



March 7, 2019

Mr. Sandy Sears  
Regulations and Permitting Advisor  
BP Exploration (Alaska) Inc.  
P.O. Box 196612  
Anchorage, AK 99519-6612

**RE: LONS 75-078, BP Exploration (Alaska) Inc., Prudhoe Bay Unit, Base Operations Center Holding Pond Breach Repair, Unit Plan of Operations Amendment Decision**

Dear Mr. Sears:

The Alaska Department of Natural Resources (DNR), Division of Oil and Gas (Division), in accordance with Alaska Statute (AS) 38.05 and Alaska Oil and Gas Leasing Regulations (11 AAC 83) grants authorization to conduct activities on state lands as proposed in the Prudhoe Bay Unit (PBU) Plan of Operations (Plan) amendment application dated January 25, 2019, for the above referenced project.

**Scope:**

BP Exploration (Alaska) Inc. (BPXA) requests approval to place gravel fill between the Base Operations Camp (BOC) Holding Lake, a permitted mixing zone, and an unnamed lower lake, a permitted water source. The purpose of this project is to reestablish the natural berm separating the two lakes, which has breached over the past several years. Heavy equipment will be used to place gravel fill impacting approximately 0.09 acres of tundra.

A Plan amendment issued on March 22, 2016 authorized work to repair the breach affecting 0.02 acres of tundra but was not successful, this request is a continuation of those efforts.

The purpose of this project is to fill the breach in the tundra that separates the holding pond and the south pond, re-creating a natural separation between the water bodies. Reestablishment of the holding pond to support the mixing zone is necessary under Alaska Pollutant Discharge Elimination System (APDES) Permit AKG572008.

**Plan activities include:**

- Construct a minimal thickness ice road from the C Pad access road to the breach site.
- Excavate the breach area to remove the existing gravel bags and fill.
- Compact the area and fill with sand bags. Voids between bags will be filled with sand.
- Side slopes of the repair area will be armored with rip-rap.
- Approximately 0.09 acres of tundra will be impacted.

**Location information:**

PBU

BOC

Meridian: Umiat

Township: 11N

Range: 14E

Section: 19

Lat: 70.290525, Long -148.700551 DD

ADL: 028305

The project site is approximately one-half mile northeast of BOC.

**Agency review:**

The Division provided an agency review and comment opportunity for the activities considered for authorization under this decision. The following government entities were notified on February 21, 2019 through February 28, 2019 for comment on the Plan: Alaska Department of Fish and Game (ADFG), and DNR: Divisions of Oil and Gas and Mining, Land, and Water. No comments were received.

**Conditions/Stipulations:**

1. A Status Report for the activities conducted under this approval must be filed with this office on May 1 and November 1 each year, from the date this approval is issued and until a Completion Report is filed with the Division. Failure to file in a timely manner may result in revocation of this approval. The completion report shall contain a statement describing clean-up activities conducted, the method of debris disposal, and a narrative description of known incidents of surface damage.
2. The applicant shall defend, indemnify and hold the State of Alaska harmless from and against any and all claims, damages, suits, losses, liabilities and expenses for injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of State lands authorized under this approval by the applicant, its contractors, subcontractors and their employees.
3. Amendments and modifications to this approval require 15-day advance notice and must be approved in writing by the Department of Natural Resources.
4. The applicant shall inform and ensure compliance with any and all conditions of this approval by its employees, agents and contractors, including subcontractors at any level.
5. The Commissioner of the Department of Natural Resources may require that an authorized representative be on site during any operations conducted under this approval. This stipulation is required to ensure that the Divisions of Oil and Gas and Mining, Land and Water meet their statutory responsibilities for monitoring activities taking place on state-owned lands.
6. Rehabilitation shall be completed to the satisfaction of the Commissioner.
7. Tundra travel on or across Native land claims is not authorized under this approval. The applicant shall consult Bureau of Land Management master title plats prior to all operations to ensure surface

operations do not cross or impact existing or pending native allotment claims. The purpose of this stipulation is to avoid trespass or damage, or both, to in-holdings on state-owned lands.

8. The applicant shall notify the Department of Natural Resources of all spills that must be reported under 18 AAC 75.300 under timelines established therein. All fires and explosions must be reported to DNR immediately. The DNR 24-hour spill report number is (907) 451-2678; the fax number is (907) 451-2751. The ADEC oil spill report number is (800) 478-9300. DNR and ADEC shall be supplied with all follow-up incident reports.

**Amendment Specific Stipulation:**

9. A certified As-Built survey of the activity shall be provided within one year of placement of the improvement. This As-Built must contain a hard copy, as well as a digital GIS file containing a Shapefile or ESRI Feature Class.

Please attach this amendment approval with the original decision. This unit operations amendment approval is issued in accordance with AS 38.05, Alaska Administrative Codes 11 AAC 83.346 and 11 AAC 83.303. The Division reviewed this amendment under the unit regulation for the Plan, 11 AAC 83.346, and considers the factors set forth in 11 AAC 83.303(a) and (b). The amendment was also evaluated against the PBU agreement for conformance.

A person affected by this decision may appeal it in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after issuance of the decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W 7<sup>th</sup> Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918, or emailed to [dnr.appeals@alaska.gov](mailto:dnr.appeals@alaska.gov). This decision takes effect immediately. If no appeal is filed by the appeal deadline, then this decision becomes a final administrative order and decision of the department on the 31<sup>st</sup> day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

This approval signifies only that the State of Alaska has no objection to the operations outlined in the Plan amendment application. It does not constitute certification of any property right or land status claimed by the applicant nor does it relieve the applicant of responsibility to obtain approvals or permits from other persons or governmental agencies. All stipulations contained in the original lease and subsequent Plan approvals remain in full force and effect.

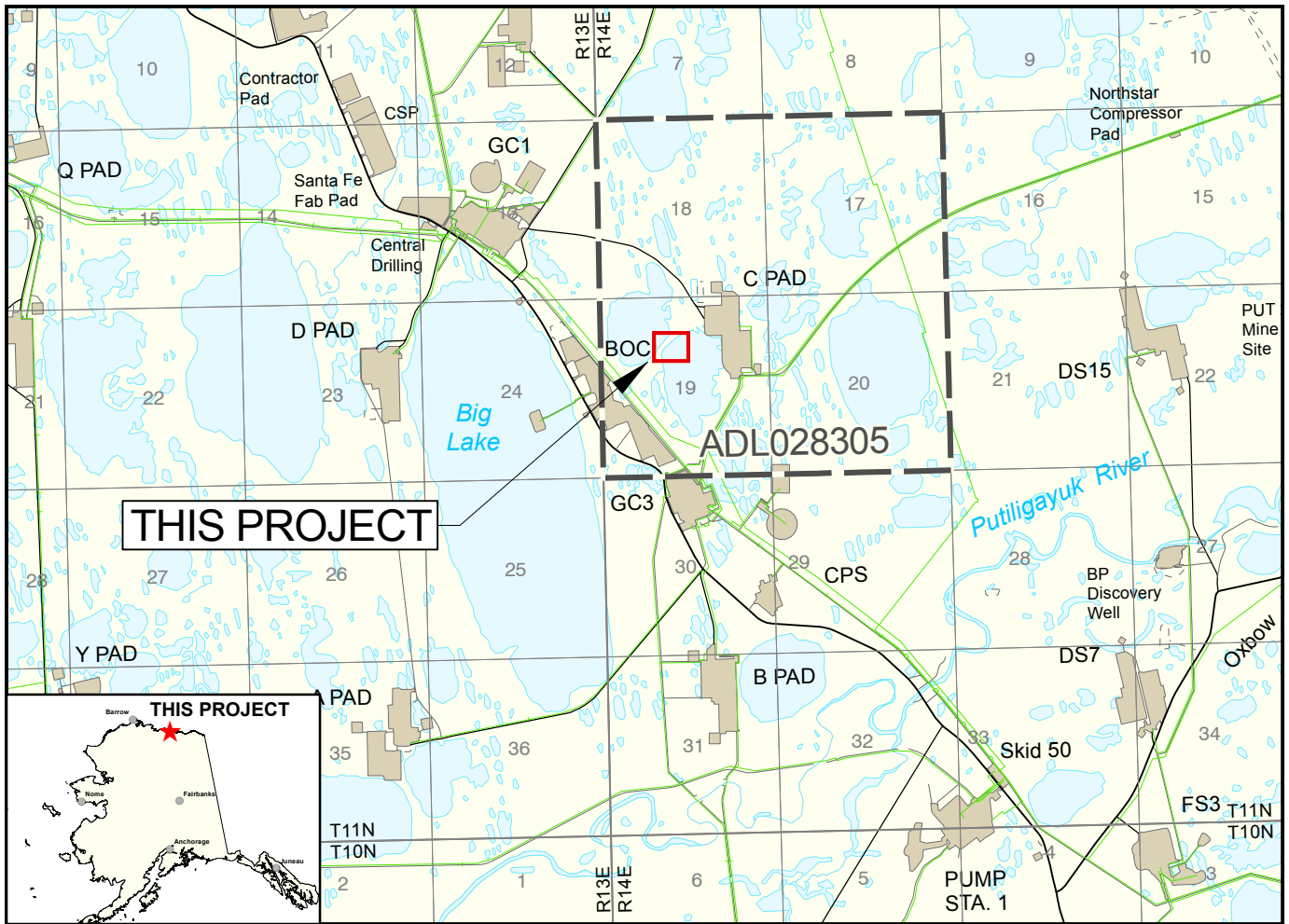
If activities have not commenced, then this approval expires on **March 7, 2022**. Failure to comply with the terms and conditions outlined in the lease, the attached stipulations, and this authorization may result in revocation of this unit operations approval.

Any questions or concerns about this amendment may be directed to Natural Resource Specialist Paul Blanche at 907-269-8570 or emailed to [paul.blanche@alaska.gov](mailto:paul.blanche@alaska.gov).

Sincerely,

Nathaniel G. Emery  
Natural Resource Specialist  
Attachments: Figures 1-4  
2018 North Slope Mitigation Measures

ecc: DOG: Graham Smith, Nathaniel Emery, James Hyun, Kevin Pike, SPCS Records  
DMLW: Melissa Head, Kimberley Maher, and Becky Baird  
ADF&G: Jack Winters  
ADEC: DEC Oil and gas, Laurie Silfven  
Borough: Jason Bergerson, Josie Kaleak, Mabel Kaleak  
Other: US Army Corps of Engineers



This map is based on U.S.G.S quad Beechey Point (B-3) and on the Unit Operator's Facility Maps.



**PROJECT LOCATION:**

PRUDHOE BAY UNIT - BASE OPERATIONS CAMP

NAD83

LAT. = 70° 17' 25.892" / DD 70.290525

LONG. = -148° 42' 01.984" / DD -148.700551

ALASKA STATE PLANE ZONE 4, NAD83

X = 1,800,921.37 FEET

Y = 5,957,394.86 FEET

SEC. 19 T11N, R14E UMIAT M.

ADL # 028305

DATUM: MEAN SEA LEVEL

PURPOSE: POND BREACH REPAIR

ADJACENT PROPERTY OWNER:  
STATE OF ALASKA

**BP EXPLORATION (ALASKA) INC.**

**PRUDHOE BAY UNIT BOC  
HOLDING POND BREACH REPAIR  
VICINITY MAP**

DATE:  
November 2018

SCALE:  
1" = 1 Mile

FIGURE:  
1

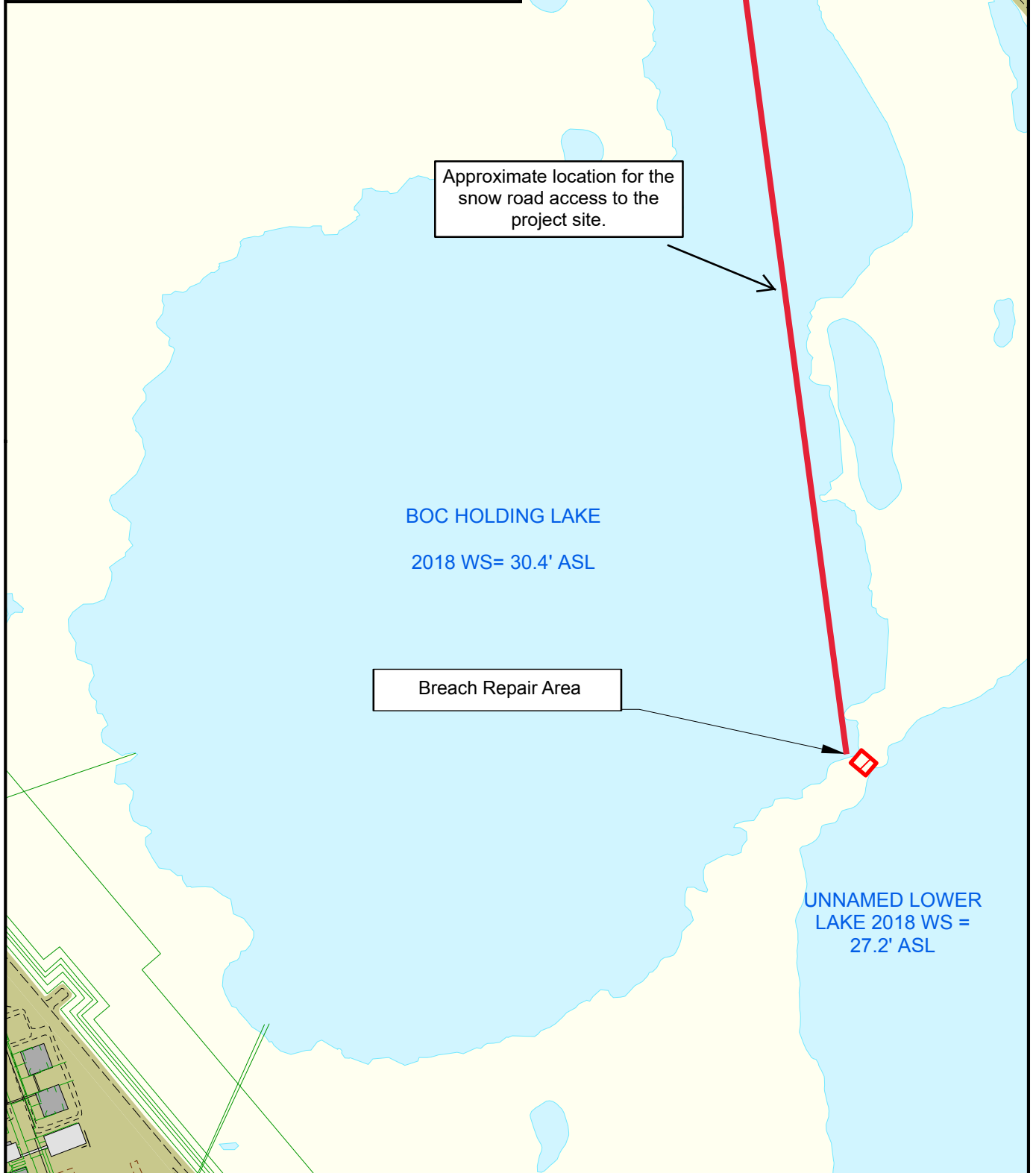
BP EXPLORATION (ALASKA) INC.

PRUDHOE BAY UNIT BOC  
HOLDING POND BREACH REPAIR  
LOCATION MAP

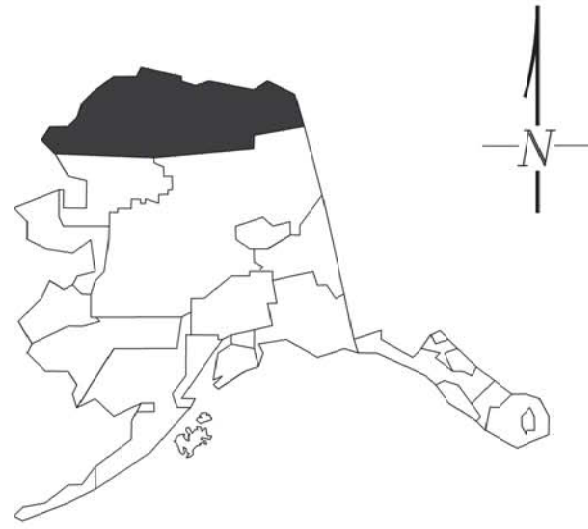
DATE:  
November 2018

SCALE:  
1" = 350'

FIGURE:  
2







**NORTH SLOPE BOROUGH  
ALASKA**

**GENERAL NOTES**

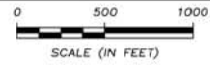
1. THE GENERAL NOTES AND LEGEND PROVIDED ON THIS DRAWING APPLY TO ALL DRAWINGS, UNLESS OTHERWISE INDICATED.
2. EXISTING TOPOGRAPHY PROVIDED BY BELL SURVEYING. DATE OF SURVEY IS AUGUST 16, 2018. ELEVATIONS SHOWN ARE IN FEET ABOVE MEAN SEA LEVEL (MSL), BPSX. HORIZONTAL CONTROL IS IN THE ALASKA STATE PLANE ZONE 4 COORDINATE SYSTEM, NAD 27.
3. EXISTING CONTOUR LINES ARE SHOWN AT 1-FOOT INTERVALS, UNLESS OTHERWISE NOTED.
4. SCALES ARE AS NOTED ON EACH DRAWING.
5. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION ACTIVITIES DO NOT INTERFERE WITH ON-GOING SITE ACTIVITIES AT ANY TIME.
6. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF SITE HEALTH AND SAFETY THROUGHOUT CONSTRUCTION.
7. UTILITIES AND LOCATIONS DEPICTED ON DRAWINGS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR. CONTRACTOR SHALL CONTRACT AN APPROVED PRIVATE UTILITY LOCATOR FOR MARKOUT OF OWNER UTILITIES PRIOR TO ANY GROUND DISTURBANCE.
8. BENCHMARKS, MONUMENTS, AND/OR PROPERTY MARKERS SHALL BE PROTECTED AT ALL TIMES AND SHALL NOT BE DISTURBED BY CONSTRUCTION ACTIVITIES.
9. WATER SURFACE ELEVATIONS SHOWN ARE AS OF TIME OF SURVEY.

**EXISTING CONDITIONS PLAN NOTES**

1. THE LIMITS OF EXISTING GRAVEL DEFINED HEREIN ENCOMPASS APPROXIMATELY 1,725 SF. GRAVEL BAGS AND LOOSE GRAVEL WERE PREVIOUSLY INSTALLED DURING A BREACH REPAIR PROJECT IN 2016.
2. ANY PROPERTY IMPROVEMENT BEYOND THOSE SHOWN IN THE DRAWINGS THAT ARE NECESSARY FOR VEHICULAR ACCESS OR TRAFFIC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO IMPLEMENTATION.
3. VEGETATION NOT INDICATED ON DRAWING. CONTRACTOR RESPONSIBLE FOR IDENTIFYING CURRENT CONDITIONS.



**SITE VICINITY MAP**

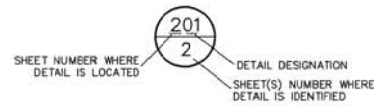


**LIST OF DRAWINGS**

SHEET NO.	TITLE
1	LOCATION MAPS, NOTES, LIST OF DRAWINGS, LEGEND, ABBREVIATIONS AND EXISTING CONDITIONS PLAN
2	BOC HOLDING LAKE BERM FINAL CONDITIONS PLAN

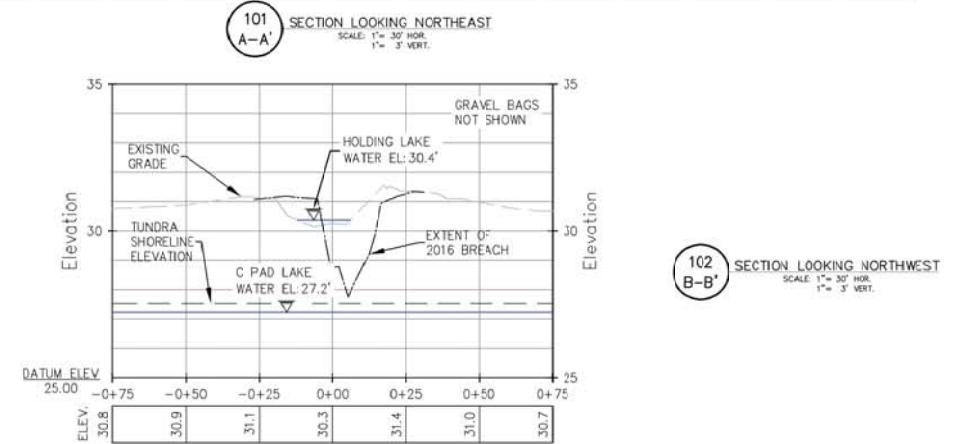
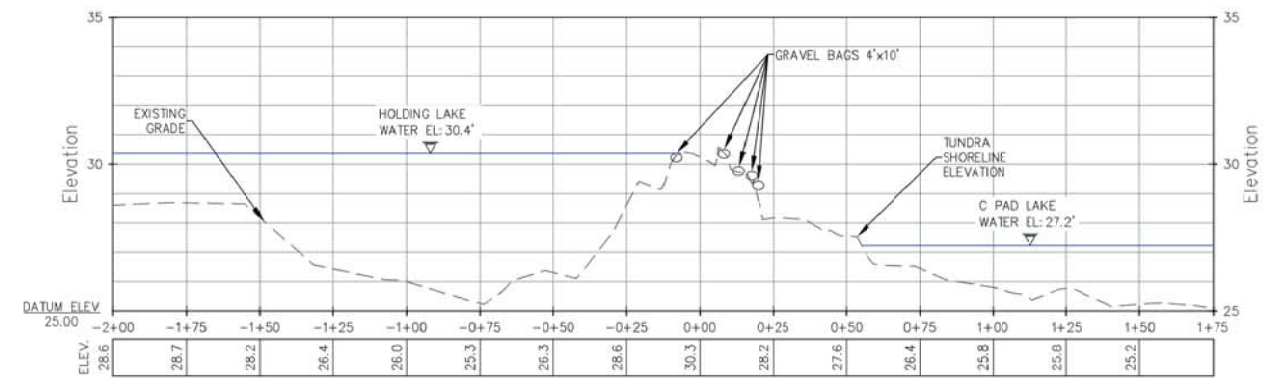
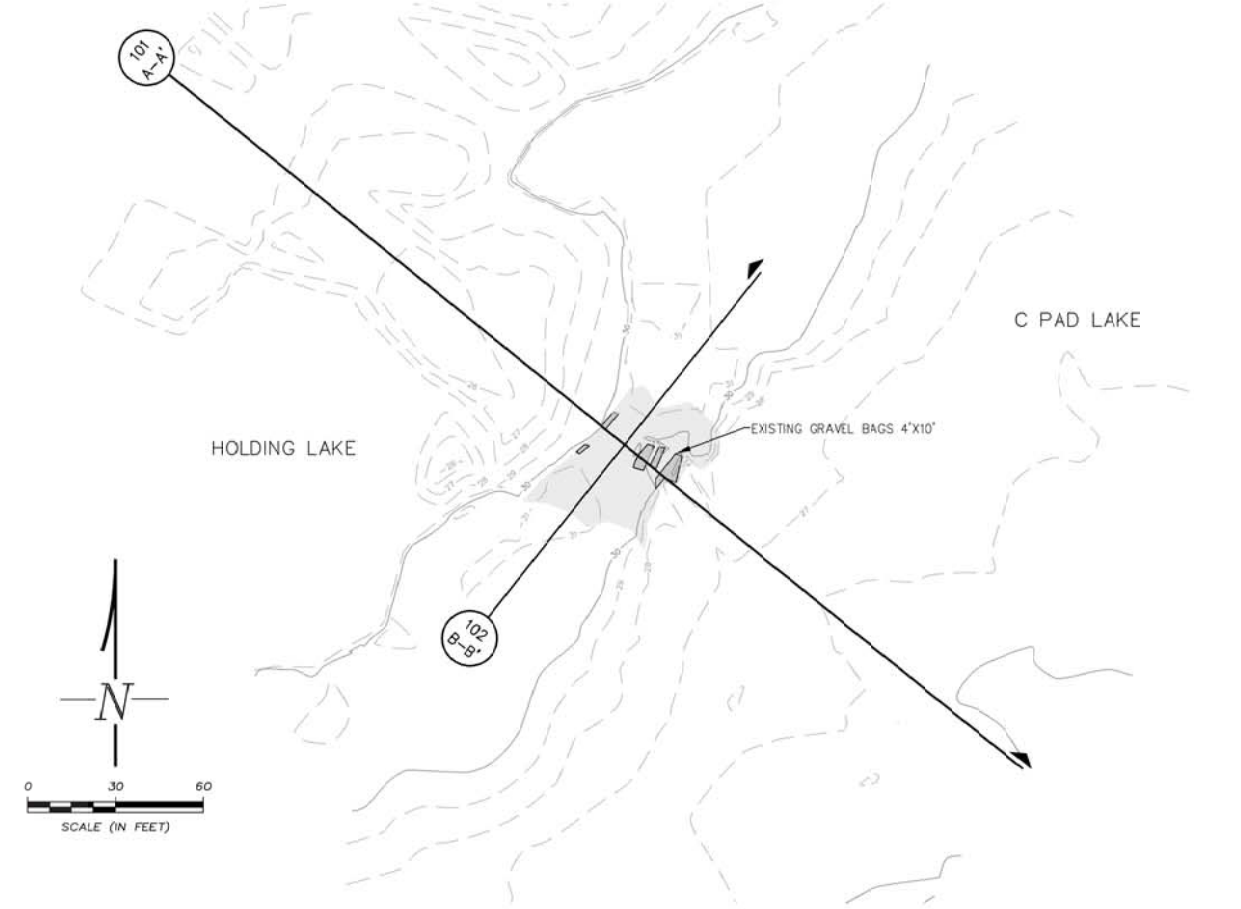
**LEGEND**

	31	EXISTING INTERMEDIATE CONTOUR
	30	EXISTING INDEX CONTOUR
		EXISTING GRAVEL BAG
		EXISTING GRAVEL
		EXISTING GRADE SPOT ELEVATION
		WATER SURFACE
	31	FINAL INTERMEDIATE CONTOUR
	30	FINAL INDEX CONTOUR
		AREA OF EXCAVATION AND GEOTEXTILE TUBE PLACEMENT
		EXISTING GROUND SURFACE
		SUBGRADE GROUND SURFACE
		SUBGRADE KEY-IN
		EXTENT OF 2016 BREACH
		RIPRAP REVETMENT AND TOE PROTECTION
		SAND AND BENTONITE MIX



**ABBREVIATIONS**

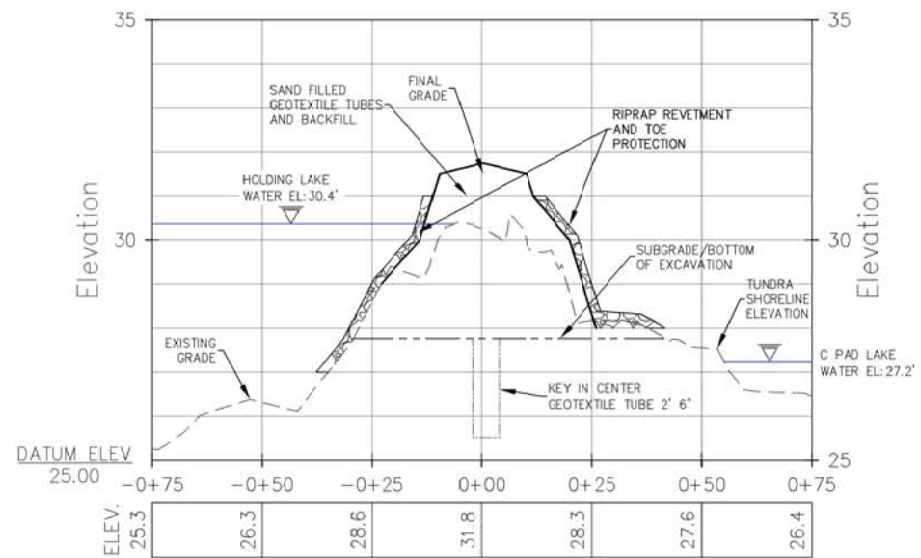
FT	FEET
IN	INCH
SF	SQUARE FEET



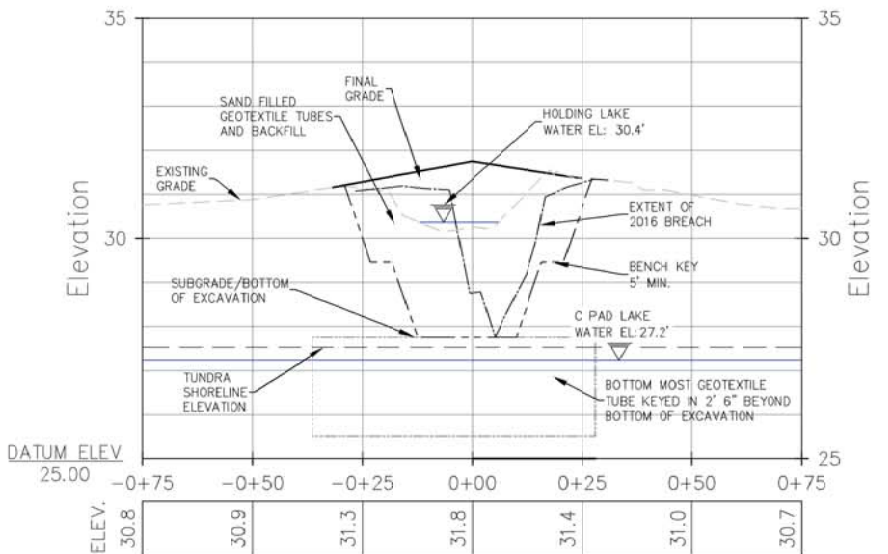
		<b>bp</b> <b>BOC HOLDING LAKE BREACH REPAIR</b> <small>PRUDHOE BAY, ALASKA</small>																	
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<table border="1"> <thead> <tr> <th>Rev.</th> <th>Date</th> <th>Description</th> <th>By</th> <th>Chk</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>9/21/18</td> <td>ISSUED FOR PERMIT</td> <td>DT</td> <td>SL</td> </tr> </tbody> </table>	Rev.	Date	Description	By	Chk	0	9/21/18	ISSUED FOR PERMIT	DT	SL	<table border="1"> <thead> <tr> <th>SCALE</th> <th>PROJECT NUMBER</th> <th>DRAWING</th> <th>REV.</th> </tr> </thead> <tbody> <tr> <td>NO'ED</td> <td>0464090</td> <td>3</td> <td>0</td> </tr> </tbody> </table>	SCALE	PROJECT NUMBER	DRAWING	REV.	NO'ED	0464090	3	0
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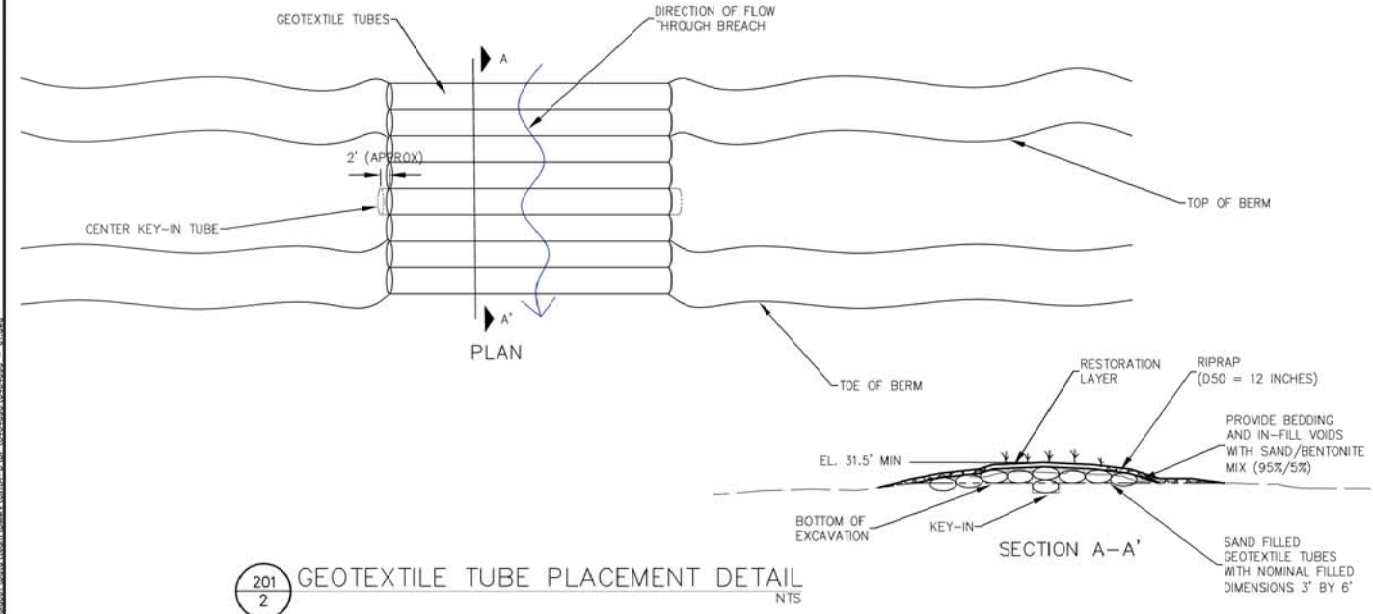
MATERIAL	QUANTITY
EXCAVATION	201 CUBIC YARDS
BACKFILL	255 CUBIC YARDS
NON-WOVEN GEOTEXTILE	2,200 SQUARE FEET
RIPRAP (12" D50)	125 CUBIC YARDS



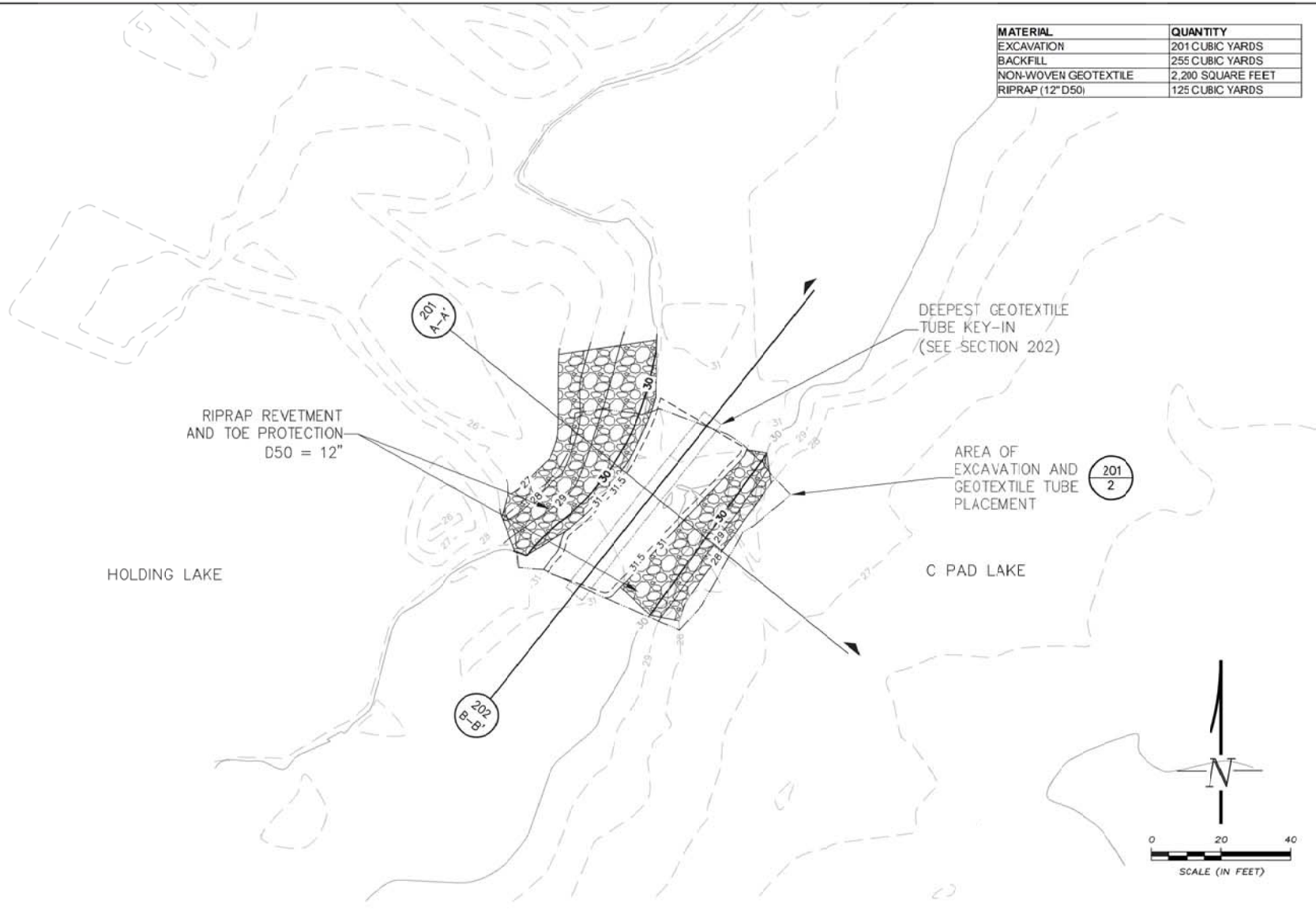
201 SECTION LOOKING NORTHEAST  
SCALE: 1" = 20' HOR.  
1" = 2' VERT.



202 SECTION LOOKING NORTHWEST  
SCALE: 1" = 20' HOR.  
1" = 2' VERT.



201 GEOTEXTILE TUBE PLACEMENT DETAIL  
NTS



- NOTES
- SEE DRAWING NO. 1 FOR GENERAL NOTES AND LEGEND.
  - THE AREA OF DISTURBANCE SHALL BE CLEARED AND GRUBBED PRIOR TO EXCAVATION, AS NECESSARY. ANY TUNDRA REMAINING SHALL BE SALVAGED FOR REUSE.
  - THE AREA OF EXCAVATION IS APPROXIMATELY 2,400 SQUARE FEET (0.055 ACRES). THE AREA OF RIPRAP ARMORING IS APPROXIMATELY 2,200 SQUARE FEET (0.05 ACRES). THE TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 4,000 SQUARE FEET (0.09 ACRES).
  - CONTRACTOR SHALL EXCAVATE AND REMOVE EXISTING GRAVEL BAGS AND LOOSE GRAVEL FILL FROM WITHIN THE AREA OF IMPROVEMENT TO AN ELEVATION OF 27.75 FEET OR WHEN COMPETENT NATIVE MATERIAL IS ENCOUNTERED, WHICHEVER RESULTS IN A DEEPER EXCAVATION, AS SHOWN ON PROFILES 201 AND 202 ON THIS SHEET. MATERIALS REMOVED SHALL BE SALVAGED FOR REUSE OR DISPOSED OFF SITE. CONTRACTOR SHALL MAINTAIN A SAFE AND STABLE EXCAVATION WITH SIDE SLOPES NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1). THE APPROXIMATE VOLUME OF EXCAVATION IS 201 CUBIC YARDS.
  - PRIOR TO COMMENCING BACKFILL, THE SUBGRADE SHALL BE COMPACTED WITH THE EXCAVATION EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR OTHER QUALIFIED PERSONNEL. SOFT, SPONGY OR OTHERWISE UNSUITABLE SUBGRADE SHALL BE EXCAVATED AND REPLACED WITH SUITABLE GRANULAR/AGGREGATE MATERIAL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER OR QUALIFIED PERSONNEL. SALVAGED GRAVEL MAY BE UTILIZED FOR THIS PURPOSE.
  - THE EXCAVATION SHALL BE BACKFILLED WITH GEOTEXTILE TUBES (GEOTUBES BY TENCATE, OR ENGINEER APPROVED EQUIVALENT) FILLED WITH SAND. SAND BACKFILL FOR GEOTEXTILE TUBES AND SURROUNDING FILL SHALL BE CLASSIFIED ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) AS SM, SC OR ML. SAND BACKFILL SHALL HAVE A MAXIMUM PLASTICITY INDEX OF 40 AND SHALL NOT CONTAIN SOUND ROCK, BROKEN CONCRETE, MASONRY, RUBBLE OR OTHER SIMILAR MATERIALS. IT SHALL HAVE PHYSICAL PROPERTIES SUCH THAT IT CAN READILY BE COMPACTED USED IN FILLING THE GEOTEXTILE TUBE. THE SAND BACKFILL SHALL BE AMENDED WITH BENTONITE AT A RATE OF 5% BY WEIGHT TO ACHIEVE A LOWER PERMEABILITY MATERIAL. GEOTEXTILE TUBES SHALL BE ORIENTED PARALLEL TO THE BERM AND THE SURROUNDING VOIDS BACKFILLED WITH SAND. THE END AND BOTTOM OF GEOTEXTILE TUBES SHALL BE KEYED INTO THE EXISTING NATIVE MATERIAL, AS SHOWN ON PROFILES 201 AND 202 ON THIS SHEET. THE APPROXIMATE VOLUME OF FILL IS 255 CUBIC YARDS.
  - THE SIDES SLOPES OF THE REPAIR AREA SHALL BE ARMORED WITH A RIPRAP REVEMENT LAYER UNDERLAIN WITH A 10 OUNCE/SQUARE YARD NON-WOVEN GEOTEXTILE. RIPRAP ARMOR SHALL HAVE A MINIMUM D50 SIZE OF 12 INCHES, AND SHALL BE PLACED, NOT DUMPED.
  - THE BERM REPAIRS SHALL BE CONFIGURED AND SEQUENCED SO THAT THE WORK IS CONDUCTED IN THE DRY TO THE EXTENT POSSIBLE. DEPENDING ON THE TIME OF YEAR, THIS MAY INCLUDE SEQUENCING THE WORK TO REPAIR THE BERM IN PHASES. USE OF COFFER DAMS OR OTHER APPROVED METHODS TO DEWATER AS NECESSARY.
  - FINAL GRADE CONTOURS DEPICTED HEREIN REPRESENT THE ELEVATION OF THE TOP OF MATERIALS AFTER PLACEMENT OF THE SAND FILLED GEOTEXTILE TUBES AND SURROUNDING FILL. ALL EXCAVATED MATERIALS SHALL BE REGRADED WITHIN THE PROPOSED LIMITS OF DISTURBANCE TO THE EXTENT POSSIBLE. NO MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - AT NO LOCATION SHALL THE FINAL GRADES BE LESS THAN 1% OR EXCEED 3:1 WITHOUT APPROVAL OF THE ENGINEER.
  - FOLLOWING COMPLETION OF BERM REPAIRS, SITE RESTORATION TO BE DETERMINED CONSISTING OF:
    - SALVAGED TUNDRA;
    - RESTORATION WITH APPROPRIATE SEED MIX AND PLANTINGS; OR,
    - TEMPORARY RESTORATION WITH GRAVEL.

		<b>bp</b> <b>BOC HOLDING LAKE BREACH REPAIR</b> <small>PRUDHOE BAY, ALASKA</small>	
		<b>BOC HOLDING LAKE BERM FINAL CONDITIONS PLAN</b>	
0 9/21/18 ISSUED FOR PERMIT Rev. Date Description DT SL By Chk	SCALE NO'ED DATE 9/18/18	PROJECT NUMBER 0464090	DRAWING 4
Environmental Resources Management		DATE 9/18/18	REV. 0