



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, ALASKA
P.O. BOX 6898
ELMENDORF AFB, ALASKA 99506-0898

MAR 31 2006

Regulatory Branch
POA-2006-511-9

Mr. Darwin Green
Niblack Mining Corp.
West Pender Street, Suite 615-800
Vancouver, BC, Canada V6C 2V6

Dear Mr. Green:

This is in response to your request to accept a consultant-completed wetland delineation report as a Department of the Army (DA) approved jurisdictional determination (JD) for the following: wetland mapping in the Niblack project area prepared for Niblack Mining Corp. The report was completed by HDR Alaska, Inc., and dated March 2006.

Based on our review of the information you furnished, we have determined the above property contains wetlands under the Corps' regulatory jurisdiction (see enclosure titled, "Jurisdictional Determination").

We hereby accept your consultant-prepared Preliminary Jurisdictional determination. The preliminary jurisdictional determination is now an approved jurisdictional determination. However, it should be noted that the lateral limits of the wetlands were mapped based upon the current planned work. If the ultimate work extends outside the existing mapped area, additional wetland delineation will be required.

This approved jurisdictional determination is valid for a period of five (5) years from the date of this letter, unless new information supporting a revision is provided to this office before the expiration date. Also enclosed is a "Notification of Administrative Appeals Options and Process and Request for Appeal" form regarding this DA approved jurisdictional determination.

DA authorization is required if you propose to place dredged and/or fill material into waters of the U.S., including wetlands or perform work in navigable waters of the U.S. Enclosed is a pamphlet to assist you in applying for a DA permit.

Please be advised that land clearing operations involving vegetation removal in wetlands with mechanized equipment and other soil disturbances are considered placement of fill material under our jurisdiction.

Section 404 of the Clean Water Act requires that a DA permit be obtained for the placement or discharge of dredged and/or fill material into waters of the U.S., including wetlands (33 U.S.C. 1344). The Corps defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Section 10 of the Rivers and Harbors Act of 1899 requires that a DA permit be obtained for structures or work in or affecting navigable waters of the U.S. (33 U.S.C. 403). Section 10 waters are those waters subject to the ebb and flow of the tide shoreward to the mean high water mark. The marine waters of Niblack Anchorage are waters subject to the Corps of Engineers jurisdiction.

Nothing in this letter excuses you from compliance with other Federal, State, or local statutes, ordinances, or regulations.

You may contact me at (907) 753-2712, toll free from within Alaska at (800) 478-2712, by mail at the letterhead address, ATTN: CEPOA-CO-R-E, or by email at michelle.L.nordhougen@poa02.usace.army.mil, if you have questions. For additional information about our Regulatory Program, visit our web site at www.poa.usace.army.mil/reg.

Sincerely,

SIGNED

Michelle Nordhougen
Regulatory Specialist

Enclosures

BCF: WITHOUT enclosures

(X) Prince of Wales

Ms. Mel Langdon, DEC, Anchorage, Alaska 99501-2617
Mr. Joe Donohue, OMB, DGC, Juneau, Alaska 99811-1030
USFWS, Juneau, Alaska 99801-7100
Mr. James W. Balsiger, Regional Administrator, NMFS, Juneau, Alaska 99802-1668
Ms. Judith Bittner, ADNR, SHPO, Anchorage, Alaska 99501-3565
Mr. Ed Collazzi, ADNR, Juneau, Alaska 99811-1724
Mr. Tom Schumacher, ADF&G, Douglas, Alaska 99824-0020
Mr. Mark Minnillo, ADNR, OHMP, Craig, Alaska 99921-0668
EPA, Anchorage, Alaska 99513-7588
Commander (OAN), Juneau, Alaska 99802-5517

Mr. Jeff Schively
HDR Alaska, Inc.
2525 C Street, Suite 305
Anchorage, Alaska 99503

To: Darwin Green, Niblack Mining Corp.	
From: Jeff Schively, HDR Alaska, Inc.	Project: Niblack Property
Date: March 21, 2007	Job No: 300070-55894

The purpose of this memorandum is to describe a wetland site along the coast of Niblack Anchorage, southeast of the patented mining claim owned by the Niblack Mining Corporation. The site is located outside of the mapped area described in the March 2006 preliminary jurisdictional determination (PJD) report (Figure 1). The site was visited on February 20, 2007 in conjunction with a nearshore eelgrass survey. Based on comparable findings described in the 2006 PJD at similar sites to the west, this site would meet U.S. Army Corps of Engineers criteria to classify it as wetland. Evidence related to the sites wetland status is included below. Site photographs are included on page 2.

Vegetation

The surrounding area is forested with a thick overstory of western hemlock (*Tsuga heterophylla* – FAC) and western red cedar (*Thuja plicata* – FAC). A sparse understory comprised of red huckleberry (*Vaccinium parvifolium* – FAC), bunchberry (*Cornus canadensis* - FACU), skunk cabbage (*Lysichiton americanus* – OBL), and deer fern (*Blechnum spicant* – FAC) was observed. Based on these plants and evidence gathered at similar forested wetlands sampled during the 2006 wetland survey, this plant community is hydrophytic. The surrounding vegetation community is shown on photographs 1 and 2.

Hydrology

The site is situated on a sloping bench between a steep-sided mountain slope to the south and the marine waters of Niblack Anchorage to the north. Many small intermittent drainages and swales are present all along the sloping bench. Wetland hydrology indicators observed included saturated soil (at the surface), sulfidic odor (4 inches below the surface), and surface water within several flat, low-lying depressional areas. Surface water seen at the site is shown on photographs 3 and 4.

Soils

The site has hydric soils based on the presence of a histic epipedon and sulfidic odor. The soil pit examined is shown on photographs 5 and 6.

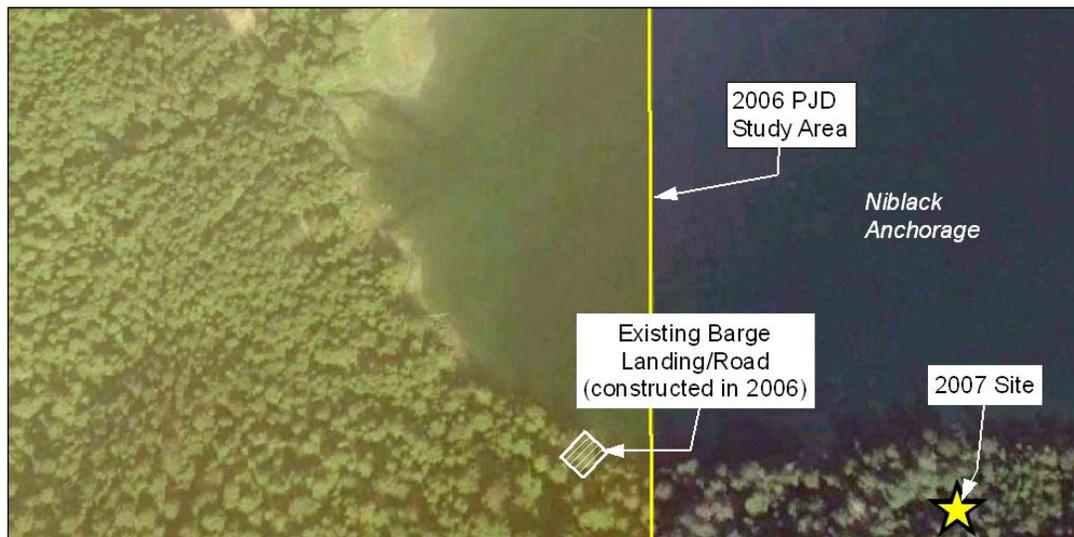


Figure 1. Approximate location of 2007 site.



Photograph 1. Vegetation



Photograph 2. Vegetation



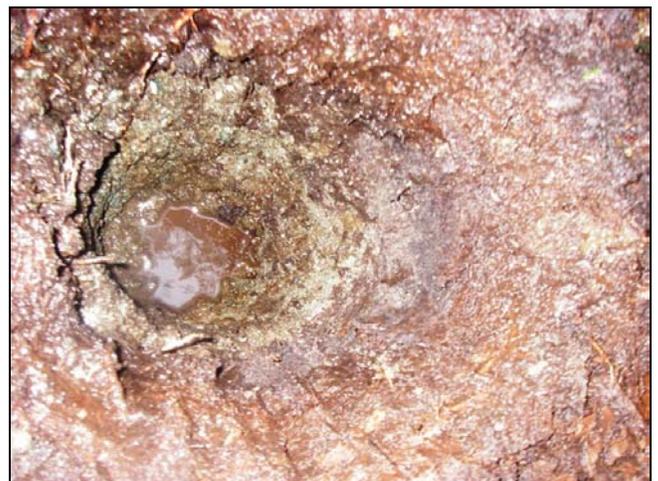
Photograph 3. Hydrology



Photograph 4. Hydrology



Photograph 5. Soil



Photograph 6. Soil

Niblack Property Prince of Wales Island, Alaska

Preliminary Jurisdictional Determination

March 2006

Prepared for:



Niblack Mining Corp.
615-800 West Pender Street
Vancouver, BC
Canada V6C 2V6

Prepared by:



HDR Alaska, Inc.
2525 C Street, Suite 305
Anchorage, Alaska 99503

1.0 Introduction and Purpose

The purpose of this report is to identify and describe wetlands and other waters within an approximately 83.4-acre area on Prince of Wales Island in southeast Alaska (Figure 1). The area is within a patented mining claim owned by the Niblack Mining Corporation.

This report describes locations within the project area that are subject to the jurisdiction of the USACOE under authority of Section 404 of the Clean Water Act or under authority of Section 10 of the Rivers and Harbors Act of 1899. By federal law (Clean Water Act) and associated policy, it is necessary to avoid project impacts to wetlands wherever practicable, minimize impact where impact is not avoidable, and in some cases compensate for the impact. The focus of this document is on delineation of wetlands. Wetlands, waters of the U.S., and uplands (non-wetlands), as referenced in this report, are defined as:

Wetlands. “Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 Code of Federal Regulations [CFR] Part 328.3(b)). Wetlands are a subset of “waters of the U.S.” Note that the “wetlands” definition does not include unvegetated areas such as streams and ponds.

Waters of the U.S. Waters of the U.S. include other waterbodies regulated by the U.S. Army Corps of Engineers, including lakes, ponds, and streams, in addition to wetlands. The ponds mapped in the project area are “waters of the U.S.” but not “wetlands”.

Uplands. Non-water and non-wetland areas are called uplands.

As described in the 1987 U.S. Army Corps of Engineers wetlands delineation manual, wetlands must possess the following three characteristics:

1. *Hydrophytic Vegetation:* Vegetation community dominated by plant species that are typically adapted for life in saturated soils.
2. *Wetland Hydrology:* Inundation or saturation of the soil during the growing season.
3. *Hydric Soils:* Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions.

1.1 Project Location and Environment

The project area is located near the head of Niblack Anchorage, a small inlet on the southeastern shore of Prince of Wales Island (Figure 1). Most of the project area is undeveloped and forested (see image at right). A small mining camp with several outbuildings exists near the coast. Specific legal and geographic descriptions for the property required for Preliminary Jurisdictional Determinations are included in Table 1.



Table 1. Project Area Information

<p>1. APPLICANT: Niblack Mining Corp.</p> <p>2. WATERWAY: Niblack Anchorage</p> <p>3. LOCATION:</p> <p style="padding-left: 20px;">A. Narrative: The project area is near the head of Niblack Anchorage on Prince of Wales Island, approximately 26 miles southwest of Ketchikan.</p> <p style="padding-left: 20px;">B. Legal Description: Sections: 33 and 34 Township: 78S Range: 88E Meridian: Copper River Latitude/Longitude (WGS84 Datum): N55.0667159 / W132.1461172</p> <p>4. SOURCE(S):</p> <p>USGS Maps: Craig A-1</p> <p>NWI Maps: Craig A-1</p> <p>Soil Maps: None</p> <p>Corps Wetland Maps: None</p> <p>Aerial Photographs: Digital black and white ortho-photography from US Forest Service.</p> <p>Other: Reconnaissance-level field survey with wetland data forms, written site observations, and photographs from HDR Alaska, Inc. site visit dated February 15-16, 2006.</p>

2.0 Methods

Two steps were used to evaluate and produce an inventory of wetlands and waterbodies in the project area. These two steps include:

2.1 Field Investigation

A two-day reconnaissance-level site visit was completed during February 15-16, 2006 to identify any wetlands and other waters potentially under the jurisdiction of the USACOE. The field visit occurred outside of the USACOE designated “growing season” (USACOE-SPN-2003-05). Specific data collected included detailed information on soil conditions, hydrology, and plant community composition. Locations were studied, to the degree possible during winter conditions, using the U.S. Corps of Engineers 1987 wetland delineation manual’s three-parameter method of determining an area’s wetland status (USACOE, 1987). Standard Corps of Engineers data sheets were completed at these sites and are included in Appendix A. Each location visited during the field visit was logged into a handheld global positioning system (GPS) unit. Representative photographs and observational data were collected in conjunction with wetland delineation data form plots. Photographs taken at each of the data collection locations are included in Appendix A.

While in the field, wetland/upland boundaries were determined by completing paired data plots. This process involves completing standard wetland data forms near observable transition zones between wetter and drier areas. A data form is completed in the wet area to verify its wetland status and then a second plot is completed, usually upslope, in the drier area to verify its status. The wetland/upland boundary between the two data plots is then logged into the handheld GPS. Wetland/upland boundaries were walked by wetland scientists in the field and locations logged into the handheld GPS.

2.2 Mapping

Initially, scientists analyzed aerial photography, topography, and NWI wetland mapping in a Geographic Information System [GIS] database. GPS locations of field visited sites and wetland/upland boundaries were overlaid on aerial photography and notes and photographs completed at each site were reviewed to identify

any wetlands or waterbodies present within the project area. The process of delineating wetlands from aerial photography included using the following methods:

Vegetation clues: On aerial photography, scientists looked for saturation-adapted vegetation communities, indicative canopy structure and height, and presence of hydrophytic plant species. A common example is dwarf spruce trees, which are indicative of a limitation to growth such as excessively wet soils.

Evidence of soil saturation: Visible evidence of wetland hydrology was sought, including surface water and darker areas of photos indicating surface saturation. A site's proximity to streams, open water habitat, and marshes can be indicative of shallow subsurface water.

Topography: Evidence of topographic high points, sloped surfaces that would allow soils to drain, and dry drainages were used to support classifying those areas as upland. Topographic depressions, toes of slopes, and flat topography served as indicators of potentially poor soil drainage.

Existing mapping: Wetland mapping from the U.S. Fish and Wildlife's National Wetland Inventory Mapping program is available for the project area (USFWS 2006). This mapping is generally an effective tool for large-scale planning and analysis of wetlands but not suitable for smaller site-specific projects such as needed for this study. National Wetland Inventory mapping is primarily based on aerial photographic interpretation with limited ground truthing, and therefore wetland boundaries tend to be oversimplified with many smaller wetland complexes not included in the mapping. According to available National Wetland Inventory Mapping for USGS quadrangle Craig A-1, forested wetlands occur in the project area (Figure 2).

3.0 Preliminary Jurisdictional Determination

No detailed vegetation or soil mapping is available for the project area. Information presented below is summarized from data collected at 15 wetland data form locations over the two-day field investigation (Appendix A). Locations of each data collection location are displayed on Figure 3.

Vegetation

Approximately 57.9 acres of the project area is either forested or previously forested but since developed by past mining activities. Developed areas include the mine camp and several small trails extending from the camp. These developed areas are generally unvegetated. Approximately 25.5 acres of the mapped project area is within Niblack Anchorage. This area includes subtidal waters (21.1 acres), unvegetated intertidal beach (4.4 acres), and vegetated intertidal beach (1.1 acres). The vegetated intertidal beach is located immediately downslope of the mine camp. Dominant plant species in this area include a mix of coastal sedges (*Carex* sp.), grasses (*Elymus* sp.), and rushes (*Juncus* sp.).

Needleleaf forest covers most the project area. The forest community is generally dominated by a thick overstory of western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), and Sitka spruce (*Picea sitchensis*) with a sparse understory comprised of red huckleberry (*Vaccinium parvifolium*), red elderberry (*Sambucus racemosa*), salal (*Gaultheria shallon*), bunchberry (*Cornus canadensis*), skunk cabbage (*Lysichiton americanus*), deer fern (*Blechnum spicant*), sword fern (*Polystichum munitum*), foamflower (*Tiarella trifoliata*), and fewflower sedge (*Carex pauciflora*). Hydrophytic plant communities occur at 13 out of the 15 wetland data form sites (Table 2).

Table 2. Vegetation at Wetland Data Form Sites

Data Form ID	Dominant Plant Species (by stratum)													
	Tree Stratum			Shrub Stratum					Herbaceous Stratum					
	Western hemlock <i>Tsuga heterophylla</i>	Western red cedar <i>Thuja plicata</i>	Sitka spruce <i>Picea sitchensis</i>	Red huckleberry <i>Vaccinium parvifolium</i>	Devils club <i>Oplopanax horridus</i>	Red elderberry <i>Sambucus racemosa</i>	Salal <i>Gaultheria shallon</i>	Deer fern <i>Blechnum spicant</i>	Bunchberry <i>Cornus canadensis</i>	Sword fern <i>Polystichum munitum</i>	Skunk cabbage <i>Lysichiton americanus</i>	Foamflower <i>Tiarella trifoliata</i>	Fewflower sedge <i>Carex pauciflora</i>	
FAC	FAC	FACU	NI	FACU	FACU	NI	FAC	FACU	NI	OBL	FAC	OBL		
S-3	X	X	X	X			X	X						
S-7	X			X	X	X	X	X	X					
S-10	X		X			X	X		X					
S-11	X	X					X	X						
S-12	X	X				X	X	X		X				
S-18	X	X	X	X				X						
S-19	X	X		X				X		X				
S-27	X	X		X		X				X				
S-31	X	X		X		X		X						
S-34	X	X		X				X			X			
S-35	X	X		X				X						
S-39	X	X	X			X					X			
S-41	X	X	X					X	X					
S-43	X	X					X	X		X				
S-44	X	X					X			X			X	

Hydrology:

The project area is situated along the bottom and lower slopes of a small, steep-sided watershed that drains directly into Niblack Anchorage. Two perennial streams generally referred to as Camp Creek and Waterfall Creek, flow through the project area immediately south of the existing mine camp. Many small intermittent drainages, swales, and rivulets flow through the project area and eventually feed into Camp or Waterfall Creeks or directly into Niblack Anchorage.

At wetland data form locations, 14 out of the 15 sites had wetland hydrology (Table 3). Commonly seen indicators included saturated soil, surface water, drainage channels, and sediment deposits.

Table 3. Hydrology at Wetland Data Form Sites

Data Form ID	Saturated in Upper 12 Inches	Water Marks	Sediment Deposits	Drainage Patterns in Wetlands	Water-Stained Leaves	Notes
S-3	X			X		saturated at 0 inches, seasonally inundated depressions present
S-7	X			X		saturated at 3 inches, inundated depressions present
S-10	X			X		saturated at 6 inches, small ephemeral drainage features present
S-11	X		X	X		saturated at 3 inches, inundated depressions present
S-12	X					saturated at 0 inches, flowing drainages present
S-18	X					saturated at 0 inches

Data Form ID	Saturated in Upper 12 Inches	Water Marks	Sediment Deposits	Drainage Patterns in Wetlands	Water- Stained Leaves	Notes
S-19	X		X	X	X	saturated at 0 inches, low inundated depressions present, likely groundwater discharge sites
S-27	X		X	X	X	saturated at 0 inches, drainage swale with surface water
S-31	X		X	X		saturated at 5 inches, inundated depressions present
S-34	X		X	X		saturated at 0 inches, inundated depressions present
S-35						None
S-39	X		X	X	X	saturated at 5 inches, flowing drainages present
S-41	X					saturated at 4 inches
S-43	X		X	X	X	saturated at 6 inches, inundated depressions present
S-44	X	X	X	X	X	saturated at 0 inches, inundated depressions present

Soils

Both hydric and non-hydric soil conditions were observed in soil pits examined during the field visit. Hydric soils were encountered at 8 of the 15 wetland data form sites (Table 4). Indicators of hydric soil included histosols, histic epipedons, and sulfidic odor.

Non-hydric soils had a shallow to moderately deep (3 to 7 inches deep) organic horizon at the ground surface overlaying mineral soils. Specific characteristics of the sampled mineral soils, including color and texture are included on the wetland data forms (Appendix A).

Table 4. Soils at Wetland Data Form Sites

Data Form ID	Hydric Soils Present	Hydric Soil Indicators Observed
S-3	Yes	Histosol
S-7	No	None
S-10	No	None
S-11	No	None
S-12	Yes	Histic epipedon, sulfidic odor
S-18	No	None
S-19	Yes	Histic epipedon, sulfidic odor
S-27	Yes	Histic epipedon, sulfidic odor
S-31	No	None
S-34	Yes	Histosol, Sulfidic odor
S-35	No	None
S-39	Yes	Histic epipedon, sulfidic odor
S-41	No	None
S-43	Yes	Sulfidic odor
S-44	Yes	Histosol, Sulfidic odor

3.1 Conclusion

Determinations were based on evidence observed outside of the growing season. Additional field indicators supporting classifying an area as wetland or non-wetland may be present during the growing season.

Wetland locations are based upon the dominance of hydrophytic vegetation, hydrologic indicators, and hydric soil indicators. Based on the findings above, it has been determined that areas displayed as wetlands on Figure 3 meet the USACOE criteria for being classified as wetland. Approximately 8.9 percent (7.4 acres) of the mapped 83.4 acres were determined to meet the USACOE requirements for being classified as wetlands (Table 5). Project area wetlands are classified as saturated needleleaf forest wetlands (PFO4B) and saturated needleleaf forest/broadleaf scrub-shrub mix wetlands (PFO4/SS1B). These areas would be subject to jurisdiction under Section 404.

Approximately 30.6 percent (25.5 acres) of the mapped area occurs below high tide line in Niblack Anchorage. These estuarine areas are classified as subtidal (E1UBL), unvegetated intertidal (E2US1N), and vegetated intertidal (E2EM1P). Estuarine areas would be subject to jurisdiction under both Section 404 and Section 10.

The remainder of the mapped project area, approximately 60.5 percent (50.5 acres) of the mapped area lack one or more of the required three parameters to support classifying an area as wetland (Table 5). These areas would not be subject to jurisdiction under Section 404.

Other jurisdictional waters in the project area include perennial streams (Camp and Waterfall Creeks), and numerous smaller unnamed intermittent streams. Approximate locations of project area streams are shown on Figure 3.

Table 5. Mapped Area Summary

Type	NWI Mapping Code	Approximate area (acres)
Saturated needleleaf forest wetland	PFO4B	5.7
Saturated needleleaf forest/broadleaf scrub-shrub wetland	PFO4/SS1B	1.7
Estuarine – emergent intertidal areas	E2EM1P	1.0
Estuarine – unvegetated intertidal areas	E2US1N	4.4
Estuarine – subtidal waters	E1UBL	20.1
Upland (non-wetland)	U	50.5
Total Mapped Area		83.4
Total Freshwater Wetland		7.4 acres (8.9%)
Total Estuarine		25.5 acres (30.6%)
Total Upland (non-wetland)		50.5 acres (60.5%)

DETERMINATION MADE BY:

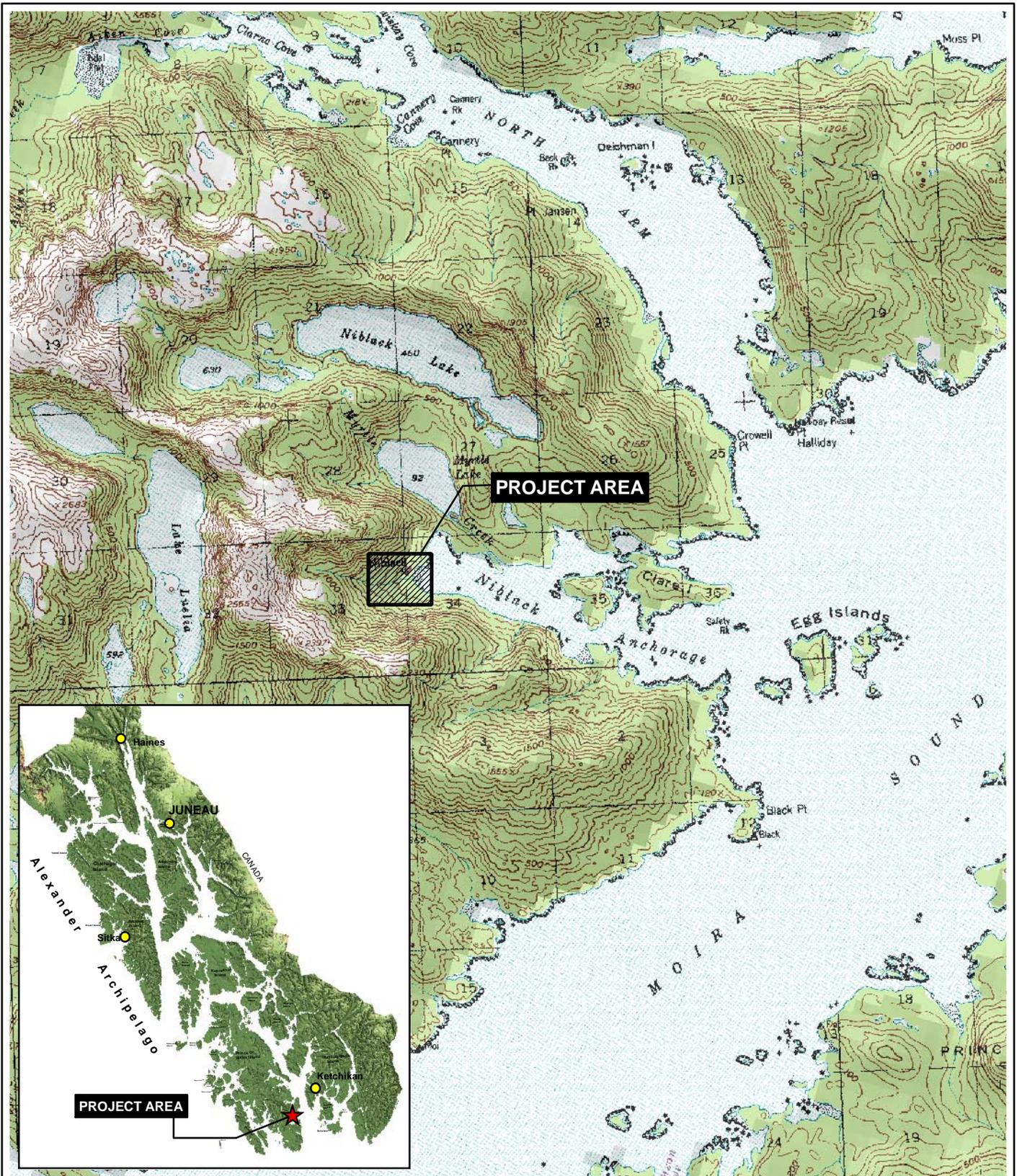
Jeff Schively
Biologist
HDR Alaska, Inc.
Date: February 2006

Attachments

Figure 1: Vicinity Map
Figure 2: USFWS Wetland Mapping
Figure 3: Wetlands

REFERENCES CITED

- U.S. Army Corps of Engineers. 2003. Special Public Notice 03-05 – SPN 2003-05 - Wetland Delineations Growing Season. Available online at:
http://www.poa.usace.army.mil/reg/SPN_Scanned/SPN-2003-05.pdf.
- U.S. Army Corps of Engineers Environmental Laboratory (USACOEEL). 1987. Corps of Engineers Wetlands Delineation Manual. Vicksburg, MS.
- U.S. Federal Register. November 13, 1986 Part II. Rules and Regulations, Vol. 51, No. 219. U.S. Department of Defense. Corps of Engineers, Department of the Army. 33 CFR Parts 320-330, Regulatory Programs of the Corps of Engineers; Final Rule.
- U.S. Fish and Wildlife Service. 2006. National Wetland Inventory Mapping for USGS Quadrangle Craig A-1. Available online at:
<http://enterprise.nwi.fws.gov/shapedata/alaska/>



MAP NOTES:

1. USGS Quadrangle - Craig A-1 shown as base image.
2. Mapping produced by HDR Alaska, Inc. for Niblack Mining Corp.

LEGEND

 Project Area

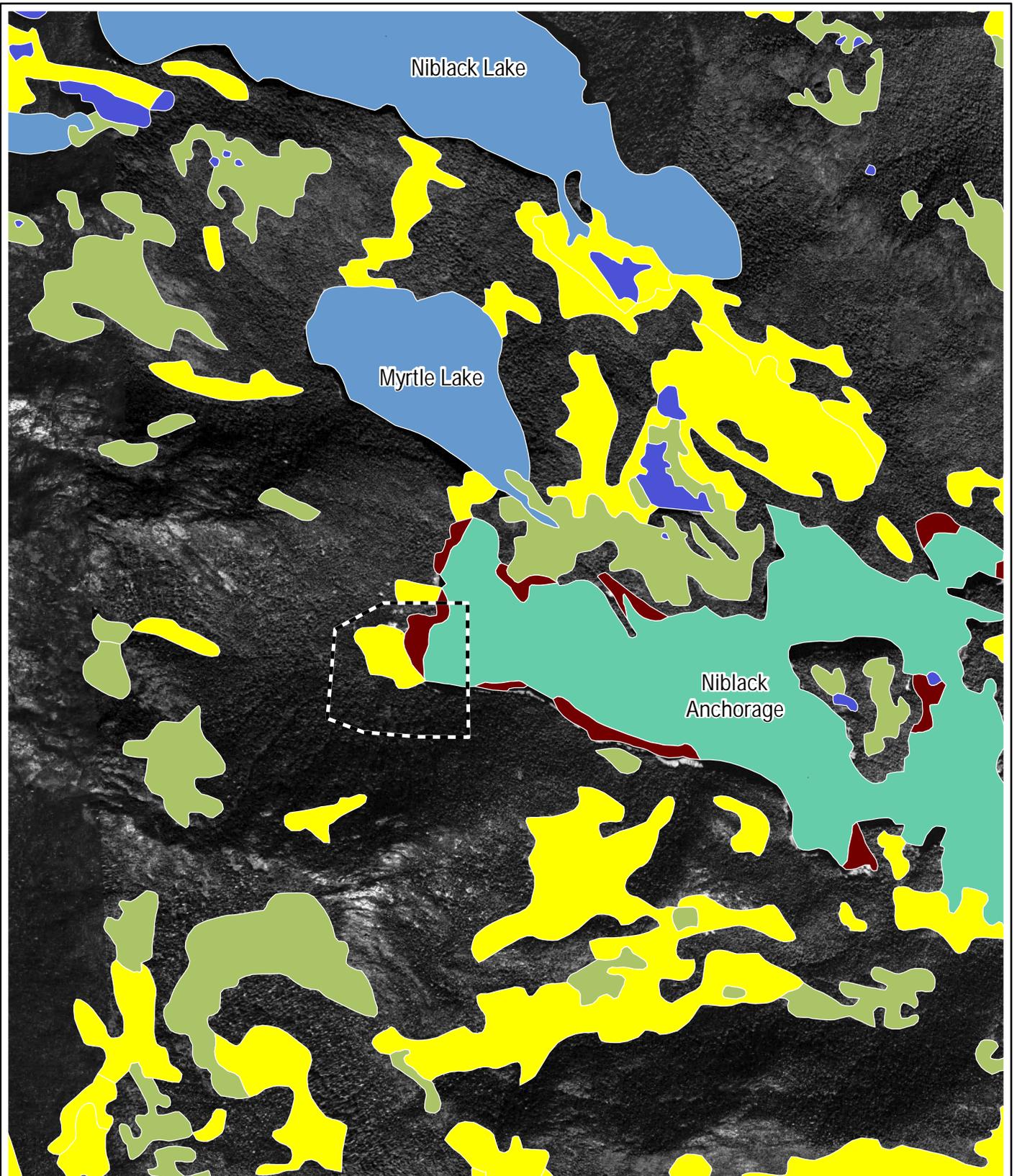
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Miles

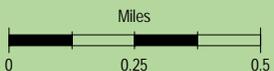
0 0.5 1

Vicinity Map
 Niblack Mining Corp.
 Niblack Property
 Prince of Wales Island, Alaska
Preliminary Jurisdictional Determination

FIGURE 1



MAP NOTES:
 1. Wetland mapping produced by U.S. Fish and Wildlife Service under National Wetland Inventory Mapping Program.
 2. Aerial photograph base from U.S. Forest Service digital orthophoto quadrangles.
 3. Figure produced by HDR Alaska, Inc. for Niblack Mining Corp.



Project Area

LEGEND

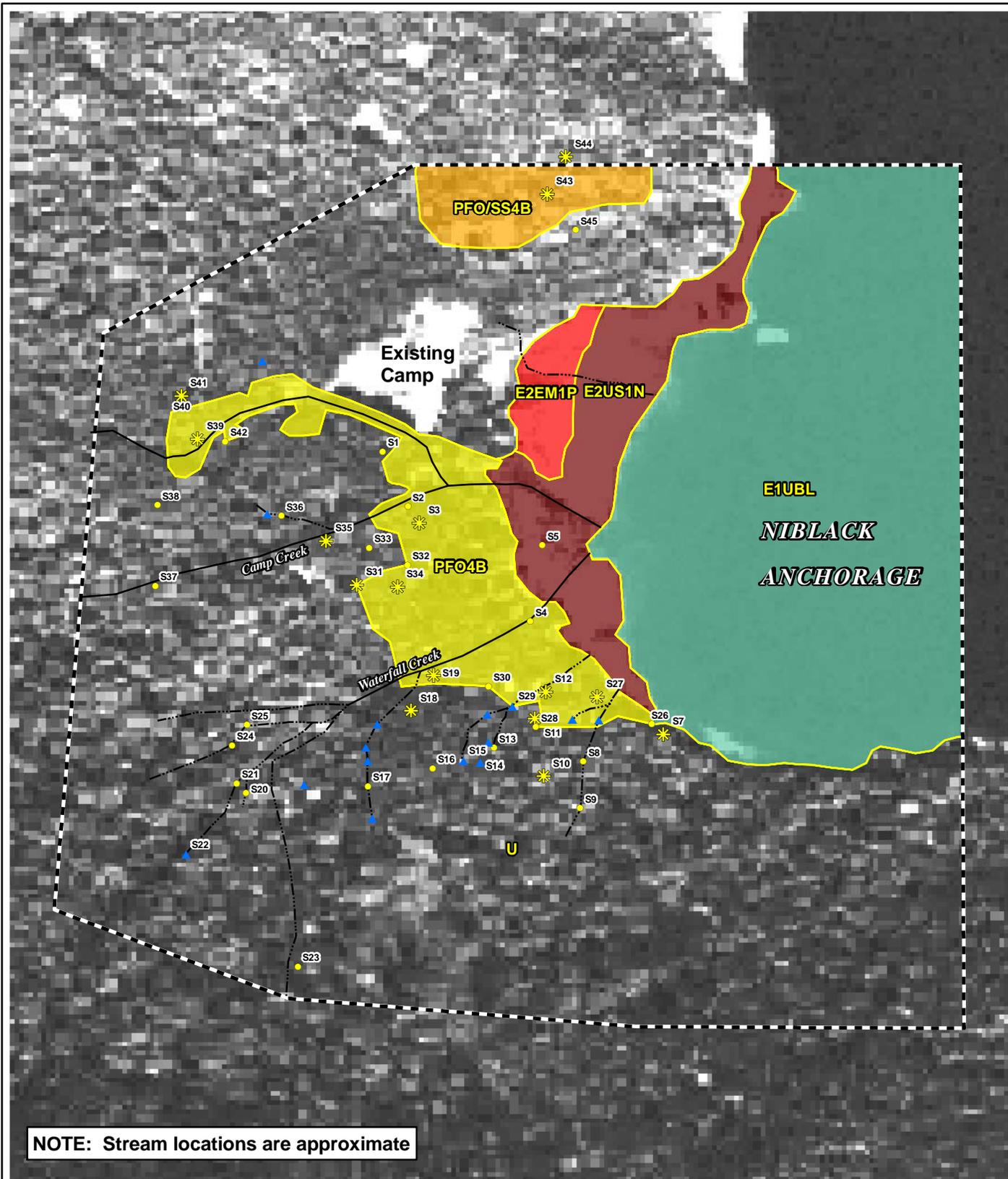
USFWS NWI Mapping

- Estuarine - subtidal
- Estuarine - intertidal
- Lakes
- Ponds
- Forested wetlands
- Scrub-shrub wetlands

USFWS Wetland Mapping

Niblack Mining Corp.
 Niblack Property
 Prince of Wales Island, Alaska
Preliminary Jurisdictional Determination

FIGURE 2



NOTE: Stream locations are approximate

MAP NOTES:

1. Aerial base from USFS Digital Orthophoto Quadrangle archive.
2. Wetland mapping produced by HDR Alaska, Inc.
3. Wetland mapping based on aerial photograph interpretation and February 2006 site reconnaissance survey.

N

Feet

0 200 400

LEGEND

Surveyed Area	Jurisdictional Waters of the U.S.
Data Collection Locations	E1UBL Estuarine - subtidal
Wetland Data Form	E2US1N Estuarine - unvegetated intertidal
Note/Photo Point	E2EM1P Estuarine - emergent intertidal
Drainage feature	PFO/SS4B Needleleaf forest/scrub-shrub wetland
Waterways	PFO4B Needleleaf forest wetland
Perennial stream	
Intermittent stream	

Wetlands
 Niblack Mining Corp.
 Niblack Property
 Prince of Wales Island, Alaska
Preliminary Jurisdictional Determination
FIGURE 3

Appendix A

WETLAND DETERMINATION FORMS AND SITE PHOTOGRAPHY

Niblack Property

Prince of Wales Island, Alaska

Preliminary Jurisdictional Determination

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NIBLACK PROPERTY</u>	Date: <u>Feb 15/06</u>
Applicant/Owner: _____	Borough: <u>PRINCE OF WALES ISLAND.</u>
Investigators: <u>JEFF SCHIVELY</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Closed needle-leaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>SITE 3</u>

General location:
Mark site on map, hang flag
VEGETATION

Plant Species	Stratum	%Cover	Indicator	Plant Species	Stratum	%Cover	Indicator
① <u>Tsuga heter</u>	<u>T</u>	<u>35</u>	<u>FAC</u>	9. <u>Ori Dil</u>	<u>H</u>	<u>T</u>	
② <u>Thu Pli</u>	<u>T</u>	<u>15</u>	<u>FAC</u>	10. <u>Dpl Hor</u>	<u>S</u>	<u>T</u>	
③ <u>Ble Spi</u>	<u>H</u>	<u>5</u>	<u>FAC</u>	⑪ <u>Pic sit</u>	<u>T</u>	<u>15</u>	<u>FACU</u>
④ <u>Cor Can</u>	<u>H</u>	<u>2</u>	<u>FACU</u>	12. <u>Tie Tri</u>	<u>H</u>	<u>T</u>	
5. <u>Cap Tri</u>	<u>H</u>	<u>T</u>		13. _____			
⑥ <u>Vac park</u>	<u>S</u>	<u>20</u>	<u>NI</u>	14. _____			
7. <u>Sam RAC</u>	<u>S</u>	<u>3</u>		15. _____			
8. <u>Lys Ame</u>	<u>H</u>	<u>T</u>		16. _____			

Circle Dominants Above Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>3/5 = 60%</u>	Method of determining dominants: <u>50/20</u> T = trace = <5%; not used in calculations above
Remarks: Describe veg. type (Viereck Level IV): <u>Closed needleleaf forest</u>	

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>n</u> Inundated</p> <p><u>y</u> Saturated in Upper 12 Inches</p> <p><u>n</u> Water Marks</p> <p><u>n</u> Drift Lines</p> <p><u>n</u> Sediment Deposits</p> <p><u>y</u> Drainage Patterns in Wetlands (describe below)</p> <p>Secondary Indicators (2 or more required):</p> <p><u>n</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>n</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>n/a</u> (in.)</p> <p>Depth to Free Water in Pit: <u>n/a</u> (in.) (just running in at that depth? <u> </u>)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	<p>Remarks: <u>Seasonably inundated low spots</u></p> <p>(Circle if Applicable) Indicator D3? D1? D6?</p> <p>B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks</p> <p>B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits</p>

SOILS

Soil Survey Map Unit Name (series, phase): _____	Field Drainage Class: <u>SWPD</u>
Map Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
0-2	Di							
2-12	De							
12-17+	Da							

Hydric Soil Indicators:

<u>Y</u> Histosol - 16+” and saturated	<u>n</u> Concretions
<u>n</u> Histic Epipedon - 8-16” and saturated	<u>n/a</u> High Organic Content in Surface Layer in Sandy Soils
<u>n</u> Sulfidic Odor - in upper foot	<u>n/a</u> Organic Streaking in Sandy Soils
Aquic Moisture Regime, based on _____	Listed on Local Hydric Soils List
<u>n</u> Reducing Conditions (use only for chemical test)	Listed on National Hydric Soils List
Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____	Other (Explain in Remarks) :
parent material? _____	Any 1995 NTCHS Hydric Soil Indicators? _____
<u>n</u> high content of organic material? _____	Any 2004 draft AK Hydric Soil Indicators? _____

Remarks

Major root zone: upper 12 inches.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

T. R. S. ; _____ Meridian
 Location collected in GPS? Y N
 GPS point name? _____
 Latitude: 682120 E
 Longitude: 6105578 N
 Datum: NAD 27
UTM ZONE 8

Photos: 4 photos
 Slope (%): 2
 Aspect (°): 55
 Landform: foot slope
 Topography: concave / convex / planar

NWI subclass: PFO4B
 HGM type: SLOPE
 Water source: discharge / precip.
 Water outflow: downslope
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S3 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S3 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S3 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S3 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Mine</u>	Date: <u>Feb 15 2006</u>
Applicant/Owner: <u>Niblack Mining Corporation</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>SITE # 7</u>

General location:

Mark site on map, hang flag

VEGETATION

Plant Species	Stratum	%Cover	Indicator	Plant Species	Stratum	%Cover	Indicator
1. TSM HER	T	40	FAC	9. COR CAN	H	2	FACU
2. PIC SIT	T	10		10. POL MUN	H	2	NI
3. DEL HOR	S	15	FACU	11. DRY DIL	H	T	
4. BLEE SPI	H	5	FAC	12. VAC PAR.	S	15	NI
5. COP TRI	H	T		13. _____	_____	_____	_____
6. TIR TRI	H	T		14. _____	_____	_____	_____
7. CAM RAC	S	20	FACU	15. _____	_____	_____	_____
8. THU PLI	T	5		16. _____	_____	_____	_____

Circle Dominants Above

Percent of Dominants that are OBL, FACW or FAC (excluding FACU): $\frac{2}{5} = 40\%$

Method of determining dominants: 50/20

T = trace = <5%; not used in calculations above

Remarks:

Describe veg. type (Vioreck Level IV): open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>no</u> Inundated</p> <p><u>yes</u> Saturated in Upper 12 Inches</p> <p><u>no</u> Water Marks</p> <p><u>no</u> Drift Lines</p> <p><u>no</u> Sediment Deposits</p> <p><u>yes</u> Drainage Patterns in Wetlands (describe below)</p> <p>Secondary Indicators (2 or more required):</p> <p><u>no</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>no</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>N/A</u> (in.)</p> <p>Depth to Free Water in Pit: <u>N/A</u> (in.) (just running in at that depth? <input type="checkbox"/>)</p> <p>Depth to Saturated Soil: <u>3</u> (in.)</p>	
<p>Remarks: <u>low wet areas</u></p> <p>(Circle if Applicable) Indicator D3? D1? D6?</p> <p>B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks</p> <p>B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits</p>	

SOILS

Soil Survey Map Unit Name (series, phase): _____

Field Drainage Class: SWPD

Map Taxonomy (Subgroup): _____

Field Observations Confirm Mapped Type? Yes No

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
0-3	Oi							
3-7	Oe						SIL	SABL
7-16	B	2.5YR 3/4						
16+	Cr							

Hydric Soil Indicators:

no Histosol - 16" and saturated no Concretions

no Histic Epipedon - 8-16" and saturated N/A High Organic Content in Surface Layer in Sandy Soils

no Sulfidic Odor - in upper foot N/A Organic Streaking in Sandy Soils

_____ Aquic Moisture Regime, based on _____ Listed on Local Hydric Soils List

no Reducing Conditions (use only for chemical test) _____ Listed on National Hydric Soils List

_____ Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____ Other (Explain in Remarks): _____

no parent material? _____ Any 1995 NTCHS Hydric Soil Indicators? _____

no high content of organic material? _____ Any 2004 draft AK Hydric Soil Indicators? _____

Remarks: C is rock
Major root zone: upper 9 inches

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No

Wetland Hydrology Present? Yes No

Hydric Soils Present? Yes No

Is this sampling point within a wetland? Yes No

Remarks:

T. R. S. ; _____ Meridian

Location collected in GPS? Y N

GPS point name? SITE 6

Latitude: 682395 E

Longitude: 6105402 N

Datum: _____

Photos: 4

Slope (%): 8

Aspect (°): 40

Landform: footslope

Topography: concave/convex/planar

NWI subclass: NA

HGM type: _____

Water source: upslope runoff + discharge

Water outflow: down slope

Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S7 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S7 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S7 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S7 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Mine</u>	Date: <u>Feb 15 / 2005</u>
Applicant/Owner: <u>Niblack Mine Corp.</u>	Borough: _____
Investigators: <u>Jeff Schirvelly</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Open needle leaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>S10</u>
(If needed, explain below.)	

General location:

Mark site on map, hang flag

VEGETATION

	Plant Species	Stratum	%Cover	Indicator		Plant Species	Stratum	%Cover	Indicator
①	PAC SIT	T	10	FACU	9.	COP TRI	H	Tr	
②	TRU HET	T	40	FAC	10.	COR CAN	H	3	
③	SAM RAC	S	55	FACU	11.	VAC PAR.	S	10	
4.	VAC ALA	S	Tr		12.	THU PLI	S	Tr	
⑤	BLE SPI	H	15	FAC	13.				
6.	OPL HOR	S	5		14.				
⑦	POL MUN	H	15	NI	15.				
8.					16.				

Circle Dominants Above	Method of determining dominants: 50/20
Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>2/4 = 50%</u>	T = trace = <5%; not used in calculations above

Remarks:
Describe veg. type (Vioreck Level IV): Open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>No</u> Inundated</p> <p><u>Yes</u> Saturated in Upper 12 Inches</p> <p><u>No</u> Water Marks</p> <p><u>No</u> Drift Lines</p> <p><u>No</u> Sediment Deposits</p> <p><u>Yes</u> Drainage Patterns in Wetlands (describe below) <u>small ephemeral drainages through hillsides</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>No</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>No</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>NA</u> (in.)</p> <p>Depth to Free Water in Pit: <u>NA</u> (in.) (just running in at that depth? ____)</p> <p>Depth to Saturated Soil: <u>6</u> (in.)</p>	

Remarks:
(Circle if Applicable) Indicator D3? D1? D6?
B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>MWD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-3</u>	<u>Oi</u>							
<u>3-6</u>	<u>Oe</u>							
<u>6-16+</u>	<u>B</u>	<u>5 yr 4/4</u>					<u>loam</u>	<u>SABL</u>
Hydric Soil Indicators:								
<u>No</u>	Histosol - 16" and saturated			<u>No</u>	Concretions			
<u>No</u>	Histic Epipedon - 8-16" and saturated			<u>NA</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>No</u>	Sulfidic Odor - in upper foot			<u>NA</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>No</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks) :			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>No</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks								
<u>Organic staining in B Horizon</u>								
Major root zone: <u>Upper 9"</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is this sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian
 Location collected in GPS? Y N
 GPS point name? S10
 Latitude: 682296 E 5
 Longitude: 6105463 N
 Datum: NAD 27, VTMBN

Photos: 4
 Slope (%): 33%
 Aspect (°): 25°
 Landform: Hillside
 Topography: concave/convex/planar

NWI subclass: U
 HGM type: NA
 Water source: precip/runoff
 Water outflow: downslope runoff
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S10 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S10 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S10 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S10 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Mine</u>	Date: <u>Feb 15/2005</u>
Applicant/Owner: <u>Niblack Mining Corp</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Open needle leaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S11</u>

General location:
Mark site on map, hang flag
VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
①	TSU HET	T	35	FAC	9.	MEN FER	S	5	
②	THU PLT	T	30	FAC	10.	SAM RAC	S	5	
③	CAL SHA	S	25	NI	11.	CAL CAN	H	Tr	
④	BLE SPI	H	30	FAC	12.	VAC PAR	S	3	
5.	COP CAN	H	4		13.	POL MVN	H	Tr	
6.	COP TRI	H	Tr		14.	LYC COM	B	Tr	
7.	TIE TRI	H	Tr		15.	VAC OVA	S	7	
8.					16.				

Circle Dominants Above	Method of determining dominants: 50/20
Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>3/3 = 100%</u>	T = trace = <5%; not used in calculations above
Remarks: Describe veg. type (Vioreck Level IV): <u>Open needleleaf forest</u>	

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>No</u> Inundated</p> <p><u>Yes</u> Saturated in Upper 12 Inches</p> <p><u>No</u> Water Marks</p> <p><u>No</u> Drift Lines</p> <p><u>Yes</u> Sediment Deposits</p> <p><u>Yes</u> Drainage Patterns in Wetlands (describe below) <i>low wet areas</i></p> <p>Secondary Indicators (2 or more required):</p> <p>____ Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>Yes</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0-0.5</u> (in.)</p> <p>Depth to Free Water in Pit: <u>NA</u> (in.) (just running in at that depth? <input type="checkbox"/>)</p> <p>Depth to Saturated Soil: <u>3</u> (in.)</p>	

Remarks:
(Circle if Applicable) Indicator D3? D1? D6?
B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-3</u>	<u>O_e</u>							
<u>3-17+</u>	<u>A</u>	<u>10 yr 3/2</u>					<u>SIL</u>	<u>SABL</u>
		<u>5 yr 4/3</u>					<u>L</u>	<u>SABL</u>
		<u>10 yr 2/1*</u>						
Hydric Soil Indicators:								
<u>No</u>	Histosol - 16+'' and saturated			<u>No</u>	Concretions			
<u>No</u>	Histic Epipedon - 8-16'' and saturated			<u>NA</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>No</u>	Sulfidic Odor - in upper foot			<u>NA</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>No</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks): _____			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>No</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks <u>* embedded organics</u>								
Major root zone: <u>Upper 9''</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is this sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian
 Location collected in GPS? Y N
 GPS point name? _____
 Latitude: 682293 E
 Longitude: 6105499 N
 Datum: NAD 27

Photos: 4
 Slope (%): 10%
 Aspect (°): 15°
 Landform: foot slope
 Topography: concave/convex/planar

NWI subclass: UV
 HGM type: NA
 Water source: precip/runoff
 Water outflow: down slope runoff
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S11 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S11 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S11 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S11 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Mine</u>	Date: <u>Feb 15 / 05</u>
Applicant/Owner: <u>Niblack Mining Corp.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S12</u>

General location:
Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
1	TSV HET	T	25	FAC	9	LYC COM	R	2 Tr	
2	TNV PL1	T	25	FAC	10	CAL CAN	H	2	
3	PIC SIT	T	5		11	LIS AME	H	7	OBL
4	GAL SHA	S	15	NI	12	SAM RAC	S	15	FACU
5	MEAI FER	S	2		13	TIE TRT	H	Tr	
6	BLE SPT	H	15	FAC	14	VAC PAR	S	4	
7	COO CAN	H	Tr		15				
8	COO TRI	H	Tr		16				

Circle Dominants Above	Method of determining dominants: 50/20
Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>4/5 = 80%</u>	T = trace = <5%; not used in calculations above

Remarks:
Describe veg. type (Viereck Level IV): Open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>No</u> Inundated</p> <p><u>Yes</u> Saturated in Upper 12 Inches</p> <p><u>No</u> Water Marks</p> <p><u>No</u> Drift Lines</p> <p><u>Yes</u> Sediment Deposits</p> <p><u>Yes</u> Drainage Patterns in Wetlands (describe below) <u>Flowing discharge</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>No</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>Yes</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0-2</u> (in.)</p> <p>Depth to Free Water in Pit: <u>17</u> (in.) (just running in at that depth? <input type="checkbox"/>)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	

Remarks:
(Circle if Applicable) Indicator D3? D1? D6?
B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-4</u>	<u>O_i</u>							
<u>4-6</u>	<u>O_e</u>							
<u>6-8</u>	<u>O_a</u>							
<u>8-17+</u>	<u>B</u>	<u>10 yr 3/1</u>					<u>SAL</u>	<u>C 20 M</u>
Hydric Soil Indicators:								
<u>No</u>	Histosol - 16+'' and saturated			<u>No</u>	Concretions			
<u>Yes</u>	Histic Epipedon - 8-16'' and saturated			<u>NA</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>Yes</u>	Sulfidic Odor - in upper foot @ 4''			<u>NA</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>Yes</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks): _____			
<u>No</u>	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks								
Major root zone: <u>upper 7''</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is this sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:	

T. R. S. ; _____ Meridian
 Location collected in GPS? Y N
 GPS point name? _____
 Latitude: 682300
 Longitude: 610520
 Datum: _____

Photos: 4
 Slope (%): 9%
 Aspect (°): 450
 Landform: fast slope
 Topography: concave/convex/planar

NWI subclass: PF04B
 HGM type: slope
 Water source: drainage swales, precip
 Water outflow: drainages
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S12 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S12 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S12 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S12 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Ni black Mine</u>	Date: <u>Feb 15/05</u>
Applicant/Owner: <u>Ni black Mining Corp</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open needle leaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>518</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
①	TSU HET	T	30	FAC	9.	RVB PED	H	Tr	
②	THV PLI	T	10	FAC	10.	VAC ALA	S	3	
③	PLC SIT	T	10	FACU	11.				
④	VAC PAR	S	20	NT	12.				
⑤	BLE SPI	H	17	FAC	13.				
6.	TIE TRI	H	Tr		14.				
7.	COR TAN	H	3		15.				
8.	GYM DRU	H	Tr		16.				

Circle Dominants Above

Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): 3/4 = 75%

Method of determining dominants: 50/20

T = trace = <5%; not used in calculations above

Remarks:

Describe veg. type (Viereck Level IV): Open needle leaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>No</u> Inundated</p> <p><u>Yes</u> Saturated in Upper 12 Inches</p> <p><u>No</u> Water Marks</p> <p><u>No</u> Drift Lines</p> <p><u>No</u> Sediment Deposits</p> <p><u>No</u> Drainage Patterns in Wetlands (describe below)</p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>N</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>NA</u> (in.)</p> <p>Depth to Free Water in Pit: <u>NO</u> (in.) (just running in at that depth? ___)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	

Remarks:

waterfall ck to NW

- (Circle if Applicable) Indicator D3? D1? D6?
- B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
- B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-3</u>	<u>O_i</u>							
<u>3-8</u>	<u>O_e</u>							
<u>6-13</u>	<u>B₁</u>	<u>7.5 yr 4/2</u>					<u>SAL</u>	<u>G10 & S20</u>
<u>13-18+</u>	<u>B₂</u>	<u>10 yr 3/2</u>					<u>SAL</u>	<u>G30 & S20</u>
Hydric Soil Indicators:								
<u>No</u>	Histosol - 16+'' and saturated			<u>No</u>	Concretions			
<u>No</u>	Histic Epipedon - 8-16'' and saturated			<u>NA</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>No</u>	Sulfidic Odor - in upper foot			<u>NA</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>No</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks): _____			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>No</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks								
Major root zone: <u>Upper 5''</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is this sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian
 Location collected in GPS? Y N
 GPS point name? _____
 Latitude: 692205 E
 Longitude: 6105507 N
 Datum: NAD 27 UTM 8N

Photos: 4
 Slope (%): 8
 Aspect (°): 25
 Landform: Footslope
 Topography: concave/convex/planar

NWI subclass: U
 HGM type: N/A
 Water source: Precip/runoff
 Water outflow: through soil/Ditches/pond
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S18 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S18 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S18 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S18 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Mine</u>	Date: <u>Feb 15/05</u>
Applicant/Owner: <u>Niblack Mining Corp</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schwely</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>519</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
1.	<u>Prc. sit</u>	<u>T</u>	<u>10</u>		9.	<u>Cop. tri.</u>	<u>H</u>	<u>T</u>	
②	<u>Thu. pli.</u>	<u>T</u>	<u>15</u>	<u>FAC</u>	10.	<u>Cot. can.</u>	<u>H</u>	<u>T</u>	
③	<u>Tsu. het.</u>	<u>T</u>	<u>30</u>	<u>FAC</u>	11.	<u>Gal. sha.</u>	<u>S</u>	<u>T</u>	
④	<u>Ble. spi.</u>	<u>H</u>	<u>5</u>	<u>FAC</u>	⑫	<u>Lis. amc.</u>	<u>H</u>	<u>7</u>	<u>OBL</u>
5.	<u>Tic. tri.</u>	<u>H</u>	<u>T</u>		13.				
6.	<u>Sam. fac.</u>	<u>S</u>	<u>2</u>		14.				
⑦	<u>Vac. par.</u>	<u>S</u>	<u>15</u>	<u>NI</u>	15.				
8.	<u>Men. fer.</u>	<u>S</u>	<u>T</u>		16.				

Circle Dominants Above

Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): 4/4 = 100%

Method of determining dominants: 50/20

T = trace = <5%; not used in calculations above

Remarks:

Describe veg. type (Vioreck Level IV): Open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>N</u> Drift Lines</p> <p><u>Y</u> Sediment Deposits - in low areas (discharge sites.)</p> <p><u>Y</u> Drainage Patterns in Wetlands (describe below) - low seasonally flooded areas, swales.</p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>Y</u> Water-Stained Leaves - in low areas</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>N/A</u> (in.)</p> <p>Depth to Free Water in Pit: <u>N/A</u> (in.) (just running in at that depth? <input type="checkbox"/>)</p> <p>Depth to Saturated Soil: <u>6'</u> (in.)</p>	
<p>Remarks:</p> <p>(Circle if Applicable) Indicator D3? D1? D6?</p> <p>B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks</p> <p>B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits</p>	

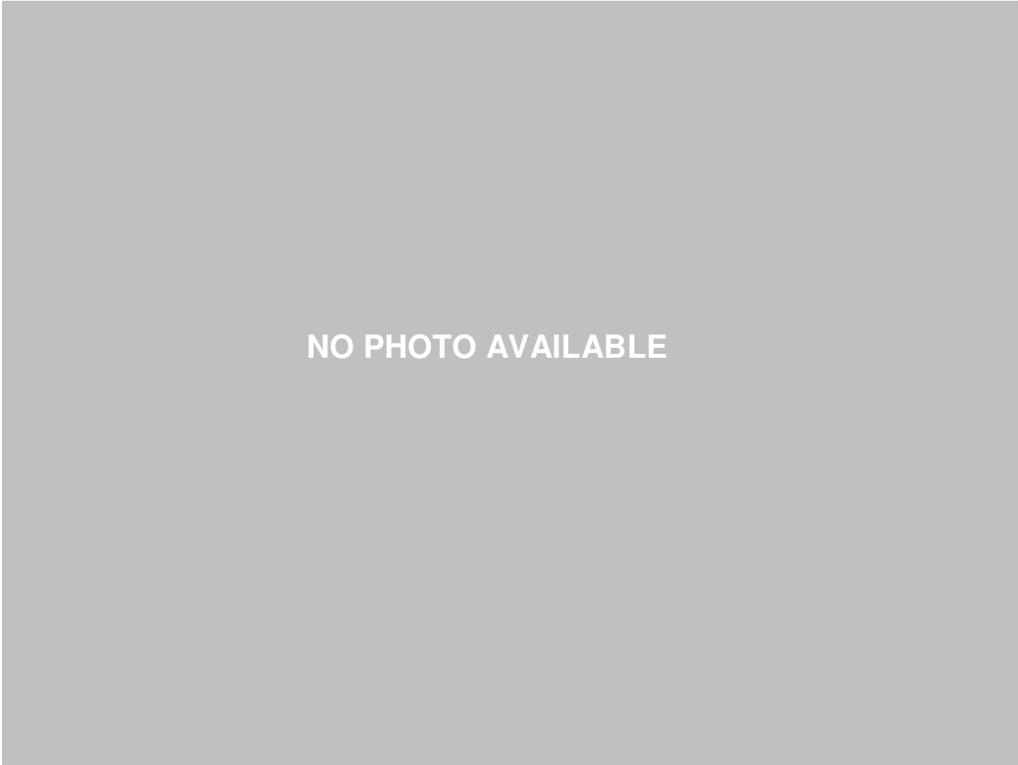
SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-6</u>	<u>Oi</u>							
<u>6-9</u>	<u>Oe</u>							<u>S20</u>
<u>9-11</u>	<u>Oa</u>							<u>S20</u>
<u>11-16+</u>	<u>A</u>	<u>10yr 3/2</u>					<u>SAL</u>	<u>G15, S30</u>
Hydric Soil Indicators:								
<u>No</u>	Histosol - 16+'' and saturated			<u>N</u>	Concretions			
<u>Yes</u>	Histic Epipedon - 8-16'' and saturated			<u>N/A</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>Yes</u>	Sulfidic Odor - in upper foot @ 4''			<u>N/A</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>Yes</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks) :			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>No</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks								
Major root zone: <u>Upper 6''</u>								

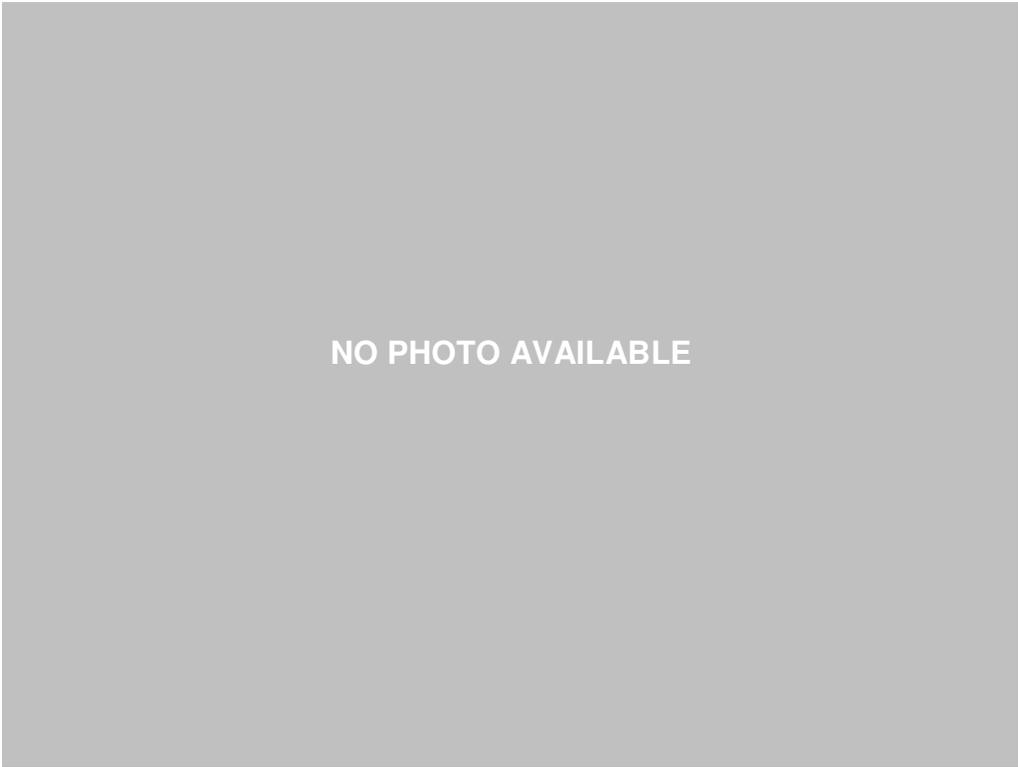
WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is this sampling point within a wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian	Photos: <u>4</u>	NWI subclass: <u>PFO4B</u>
Location collected in GPS? <input checked="" type="checkbox"/> N	Slope (%): <u>7</u>	HGM type: <u>Slope</u>
GPS point name? _____	Aspect (°): <u>45</u>	Water source: <u>discharge, precip</u>
Latitude: <u>682222</u>	Landform: <u>Foot slope</u>	Water outflow: <u>down slope, to creek</u>
Longitude: <u>6105540</u>	Topography: <u>concave</u> /convex/planar	Functions: _____
Datum: _____		



Niblack Property (Feb. 2006) - Wetland Data Form Site #S19 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S19 – Soils

NO PHOTO AVAILABLE

Niblack Property (Feb. 2006) - Wetland Data Form Site #S19 – Vegetation

NO PHOTO AVAILABLE

Niblack Property (Feb. 2006) - Wetland Data Form Site #S19 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NiBlack Property</u>	Date: <u>2-16-2006</u>
Applicant/Owner: <u>NiBlack Mining Corp.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively / Darwin Green</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Closed needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S27</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
①	Tsu. het.	T	55	FAC	⑨	Val. pars.	S	3	WVI
②	Thu. pli.	T	15	FAC	10.				
③	Lis. amer.	H	15	OBL	11.				
4.	Blu. spi.	H	T		12.				
5.	Tie. tri.	H	T		13.				
6.	Lyc. com.	B	T		14.				
⑦	Sam. rac.	S	3	FACU	15.				
8.	Pir. sit	T	3		16.				

Circle Dominants Above	Method of determining dominants: 50/20
Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>3/4 = 75%</u>	T = trace = <5%; not used in calculations above

Remarks: No dominant tree species

Describe veg. type (Vioreck Level IV): Closed needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>Y</u> Drift Lines</p> <p><u>Y</u> Sediment Deposits</p> <p><u>Y</u> Drainage Patterns in Wetlands (describe below) - <u>swale</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>Y</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>→ in swale</u> <u>0-4"</u> (in.)</p> <p>Depth to Free Water in Pit: <u>10"</u> (in.) (just running in at that depth? <u> </u>)</p> <p>Depth to Saturated Soil: <u>0"</u> (in.)</p>	

Remarks: Standing water throughout

(Circle if Applicable) Indicator D3? D1? D6?

B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks

B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____	Field Drainage Class: <u>PD</u>
Map Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-7</u>	<u>Oi</u>							
<u>7-11</u>	<u>Oe</u>							
<u>11-12+</u>	<u>B_r</u>	<u>10yr 3/2</u>				<u>SAND S&E</u>		<u>S70</u>

Hydric Soil Indicators:

<p><u>N</u> Histosol - 16+'' and saturated</p> <p><u>Y</u> Histic Epipedon - 8-16'' and saturated</p> <p><u>Yes</u> Sulfidic Odor - in upper foot @ 3''</p> <p>_____ Aquic Moisture Regime, based on _____</p> <p><u>Y</u> Reducing Conditions (use only for chemical test)</p> <p>_____ Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____</p> <p><u>No</u> parent material? _____</p> <p>_____ high content of organic material? _____</p>	<p><u>N</u> Concretions</p> <p><u>N/A</u> High Organic Content in Surface Layer in Sandy Soils</p> <p><u>N/A</u> Organic Streaking in Sandy Soils</p> <p>_____ Listed on Local Hydric Soils List</p> <p>_____ Listed on National Hydric Soils List</p> <p>_____ Other (Explain in Remarks) :</p> <p>_____ Any 1995 NTCHS Hydric Soil Indicators? _____</p> <p>_____ Any 2004 draft AK Hydric Soil Indicators? _____</p>
--	---

Remarks

Major root zone: Upper 4''

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this sampling point within a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

T. R. S. ; _____ Meridian

Location collected in GPS? 0 N

GPS point name? 527

Latitude: 682335 E

Longitude: 6165517 N

Datum: NAD 27, UTM 8N

Photos: 4 (2 soil, 2 veg)

Slope (%): 14%

Aspect (°): 65°

Landform: Swale

Topography: concave/convex/planar

NWI subclass: PFO4B

HGM type: slope

Water source: swale, upslope

Water outflow: swale, downslope

Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S27 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S27 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S27 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S27 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Project</u>	Date: <u>Feb 16/05</u>
Applicant/Owner: <u>Niblack Mining Corp</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open closed needle wood forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S-31</u>

General location:
Mark site on map, hang flag

VEGETATION

Plant Species	Stratum	%Cover	Indicator	Plant Species	Stratum	%Cover	Indicator
① TSV HET	T	30	FAC	⑥ SAM RAC	S	7	FAC
② THV PFI	T	20	FAC	10. RUB PED	H	Tr	
3. PIC SIT	T	10		11. COR CAN	H	Tr	
④ BLE SPI	H	15	FAC	12. GYM DRY	H	Tr	
5. TIE TRI	H	2		13. _____	_____	_____	_____
⑥ VAC PAR	S	20	INT	14. _____	_____	_____	_____
7. VAC ALA	S	3		15. _____	_____	_____	_____
8. _____	_____	_____	_____	16. _____	_____	_____	_____

Circle Dominants Above	Method of determining dominants: 50/20
Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>4/10 = 100%</u>	T = trace = <5%; not used in calculations above

Remarks:
Describe veg. type (Vioreck Level IV): Closed needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>Y</u> Drift Lines</p> <p><u>Y</u> Sediment Deposits</p> <p><u>Y</u> Drainage Patterns in Wetlands (describe below) <u>low wet areas</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>N</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>N/A</u> (in.)</p> <p>Depth to Free Water in Pit: <u>N/A</u> (in.) (just running in at that depth? <u> </u>)</p> <p>Depth to Saturated Soil: <u>5</u> (in.)</p>	

Remarks:
(Circle if Applicable) Indicator D3? D1? D6?
B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____	Field Drainage Class: <u>SWPD</u>
Map Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-1</u>	<u>Oi</u>							
<u>1-7</u>	<u>Oe</u>							
<u>7-16+</u>	<u>Br</u>	<u>10yr 4/2</u>					<u>SIL</u>	<u>615/515</u>

Hydric Soil Indicators:

<u>N</u> Histosol – 16+” and saturated	<u>N</u> Concretions
<u>N</u> Histic Epipedon – 8-16” and saturated	<u>N/A</u> High Organic Content in Surface Layer in Sandy Soils
<u>N</u> Sulfidic Odor - in upper foot	<u>N/A</u> Organic Streaking in Sandy Soils
_____ Aquic Moisture Regime, based on _____	_____ Listed on Local Hydric Soils List
<u>N</u> Reducing Conditions (use only for chemical test)	_____ Listed on National Hydric Soils List
_____ Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____	_____ Other (Explain in Remarks) :
<u>N</u> parent material? _____	_____ Any 1995 NTCHS Hydric Soil Indicators? _____
<u>N</u> high content of organic material? _____	_____ Any 2004 draft AK Hydric Soil Indicators? _____

Remarks embedded organic in B-horizon
 Major root zone: upper 9"

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Remarks: Soils are marginal w/ 7" of organics, appears to be more characteristic of upland sites sampled in area. Likely on the fringe boundary of upland/wetland.

T. R. S. : _____ Meridian	Photos: <u>4 (2 soil, 2veg)</u>	NWI subclass: <u>U</u>
Location collected in GPS? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Slope (%): _____	HGM type: <u>N/A</u>
GPS point name? _____	Aspect (°): <u>90</u>	Water source: <u>Precip, upslope runoff</u>
Latitude: <u>662168</u>	Landform: <u>footslope</u>	Water outflow: <u>↓ thru soil</u>
Longitude: <u>6105594</u>	Topography: <u>concave</u> /convex/planar	Functions: _____
Datum: _____		



Niblack Property (Feb. 2006) - Wetland Data Form Site #S31 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S31 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S31 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S31 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>Niblack Mine</u>	Date: <u>February 16, 2006</u>
Applicant/Owner: <u>Niblack Mining Corp.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S-34</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
1.	TSU HET	T	20	FAC	9.	COR CAN	H	T	
2.	THU PLI	T	20	FAC	10.	VAC ALA	S	5	
3.	VAC PAR	S	25	FAC	11.	PIC SIT	T	7	
4.	TIE TRI	H	3	FAC	12.	SAN RAC	S	2	
5.	COP TRI	H	T		13.	LIS ANE	H	T	
6.	BLE SPI	H	5	FAC	14.				
7.	RUB PED	H	T		15.				
8.					16.				

Circle Dominants Above

Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): 5/5 = 100%

Method of determining dominants: 50/20

T = trace = <5%; not used in calculations above

Remarks:

Describe veg. type (Viereck Level IV): open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>N</u> Drift Lines</p> <p><u>Y</u> Sediment Deposits</p> <p><u>Y</u> Drainage Patterns in Wetlands (describe below) <u>low inundated areas</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>N</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0-3</u> (in.)</p> <p>Depth to Free Water in Pit: <u>10</u> (in.) (just running in at that depth? <u> </u>)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	

Remarks:

(Circle if Applicable) Indicator D3? D1? D6?

B4: Mat or Algal Crust /Marl

B5: Iron Deposits

B6: Surface Soil Cracks

B7: Inundation on Aerials

C3: Dry-Season H2O Table

C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____

Field Drainage Class: PD

Field Observations Confirm Mapped Type? Yes No

Map Taxonomy (Subgroup): _____

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
0-4	O _i							
4-8	O _e							
8-16+	O _a							

Hydric Soil Indicators:

- Y Histosol - 16" and saturated N Concretions
- N Histic Epipedon - 8-16" and saturated N/A High Organic Content in Surface Layer in Sandy Soils
- Y Sulfidic Odor - in upper foot at 5 inches N/A Organic Streaking in Sandy Soils
- _____ Aquic Moisture Regime, based on _____ Listed on Local Hydric Soils List
- Y Reducing Conditions (use only for chemical test) _____ Listed on National Hydric Soils List
- _____ Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____ Other (Explain in Remarks): _____
- N high content of organic material? _____ Any 1995 NTCHS Hydric Soil Indicators? _____
- _____ Any 2004 draft AK Hydric Soil Indicators? _____

Remarks

Major root zone: upper 8 inches

WETLAND DETERMINATION

- Hydrophytic Vegetation Present? Yes No
- Wetland Hydrology Present? Yes No
- Hydric Soils Present? Yes No
- Is this sampling point within a wetland? Yes No

Remarks:

T. R. S. ; _____ Meridian
 Location collected in GPS? Y N
 GPS point name? S-34
 Latitude: 682199 E
 Longitude: 6105591 N
 Datum: _____

Photos: 4 (2 soil 2 veg)
 Slope (%): 6
 Aspect (°): 40
 Landform: foot slope
 Topography: concave/convex/planar

NWI subclass: TFO 4B
 HGM type: slope
 Water source: discharge + upflow run
 Water outflow: downslope
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S34 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S34 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S34 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S34 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NIBLACK MINE</u>	Date: <u>FEBRUARY 16/2006</u>
Applicant/Owner: <u>NIBLACK MINING CORP.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S-35</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
①	THV PLI	T	15	FAC	9.	LYC COM	B	T	
②	TSU HET	T	35	FAC	10.	COR CAN	H	T	
③	VAC PAR	S	15	NI	11.	TIE TRI	H	T	
4.	VAC ALA	S	2		12.	RUB PED	H	T	
5.	MEN FER	S	T		13.				
6.	RUB PED	H	T		14.				
⑦	BLE SPI	H	25	FAC	15.				
8.	POL MUN	H	T		16.				

Circle Dominants Above

Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): 3/3 = 100%

Method of determining dominants: 50/20

T = trace = <5%; not used in calculations above

Remarks:

Describe veg. type (Vioreck Level IV): open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>___ Stream, Lake, or Tide Gauge</p> <p>___ Aerial Photographs</p> <p>___ Other</p> <p>___ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>N</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>N</u> Drift Lines</p> <p><u>N</u> Sediment Deposits</p> <p><u>N</u> Drainage Patterns in Wetlands (describe below)</p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>N</u> Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>N/A</u> (in.)</p> <p>Depth to Free Water in Pit: <u>N/A</u> (in.) (just running in at that depth? ___)</p> <p>Depth to Saturated Soil: <u>N/A</u> (in.)</p>	
<p>Remarks:</p> <p>(Circle if Applicable) Indicator D3? D1? D6?</p> <p>B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks</p> <p>B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits</p>	

SOILS

Soil Survey Map Unit Name (series, phase): _____	Field Drainage Class: <u>MWD</u>
Map Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-3</u>	<u>Oi</u>						<u>SIL SABL</u>	
<u>3-5</u>	<u>A</u>	<u>10YR 3/1</u>					<u>Loam SABL G20</u>	
<u>5-9</u>	<u>B1</u>	<u>7.5YR 5/1</u>					<u>SAL GR G20 S20</u>	
<u>9-16+</u>	<u>B2</u>	<u>5YR 4/3</u>	<u>60%</u>				<u>SAL GR</u>	
		<u>7.5YR 5/1</u>	<u>40%</u>					

Hydric Soil Indicators:

<u>N</u> Histosol - 16" and saturated	<u>N</u> Concretions
<u>N</u> Histic Epipedon - 8-16" and saturated	<u>N/A</u> High Organic Content in Surface Layer in Sandy Soils
<u>N</u> Sulfidic Odor - in upper foot	<u>N/A</u> Organic Streaking in Sandy Soils
Aquic Moisture Regime, based on _____	Listed on Local Hydric Soils List
<u>N</u> Reducing Conditions (use only for chemical test)	Listed on National Hydric Soils List
Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____	Other (Explain in Remarks) : _____
parent material? _____	Any 1995 NTCHS Hydric Soil Indicators? _____
<u>N</u> high content of organic material? _____	Any 2004 draft AK Hydric Soil Indicators? _____

Remarks or some organic staining in B1 horizon.
Major root zone: upper 7 inches

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Remarks:

T. R. S. ; _____ Meridian
Location collected in GPS? Y N
GPS point name? _____
Latitude: 602146 E
Longitude: 0105620 N
Datum: _____

Photos: 4 (2 soil, 2 veg)
Slope (%): 34
Aspect (°): 78
Landform: ridge
Topography: concave/convex/planar

NWI subclass: U
HGM type: N/A
Water source: precip
Water outflow: through soil + down slope
Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S35 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S35 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S35 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S35 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NIBLACK PROJECT</u>	Date: <u>FEBRUARY 10 / 2006</u>
Applicant/Owner: <u>Niblack mining corp.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>Open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>5-39</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
1	THU PLI	T	10	FAC	9.	OPL HOR	S	T	
2	TSU HET	T	20	FAC	10.	LYC COM	B	T	
3	PIC SIT	T	10	FACU	11.	VAC PAR	S	15	
4.	POL MVN	H	T		12.	VAC ALA	S	T	
5	BLE SPI	H	3	FAC	13.	COR CAN	H	T	
6	TIE TRI	H	2	FAC	14.				
7	CAM RAC	S	35	FACU	15.				
8.					16.				

Circle Dominants Above	Method of determining dominants: 50/20
Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): <u>4/6 = 67%</u>	T = trace = <5%; not used in calculations above

Remarks:
Describe veg. type (Viereck Level IV): open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>Y</u> Drift Lines</p> <p><u>Y</u> Sediment Deposits</p> <p><u>Y</u> Drainage Patterns in Wetlands (describe below) <u>active drainage</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>Y</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0-6</u> (in.)</p> <p>Depth to Free Water in Pit: <u>N/A</u> (in.) (just running in at that depth? <input type="checkbox"/>)</p> <p>Depth to Saturated Soil: <u>5</u> (in.)</p>	

Remarks:
(Circle if Applicable) Indicator D3? D1? D6?
B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-2</u>	<u>Oi</u>							
<u>2-5</u>	<u>De</u>							
<u>5-10</u>	<u>Oa</u>							
<u>10-16+</u>	<u>B</u>	<u>10YR 4/3</u>					<u>SAL</u> <u>SABL</u>	
Hydric Soil Indicators:								
<u>N</u>	Histosol - 16+'' and saturated			<u>N</u>	Concretions			
<u>Y</u>	Histic Epipedon - 8-16'' and saturated			<u>N/A</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>Y</u>	Sulfidic Odor - in upper foot at 6 inches			<u>N/A</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>Y</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks) :			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>N</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks								
Major root zone: <u>upper 7 inches.</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is this sampling point within a wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian	Photos: <u>4 (2 soil 2 veg)</u>	NWI subclass: <u>PFO4C/R3</u>
Location collected in GPS? Y N	Slope (%): <u>5%</u>	HGM type: <u>slope</u>
GPS point name? _____	Aspect (°): <u>63</u>	Water source: <u>stream</u>
Latitude: <u>132° 08' 57. 6 570'' N</u>	Landform: <u>swale</u>	Water outflow: <u>stream</u>
Longitude: <u>55° 03' 59. 727'' N</u>	Topography: <u>concave</u> /convex/planar	Functions: _____
Datum: _____		



Niblack Property (Feb. 2006) - Wetland Data Form Site #S39 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S39 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S39 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S39 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NIBLACK PROJECT</u>	Date: <u>FEBRUARY 16/2006</u>
Applicant/Owner: <u>Niblack Mining Corp.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S-41</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
1	TSU HET	T	30	FAC	9.				
2	PIC SIT	T	15	FACU	10.				
3	THU PLB1	T	15	FAC	11.				
4	BLE SPI	H	15	FAC	12.				
5	PDL MVN	H	5	NI	13.				
6.	TIE TRI	H	T		14.				
7.					15.				
8.					16.				

Circle Dominants Above

Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): 3/4 = 75%

Method of determining dominants: 50/20

T = trace = <5%; not used in calculations above

Remarks:

Describe veg. type (Viereck Level IV): open needleleaf forest

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>N</u> Water Marks</p> <p><u>N</u> Drift Lines</p> <p><u>N</u> Sediment Deposits</p> <p><u>N</u> Drainage Patterns in Wetlands (describe below)</p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>N</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>N/A</u> (in.)</p> <p>Depth to Free Water in Pit: <u>N/A</u> (in.) (just running in at that depth? ____)</p> <p>Depth to Saturated Soil: <u>4</u> (in.)</p>	

Remarks:

(Circle if Applicable) Indicator D3? D1? D6?

B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks

B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-1</u>	<u>Oi</u>							
<u>1-4</u>	<u>Oe</u>							
<u>4-8</u>	<u>Ar</u>	<u>10YR 3/2</u>					<u>SIL</u>	<u>G10 S40</u>
<u>8-13+</u>	<u>Br</u>	<u>5YR 4/3</u>					<u>SAL</u>	<u>G10 S50</u>
Hydric Soil Indicators:								
<u>N</u>	Histosol – 16+” and saturated			<u>N</u>	Concretions			
<u>N</u>	Histic Epipedon – 8-16” and saturated			<u>N/A</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>N</u>	Sulfidic Odor - in upper foot			<u>N/A</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>N</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks) :			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>N</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks								
Major root zone: <u>upper 5 inches</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is this sampling point within a wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian	Photos: <u>4 (2 soil 2 veg)</u>	NWI subclass: <u>U</u>
Location collected in GPS? Y N	Slope (%): <u>28</u>	HGM type: <u>N/A</u>
GPS point name? _____	Aspect (°): <u>6 (S)</u>	Water source: <u>precip + runoff</u>
Latitude: <u>132° 08' 57.855" E</u>	Landform: <u>hillside</u>	Water outflow: <u>downslope</u>
Longitude: <u>55° 04' 01.111" N</u>	Topography: <u>concave</u> / convex / planar	Functions: _____
Datum: _____		



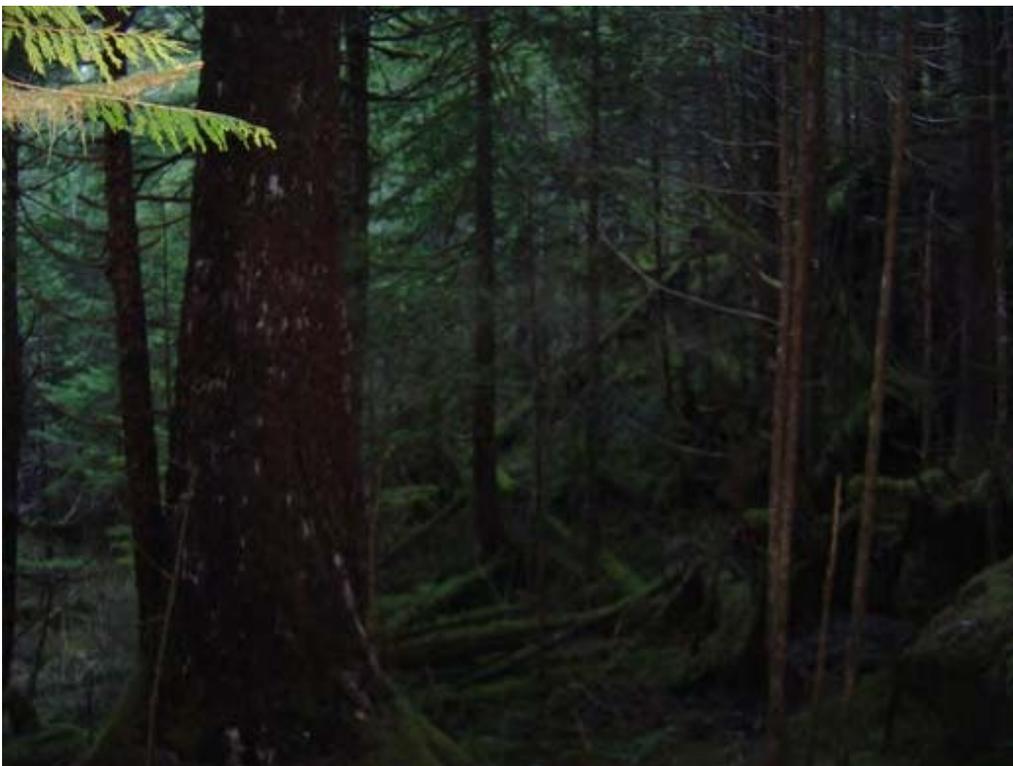
Niblack Property (Feb. 2006) - Wetland Data Form Site #S41 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S41 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S41 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S41 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NIBLACK PROJECT</u> Applicant/Owner: <u>N. Black Mining Corp.</u> Investigators: <u>Jeff Schively</u>	Date: <u>FEBRUARY 16 / 2006</u> Borough: <u>N/A</u> State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Veg. community type: <u>Open needleleaf forest</u> Map number: _____ Plot ID: <u>S-43</u>

General location:
Mark site on map, hang flag
VEGETATION

Plant Species	Stratum	%Cover	Indicator	Plant Species	Stratum	%Cover	Indicator
① THU PLE	T	25	FAC	9. PIC SIT	T	2	
② TSU HET	T	15	FAC	10. LYC COM	B	T	
③ GAL SHA	S	40%	NI	11. BE TETRI	H	T	
④ BLE SPI	H	7	FAC	⑫ LIS ANE	H	10	OBL
⑤ VAC ALA	S	10		13. _____	_____	_____	_____
6. COR CAN	H	4		14. _____	_____	_____	_____
7. VAC PAR	S	5		15. _____	_____	_____	_____
8. unknown grass sp.	H	T		16. _____	_____	_____	_____

Circle Dominants Above Method of determining dominants: 50/20
 Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): 4/4 = 100% T = trace = <5%; not used in calculations above

Remarks:
 Describe veg. type (Vioreck Level IV): Open needleleaf forest

HYDROLOGY

Recorded Data (Describe in Remarks): _____ Stream, Lake, or Tide Gauge _____ Aerial Photographs _____ Other _____ No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <u>N</u> Inundated <u>Y</u> Saturated in Upper 12 Inches <u>N</u> Water Marks <u>N</u> Drift Lines <u>Y</u> Sediment Deposits <u>Y</u> Drainage Patterns in Wetlands (describe below) <u>(low ponded areas)</u>
Field Observations: Depth of Surface Water: <u>0-2</u> (in.) Depth to Free Water in Pit: <u>18</u> 18 (in.) (just running in at that depth? <input type="checkbox"/> Depth to Saturated Soil: <u>6</u> (in.)	Secondary Indicators (2 or more required): <u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots) <u>Y</u> Water-Stained Leaves _____ Local Soil Survey Data _____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U) _____ Other (Explain in Remarks)

Remarks: discharge seeps throughout site.
 (Circle if Applicable) Indicator D3? D1? D6?
 B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
 B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____				Field Drainage Class: <u>SWPD</u>				
Map Taxonomy (Subgroup): _____				Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Profile Description:								
Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
0-7	Oi							
7-8	A	10YR 3/2					SIL SABL	
8-18+	B	7.5YR 4/2					SICL MASSIVE	
Hydric Soil Indicators:								
<u>N</u>	Histosol - 16+'' and saturated			<u>N</u>	Concretions			
<u>N</u>	Histic Epipedon - 8-16'' and saturated			<u>N/A</u>	High Organic Content in Surface Layer in Sandy Soils			
<u>Y</u>	Sulfidic Odor - in upper foot at 6 inches - faint			<u>N/A</u>	Organic Streaking in Sandy Soils			
	Aquic Moisture Regime, based on _____				Listed on Local Hydric Soils List			
<u>Y</u>	Reducing Conditions (use only for chemical test)				Listed on National Hydric Soils List			
	Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____				Other (Explain in Remarks): _____			
	parent material? _____				Any 1995 NTCHS Hydric Soil Indicators? _____			
<u>N</u>	high content of organic material? _____				Any 2004 draft AK Hydric Soil Indicators? _____			
Remarks <u>organic staining in upper B horizon</u>								
Major root zone: <u>upper 9 inches</u>								

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Is this sampling point within a wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks:	

T. R. S. ; _____ Meridian
 Location collected in GPS? N
 GPS point name? 643
 Latitude: 55 04.104.489
 Longitude: 132 08.42.257
 Datum: _____

Photos: 5 (2 soil, 2 veg, 1 hydro)
 Slope (%): 25
 Aspect (°): 38 (S)
 Landform: bench
 Topography: concave/convex/planar

NWI subclass: PFO 4B
 HGM type: slope
 Water source: precip + discharge
 Water outflow: downslope runoff
 Functions: _____



Niblack Property (Feb. 2006) - Wetland Data Form Site #S43 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S43 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S43 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S43 – Vegetation

**DATA FORM (modified from Corps form)
ROUTINE WETLAND DETERMINATION**

Project Site: <u>NIBLACK</u>	Date: <u>FEBRUARY 16 / 2006</u>
Applicant/Owner: <u>Niblack Mining Corp.</u>	Borough: <u>N/A</u>
Investigators: <u>Jeff Schrively</u>	State: <u>Alaska</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Veg. community type: <u>open needleleaf forest</u>
Is the site significantly disturbed (atypical situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Map number: _____
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain below.)	Plot ID: <u>S-44</u>

General location:

Mark site on map, hang flag

VEGETATION

#	Plant Species	Stratum	%Cover	Indicator	#	Plant Species	Stratum	%Cover	Indicator
1	THU PLE	T	30 20	FAC	9.	COP TRI	H	T	
2	TSU MER	T	20	FAC	10.	BLE SPI	H	3	
3	GAL SHA	S	40	NI	11.	LYC COM	B	T	
4.	AND POL	S	T		12.	CAL CAN	H	4	
5.	LIN BDR	S	T		13.	EMP NIG	S	T	
6.	COR CAN	H	T		14.	VAC VIT	S	T	
7.	TRI EUR	H	T		15.	VAC PAR	S	5	
8.	LED ORL	S	T		16.	Caro PAL	H	10	OBL

Circle Dominants Above
 Percent of Dominants that are OBL, FACW or FAC (excluding FAC-): $4/4 = 100\%$ (Method of determining dominants: 50/20
 T = trace = <5%; not used in calculations above)

Remarks:
 Describe veg. type (Vioreck Level IV): open needleleaf forest
 17 PIN CON T 5
 18 LIS AME H 10 OBL

HYDROLOGY

<p>Recorded Data (Describe in Remarks):</p> <p>____ Stream, Lake, or Tide Gauge</p> <p>____ Aerial Photographs</p> <p>____ Other</p> <p>____ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><u>N</u> Inundated</p> <p><u>Y</u> Saturated in Upper 12 Inches</p> <p><u>Y</u> Water Marks</p> <p><u>N</u> Drift Lines</p> <p><u>Y</u> Sediment Deposits</p> <p><u>Y</u> Drainage Patterns in Wetlands (describe below) <u>(ponded areas)</u></p> <p>Secondary Indicators (2 or more required):</p> <p><u>N</u> Oxidized Root Channels in Upper 12 Inches (along living roots)</p> <p><u>Y</u> Water-Stained Leaves</p> <p>____ Local Soil Survey Data</p> <p>____ FAC-Neutral Test (more dominants FACW + OBL than FACU+ U)</p> <p>____ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p>Depth of Surface Water: <u>0-3ft.</u> (in.)</p> <p>Depth to Free Water in Pit: <u>18</u> (in.) (just running in at that depth? <input type="checkbox"/>)</p> <p>Depth to Saturated Soil: <u>0</u> (in.)</p>	

Remarks:
 (Circle if Applicable) Indicator D3? D1? D6?
 B4: Mat or Algal Crust /Marl B5: Iron Deposits B6: Surface Soil Cracks
 B7: Inundation on Aerials C3: Dry-Season H2O Table C5: Salt Deposits

SOILS

Soil Survey Map Unit Name (series, phase): _____	Field Drainage Class: <u>PD</u>
Map Taxonomy (Subgroup): _____	Field Observations Confirm Mapped Type? <input type="checkbox"/> Yes <input type="checkbox"/> No

Profile Description:

Depth (inches)	Horizon	Matrix Color	Mottle or Redox Feature Colors	Redox or Mottles			Texture	Comments (moisture, coarse frags)
				abundance	size	contrast		
				f/c/m	1/2/3/4/5	F/D/P		
<u>0-18+</u>	<u>Oi</u>							

Hydric Soil Indicators:

<u>Y</u> Histosol – 16+” and saturated	<u>N</u> Concretions
<u>N</u> Histic Epipedon – 8-16” and saturated	<u>N/A</u> High Organic Content in Surface Layer in Sandy Soils
<u>Y</u> Sulfidic Odor - in upper foot (<u>4 inches</u>)	<u>N/A</u> Organic Streaking in Sandy Soils
_____ Aquic Moisture Regime, based on _____	Y Listed on Local Hydric Soils List
<u>Y</u> Reducing Conditions (use only for chemical test)	_____ Listed on National Hydric Soils List
_____ Gleyed or Low-Chroma Colors: likely caused by reducing conditions? _____	_____ Other (Explain in Remarks) :
<u>N</u> parent material? _____	_____ Any 1995 NTCHS Hydric Soil Indicators? _____
_____ high content of organic material? _____	_____ Any 2004 draft AK Hydric Soil Indicators? _____

Remarks

Major root zone: upper 11 inches.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this sampling point within a wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

T. R. S. ; _____ Meridian	Photos: <u>5 (2 soil, 2 veg, 1 hydro)</u>	NWI subclass: <u>PSS 4B</u>
Location collected in GPS? <u>Y</u> <u>N</u>	Slope (%): <u>12 40</u>	HGM type: <u>flat</u>
GPS point name? _____	Aspect (°): <u>70 (N)</u>	Water source: <u>discharge precip</u>
Latitude: <u>132° 08' 41.354" W</u>	Landform: <u>bench</u>	Water outflow: <u>downslope recharge</u>
Longitude: <u>55° 04' 05.624" N</u>	Topography: <u>concave</u> /convex/planar	Functions: _____
Datum: _____		



Niblack Property (Feb. 2006) - Wetland Data Form Site #S44 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S44 – Soils



Niblack Property (Feb. 2006) - Wetland Data Form Site #S44 – Vegetation



Niblack Property (Feb. 2006) - Wetland Data Form Site #S44 – Vegetation