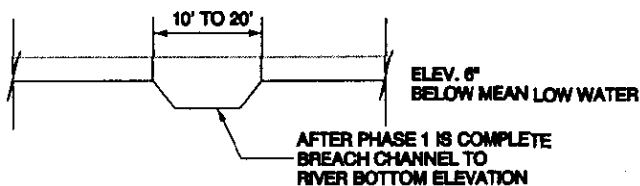
BP EXPLORATION (ALASKA) INC.		
LIBERTY DEVELOPMENT PROJECT		
PROPOSED MINE SITE		
REHABILITATION PLAN		
COE REF#: 6-981109		
DATE: November 1998	SCALE: 1" = 500'	FIGURE: 24



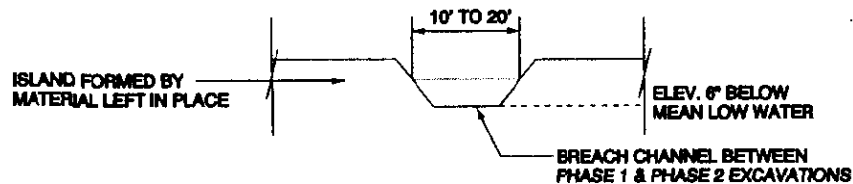
CROSS SECTION A-A'



CROSS SECTION B-B'



CROSS SECTION C-C'



CROSS SECTION D-D'

NOTE: ALL DIMENSIONS ARE APPROXIMATE

COE REF#: 6-981109

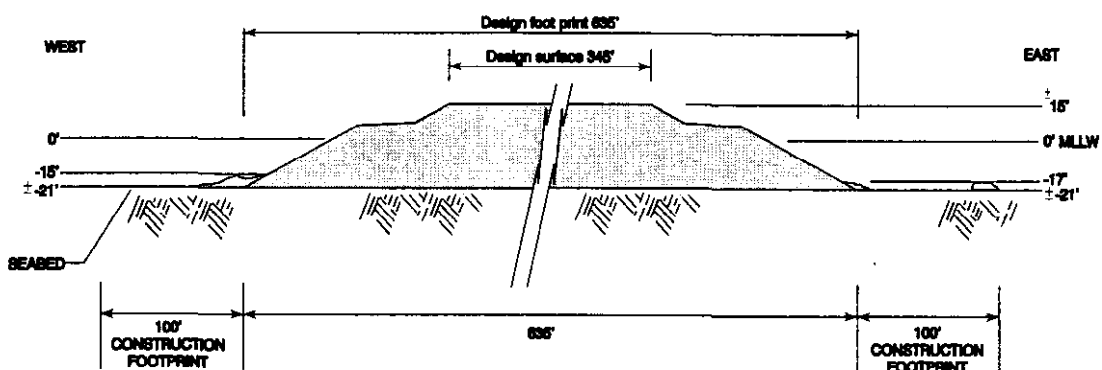
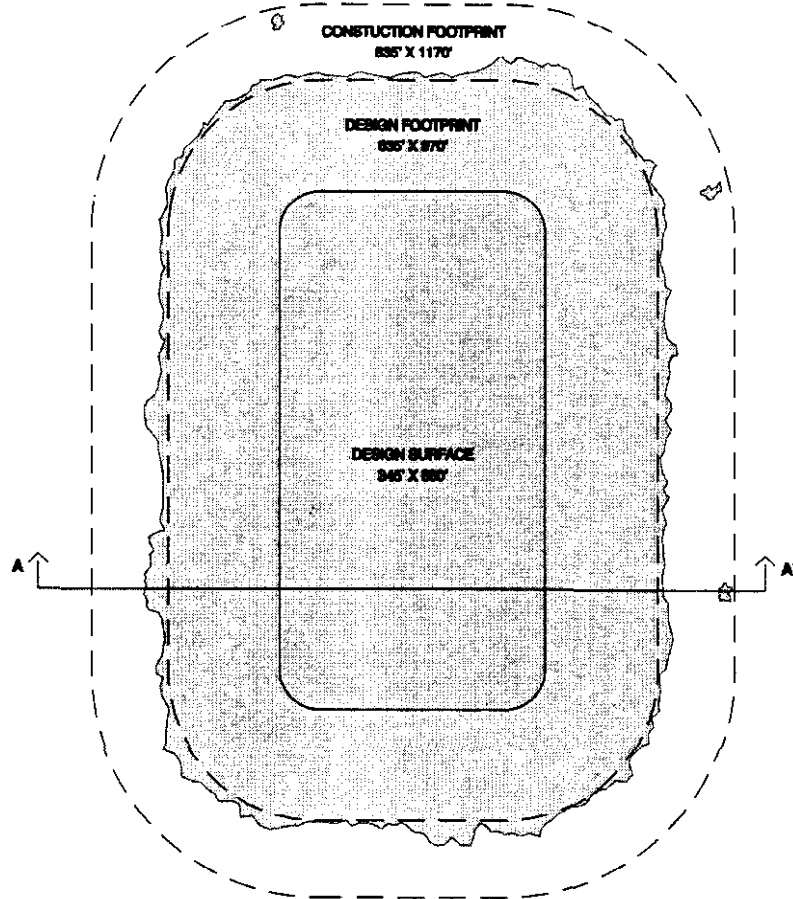
BP EXPLORATION (ALASKA) INC.

LIBERTY DEVELOPMENT PROJECT
 PROPOSED MINE SITE
 REHABILITATION PLAN
 TYPICAL CROSS SECTIONS

DATE:
November 1998

SCALE:
NOT TO SCALE

FIGURE:
25



CROSS - SECTION A-A'

Notes:

1. The construction footprint has been designated to accommodate the possibility that not all gravel will fall precisely within the design footprint. In the process of dropping material through the water column, some material may roll outside the design footprint. In addition, during the process of underwater regrading prior to installation of slope protection some material may be extended beyond the design footprint.
2. The most likely situation would be material extended from the toe of the island out 10-20 feet and up to 4 feet high.
3. A less likely circumstance would be material extending out 20-35 feet and up to 6 feet high.
4. There is a possibility that a large, frozen clump of material could roll down the slope and away from the island; this would likely be deposited within 100 feet of the design footprint. A typical clump size would be about 2 to 4 feet in diameter.

ALL DIMENSIONS ARE APPROXIMATE

BP EXPLORATION (ALASKA) INC.

**LIBERTY DEVELOPMENT PROJECT
ISLAND CONSTRUCTION FOOTPRINT**

COE REF#: 6-981109

DATE: December 1998	SCALE: NOT TO SCALE	FIGURE: 26
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Table 1
Temporary Water Use Permits

Approval Number	Issuance Date	Expiration Date
LAS 13290	June 30, 1996	May 16, 2001
LAS 13629	May 8, 1998	May 15, 2002
LAS 13630	December 5, 1997	December 28, 2002
LAS 14042	March 9, 1998	March 8, 2003
LAS 19405	October 16, 2000	October 16, 2005
LAS 20601	November 20, 1996	December 28, 2001

Temporary Water Use Permit LAS 18724 was originally identified as a water source to be used for the Liberty Development. This permit expired December 1999. BPXA chose to not renew this permit to help safeguard a developing fish habitat in the area.

Coastal Project Questionnaire and Certification Statement

Please answer all questions. To avoid a delay in processing, please call the department if you answer "yes" to any of the questions related to that department. Maps and plan drawings must be included with your packet. *An incomplete packet will be returned.*

■ APPLICANT INFORMATION

1. BP Exploration (Alaska), Inc.
 Name of Applicant
P.O. Box 196612
 Address
Anchorage AK 99519-6612
 City State Zip Code
(907) 564-5490 (907) 564-5020
 Daytime Phone Fax Number
wuesteks@bp.com
 E-mail Address

2. Karen S Wuestenfeld
 Agent/Responsible if other than applicant
 Address
 City State Zip Code
 Daytime Phone Fax Number
 E-mail Address

■ PROJECT INFORMATION

1. This activity is a New Project Modification or addition to an existing project Yes No
 If a modification, do you currently have any State, federal or local approvals related to this activity?...

Note: Approval means any form of authorization. If "yes," please list below:

Approval Type	Approval #	Issuance Date	Expiration Date
<u>Dept. of the Army Permit (Section 404)</u>	<u>M-800261 Beaufort Sea 111</u>	<u>Oct. 24, 1997</u>	<u>Oct. 31, 2007</u>
<u>(DIU mine site temporary laydown area)</u>			
<u>Temporary Water Use Permits</u>	<u>See Table 1</u>	<u>See Table 1</u>	<u>See Table 1</u>

2. If a modification, has this project ever been reviewed by the State of Alaska under the ACMP?.....
 Previous State I.D. Number: AK Previous Project Name: note: revises CPQ dated 11/17/98

■ PROJECT DESCRIPTION

1. Provide a brief description of your entire project and ALL associated facilities and land use conversions. Attach additional sheet(s) as needed.
 Liberty Development: Construction and operation of production island, facilities and oilfield on the OCS; a sales oil pipeline in federal waters and in state land and waters; gravel mine site; associated ice road/pad construction; use of existing water sources, use of existing permitted laydown area at DIU mine site.

Proposed start date for the project: December 2002 Proposed ending date for project: at termination

2. Attach the following: -- a detailed description of the project, all associated facilities, and land use conversions, etc. (Be specific, including all roads, caretaker facilities, waste disposal sites, etc.); -- a project timeline for completion of all major activities in the proposal; -- a site plan depicting property boundary with all proposed actions; -- other supporting documentation that would facilitate review of the project. Note: If the project is a modification, identify existing facilities as well as proposed changes on the site plan.

PROJECT LOCATION

1. Attach a copy of the topographical and vicinity map clearly indicating the location of the project. Please include a map title
2. The project is located in which region (see attached map): Northern Southcentral Southeast
 within or associated with the Trans-Alaska Pipeline corridor
3. Location of project (Include name of the nearest land feature or body of water. Foggy Island Bay in Alaska Beaufort Sea
 Township: 10 N Range: 18 E Section: 27 Meridian: Urmiat Latitude/Longitude: 70deg / -147d USGS Quad Map: Island Center 70°16'45.3" / -147°35'22.0"
4. Is the project located in a coastal district? Yes No If yes, identify: North Slope Borough
(Coastal districts are a municipality or borough, home rule or first class city, second class with planning, or coastal resource service area.)
Note: A coastal district is a participant in the State's consistency review process. It is possible for the State review to be adjusted to accommodate a local permitting public hearing. Early interaction with the district is important; Please contact the district representative listed on the attached contact list.
5. Identify the communities closest to your project location: Deadhorse, Nuiqsut, Kaktovik
6. The project is on: State land or water* Federal land Private Land
 Municipal Land Mental Health Trust land
**State land can be uplands, tidelands, or submerged lands to 3 miles offshore. See Question #1 in DNR section.*
 Contact the applicable landowner(s) to obtain necessary authorizations.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) APPROVALS

Yes No

- | | | |
|--|-------------------------------------|-------------------------------------|
| 1. Will a discharge of wastewater from industrial or commercial operations occur? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Will the discharge be connected to an already approved sewer system? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Will the project include a stormwater collection/discharge system? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Do you intend to construct, install, modify, or use any part of a wastewater (sewage or greywater) disposal system?..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| a) If so, will the discharge be 500 gallons per day or greater? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) If constructing domestic wastewater treatment or disposal system, will the system be located within fill material requiring COE permit? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If you answered yes to a) or b), answer the following:

- 1) What is the distance from the bottom of the system to the top of the subsurface water table? N/A
- 2) How far is any part of the wastewater disposal system from the nearest surface water? N/A
- 3) Is the surrounding area inundated with water at any time of the year?
- 4) How big is the fill area to be used for the absorption system? N/A

(Questions 1 and 2 will be used by DEC to determine whether separation distances are being met; Questions 3 and 4 relate to the required size of the fill if wetlands are involved.)

- | | | |
|--|--------------------------|-------------------------------------|
| 3. Do you expect to request a mixing zone for your proposed project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|-------------------------------------|
- (If your wastewater discharge will exceed Alaska water quality standards, you may apply for a mixing zone. If so, please contact DEC to discuss information required under 18 AAC 70.032.)*

- | | Yes | No |
|---|-------------------------------------|-------------------------------------|
| 4. a) Will your project result in the construction, operation, or closure of a facility for the disposal of solid waste?.....
<i>(Note: Solid waste means drilling wastes, household garbage, refuse, sludge, construction or demolition wastes, industrial solid waste, asbestos, and other discarded, abandoned, or unwanted solid or semi-solid material, whether or not subject to decomposition, originating from any source. Disposal means placement of solid waste on land.)</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Will your project result in the treatment of solid waste at the site?
<i>(Examples of treatment methods include, but are not limited to: incineration, open burning, baling, and composting.)</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Will your project result in the storage or transfer of solid waste at the site? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Will the project result in the storage of more than 50 tons of materials for reuse, recycling, or resource recovery? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Will any sewage sludge or biosolids be disposed of or land-applied to the site?
<i>(Sewage solids include wastes that have been removed from a wastewater treatment plant system, such as a septic tank, lagoon dredge, or wastewater treatment sludge that contain no free liquids. Biosolids are the solid, semi-solid, or liquid residues produced during the treatment of domestic sewage in a treatment works which are land applied for beneficial use.)</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Will your project require the application of oil, pesticides, and/or any other broadcast chemicals? ... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. a) Will you have a facility with industrial processes that are designed to process no less than five tons per hour and needs air pollution controls to comply with State emission standards?..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Will you have stationary or transportable fuel burning equipment, including flares, with a total fuel | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Will you have a facility with incinerators having a total charging capacity of no less than 1,000 pounds per hour?..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Will you have a facility with equipment or processes that are subject to Federal New Source Performance Standards or National Emission Standards for hazardous air pollutants? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Will you propose exhaust stack injection? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Will you have a facility with the potential to emit no less than 100 tons per year of any regulated | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| f) Will you have a facility with the potential to emit no less than 10 tons per year of any hazardous air contaminant or 25 tons per year of all hazardous air contaminants?..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Will you construct or add stationary or transportable fuel burning equipment of no less than 10 million Btu/hour in the City of Unalaska or the City of St. Paul? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Will you construct or modify in the Port of Anchorage a volatile liquid storage tank with a volume no less than 9,000 barrels, or a volatile liquid loading rack with a design throughput no less than 15 million gallons? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Will you be requesting operations or physical limits designed to reduce emissions from an existing facility in an air quality nonattainment area to offset an emission increase from another new or modified facility? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Will you be developing, constructing, installing, or altering a public water system? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. a) Will your project involve the operation of waterborne tank vessels or oil barges that carry crude or non-crude oil as bulk cargo, or the transfer of oil or other petroleum products to or from such a vessel or a pipeline system? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Will your project require or include onshore or offshore oil facilities with an effective aggregate storage capacity of greater than 5,000 barrels of crude oil or greater than 10,000 barrels of non-crude oil? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- c) Will you be operating facilities on the land or water for the exploration or production of hydrocarbons? Yes No

If you answered NO to ALL questions in this section, continue to next section.

If you answered YES to ANY of these questions, contact the DEC office nearest you for information and application forms. Please be advised that all new DEC permits and approvals require a 30-day public notice period. DEC Pesticide permits take effect no sooner than 40-days after the permit is issued.

Based on your discussion with DEC, please complete the following:

Types of project approvals or permits needed	Date application submitted
ODPCP	7/31/2000
USEPA Part 55 Air Permit	2/13/1998

9. Does your project qualify for a general permit for wastewater or solid waste? Yes No
Note: A general permit is an approval issued by DEC for certain types of routine activities.

If you answered YES to any questions in this section and are not applying for DEC permits, indicate reason:

- _____ (DEC contact) told me on _____ that no DEC approvals are required on this project because _____
- Other: solid waste to be back hauled to existing approved facilities. NPDES permit for OCS only

DEPARTMENT OF FISH AND GAME (DFG) APPROVALS

1. Will you be working in, removing water or material from, or placing anything in, a stream, river or lake? (This includes work or activities below the ordinary high water mark or on ice, in the active flood plain, on islands, in or on the face of the banks, or, for streams entering or flowing through tidelands, above the level of mean lower low tide.) Yes No
- Note: if the proposed project is located within a special flood hazard area, a floodplain development permit may be required. Contact the affected city or borough planning department for additional information and a floodplain determination.*
- Name of Waterbody: Kadleroshilik River

2. Will you do any of the following: Yes No

Please indicate below:

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Build a dam, river training structure, other instream impoundment, or weir <input checked="" type="checkbox"/> Use the water <input type="checkbox"/> Pump water into or out of stream or lake (including dry channels) <input checked="" type="checkbox"/> Divert or alter the natural stream channel <input type="checkbox"/> Change the water flow or the stream channel <input checked="" type="checkbox"/> Introduce silt, gravel, rock, petroleum products, debris, brush, trees, chemicals, or other organic/inorganic material, including waste of any type, into the water. <input type="checkbox"/> Alter, stabilize or restore the banks of a river, stream or lake (provide # of linear feet affected along the bank(s)) <input checked="" type="checkbox"/> Mine, dig in, or remove material, including woody debris, from the beds or banks of a waterbody. <input type="checkbox"/> Use an instream in-water structure not mentioned here. | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Use explosives in or near a waterbody <input type="checkbox"/> Build a bridge (including an ice bridge) <input checked="" type="checkbox"/> Use the stream, lake or waterbody as a road (even when frozen), or cross the stream with tracked or wheeled vehicles, log-dragging or excavation equipment (backhoes, bulldozers, etc.) <input type="checkbox"/> Install a culvert or other drainage structure <input type="checkbox"/> Construct, place, excavate, dispose or remove any material below the ordinary high water of a waterbody. <input type="checkbox"/> Construct a storm water discharge or drain into the waterbody <input type="checkbox"/> Place pilings or anchors <input type="checkbox"/> Construct a dock <input type="checkbox"/> Construct a utility line crossing <input type="checkbox"/> Maintain or repair an existing structure |
|--|---|

- | | Yes | No |
|--|--------------------------|-------------------------------------|
| 3. Is your project located in a designated State Game Refuge, Critical Habitat Area or State Game Sanctuary? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Does your project include the construction/operation of a salmon hatchery? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Does your project affect, or is it related to, a previously permitted salmon hatchery? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Does your project include the construction of an aquatic farm? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If you answered NO to ALL questions in this section, continue to next section.

If you answered YES to ANY questions under 1-3, contact the Regional or Area DFG Habitat and Restoration Division Office for information and application forms.

If you answered YES to ANY questions under 4-6, contact the DFG Commercial Fisheries Division headquarters for information and application forms.

Based on your discussion with DFG, please complete the following:

<u>Types of project approvals or permits needed</u>	<u>Date application submitted</u>
Title 16 Fish Habitat Permit	11/17/1998

If you answered YES to any questions in this section and are not applying for DFG permits, indicate reason:

- _____ (DFG contact) told me on _____ that no DFG approvals are required on this project because _____
- Other: _____

DEPARTMENT OF NATURAL RESOURCES (DNR) APPROVALS

- | | Yes | No |
|---|-------------------------------------|-------------------------------------|
| 1. Is the proposed project on State-owned land or water or will you need to cross State-owned land for access? ("Access" includes temporary access for construction purposes. Note: In addition to State-owned uplands, the State owns almost all land below the ordinary high water line for navigable streams, rivers and lakes, and below the mean high tide line seaward for three miles.)..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| a) Is this project for a commercial activity? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Is the proposed project on Alaska Mental Health Trust land (AMHT) or will you need to cross AMHT land? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <i>note: Alaska Mental Health Trust land is not considered State land for the purpose of ACMF reviews</i> | | |
| 3. Do you plan to dredge or otherwise excavate/remove materials on State-owned land?..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Location of dredging site if different than the project site <u>Kadleroshilik River mine site</u> | | |
| Township <u>10 N</u> Range <u>18 E</u> Section <u>29, 32</u> Meridian <u>Umial</u> USGS Quad Map: | | |
| 4. Do you plan to place fill or dredged material on State-owned land?..... | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Location of fill disposal site if different than the project sit <u>Kadleroshilik River mine site</u> | | |
| Township <u>10 N</u> Range <u>18 E</u> Section <u>29, 32</u> Meridian <u>Umial</u> USGS Quad Map: | | |
| 5. Do you plan to use any of the following State-owned resources: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Timber Will you be harvesting timber? Amount: | | |
| <input checked="" type="checkbox"/> Materials such as rock, sand or gravel, peat, soil, overburden, etc.: | | |

Which Material? gravel Amount: up to 2,000,000 cubic yards

Location of source if different than the project site:

Township _____ Range _____ Section _____ Meridian _____ USGS Quad Map: _____

- | | Yes | No |
|--|-------------------------------------|-------------------------------------|
| 6. Are you planning to divert, impound, withdraw, or use any fresh water, except from an existing public water system or roof rain catchment system (regardless of land ownership)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Amount (maximum daily, not average, in gallons per day) _____ | | |
| Source: <u>existing permitted water sources</u> Intended Use: <u>ice roads / pads</u> | | |
| If yes, will your project affect availability of water to anyone holding water rights to that water? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Will you be building or altering a dam (regardless of land ownership)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Do you plan to drill a geothermal well (regardless of land ownership)?..... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. At any one site (regardless of land ownership), do you plan to do any of the following? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Mine five or more acres over a year's time | | |
| <input checked="" type="checkbox"/> Mine 50,000 cubic yards or more of materials (rock, sand or gravel, soil, peat, overburden, etc.) over a year's time | | |
| <input type="checkbox"/> Have a cumulative unreclaimed mined area of five or more acres | | |
| If yes to any of the above, contact DNR about a reclamation plan. | | |
| If you plan to mine less than the acreage/amount state above and have a cumulative unreclaimed mined area of less than five acres, do you intend to file a voluntary reclamation plan for approval? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Will you be exploring for or extracting coal? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. a) Will you be exploring for or producing oil and gas? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Will you be conducting surface use activities on/within an oil and gas lease or unit? | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12. Will you be investigating, removing, or impacting historical or archaeological or paleontological resources (anything over 50 years old) on State-owned land? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 13. Is the proposed project located within a known geophysical hazard area? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <i>Note: 6AAC80.900(9) defines geophysical hazard as "those areas which present a threat to life or property from geophysical or geological hazards, including flooding, tsunami run-up, storm surge run-up, landslides, snowslides, faults, ice hazards, erosion, and littoral beach process." "known geophysical hazard area" means any area identified in a report or map published by a federal, state, or local agency, or by a geological or engineering consulting firm, or generally known by local knowledge, as having known or potential hazards from geologic, seismic, or hydrologic processes.</i> | | |
| 14. Is the proposed project located in a unit of the Alaska State Park System? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If you answered NO to ALL questions in this section, continue to Federal Approvals section.

If you answered YES to ANY questions in this section, contact DNR for information.

Based on your discussion with DFG, please complete the following:

<u>Types of project approvals or permits needed</u>	<u>Date application submitted</u>
<u>Land Use Permit</u>	<u>11/17/2998</u>
<u>Gravel Material Sale</u>	<u>11/17/1998</u>

If you answered YES to any questions in this section and are not applying for DNR permits, indicate reason:

- _____ (DNR contact) told me on _____ that no DNR approvals are required on this project because _____
- Other: Oil production activities are located on the OCS _____

FEDERAL APPROVALS

Yes No

U.S. Army Corps of Engineers (COE)

1. Will you be dredging or placing structures or fills in any of the following:
 tidal (ocean) waters? streams? lakes? wetlands*?
- If yes, have you applied for a COE permit?..... *File No. 6-9B109, Foggy Island Bay*
- Date of submittal 12/14/1998

(Note: Your application for this activity to the COE also serves as application for DEC Water Quality Certification.)

**If you are not certain whether your proposed project is in a wetlands (wetlands include muskegs), contact the COE, Regulatory Branch at (907) 753-2720 for a wetlands determination (outside the Anchorage area call toll free 1-800-478-2712).*

Bureau of Land Management (BLM)

2. Is the proposed project located on BLM land, or will you need to cross BLM land for access?.....
- If yes, have you applied for a BLM permit or approval?.....
- Date of submittal: _____

U.S. Coast Guard (USCG)

3. a) Will you be constructing a bridge or causeway over tidal (ocean) waters, or navigable rivers, streams or lakes?
- b) Does your project involve building an access to an island?
- c) Will you be siting, constructing, or operating a deepwater port?
- If yes, have you applied for a USCG permit?.....
- Date of submittal: _____

U.S. Environmental Protection Agency (EPA)

4. a) Will the proposed project have a discharge to any waters?
- b) Will you be disposing of sewage sludge (contact EPA at 206-553-1941)?
- If you answered yes to a) or b), have you applied for an EPA National Pollution Discharge Elimination System (NPDES) permit? *File No. AK-005914-7*
- Date of submittal: 12/3/1998
- (Note: For information regarding the need for an NPDES permit, contact EPA at (800) 424-4372.)*
- c) Will construction of your project expose 5 or more acres of soil?
- (This applies to the total amount of land disturbed, even if disturbance is distributed over more than one season, and also applies to areas that are part of a larger common plan of development or sale..)*
- d) Is your project an industrial facility which will have stormwater discharge which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant?.....
- If you answered yes to c) or d), your project may require an NPDES Stormwater permit. Contact EPA at 206-553-8399.

Federal Aviation Administration (FAA)

5. a) Is your project located within five miles of any public airport?
- b) Will you have a waste discharge that is likely to decay within 5,000 feet of a public airport? ...
- If yes, please contact the Airports Division of the FAA at (907) 271-5444.

Federal Energy Regulatory Commission (FERC)

6. a) Does the project include any of the following:
 1) a non-federal hydroelectric project on any navigable body of water

- | | | |
|--|--------------------------|-------------------------------------|
| | Yes | No |
| 2) a location on federal land (including transmission lines) | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3) utilization of surplus water from any federal government dam | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project include construction and operation, or abandonment of natural gas pipeline facilities under sections (b) and (c) of the Federal Power Act (FPA)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project include construction for physical interconnection of electric transmission facilities under section 202 (b) of the FPA? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| If you answered yes to any questions under number 6, have you applied for a permit from FERC? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Date of submittal: _____

(Note: For information, contact FERC, Office of Hydropower Licensing (202) 219-2668; Office of Pipeline Regulation (202) 208-0700; Office of Electric Power Regulation (202) 208-1200.)

U.S. Forest Service (USFS)

- | | | |
|--|--------------------------|-------------------------------------|
| 7. a) Does the proposed project involve construction on USFS land? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the proposed project involve the crossing of USFS land with a water line? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| If the answer to either question is yes, have you applied for a USFS permit or approval? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Date of submittal: _____

- | | | |
|---|-------------------------------------|--------------------------|
| 8. a) Have you applied for any other federal permits or authorizations? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|-------------------------------------|--------------------------|

AGENCY	APPROVAL TYPE	DATE SUBMITTED
USEPA	Part 55 Air Permit	2/13/1998
MMS	Development and Production Plan	2/17/1996

Please be advised that the CPQ identifies permits subject to a consistency review. You may need additional permits from other agencies or the affected city and/or borough government to proceed with your activity.

Certification Statement

The information contained herein is true and complete to the best of my knowledge. I certify that the proposed activity complies with, and will be conducted in a manner consistent with, the Alaska Coastal Management Program.

[Signature]
8 Dec 2000

Signature of Applicant or Agent Date

Note: Federal agencies conducting an activity that will affect the coastal zone are required to submit a federal consistency determination, per 15 CFR 930, Subpart C, rather than this certification statement. DFG has developed a guide to assist federal agencies with this requirement. Contact DFG to obtain a copy.

This certification statement will not be complete until all required State and federal authorization requests have been submitted to the appropriate agencies.

■ To complete your packet, please attach your State permit applications and copies of your federal permit applications to this questionnaire.