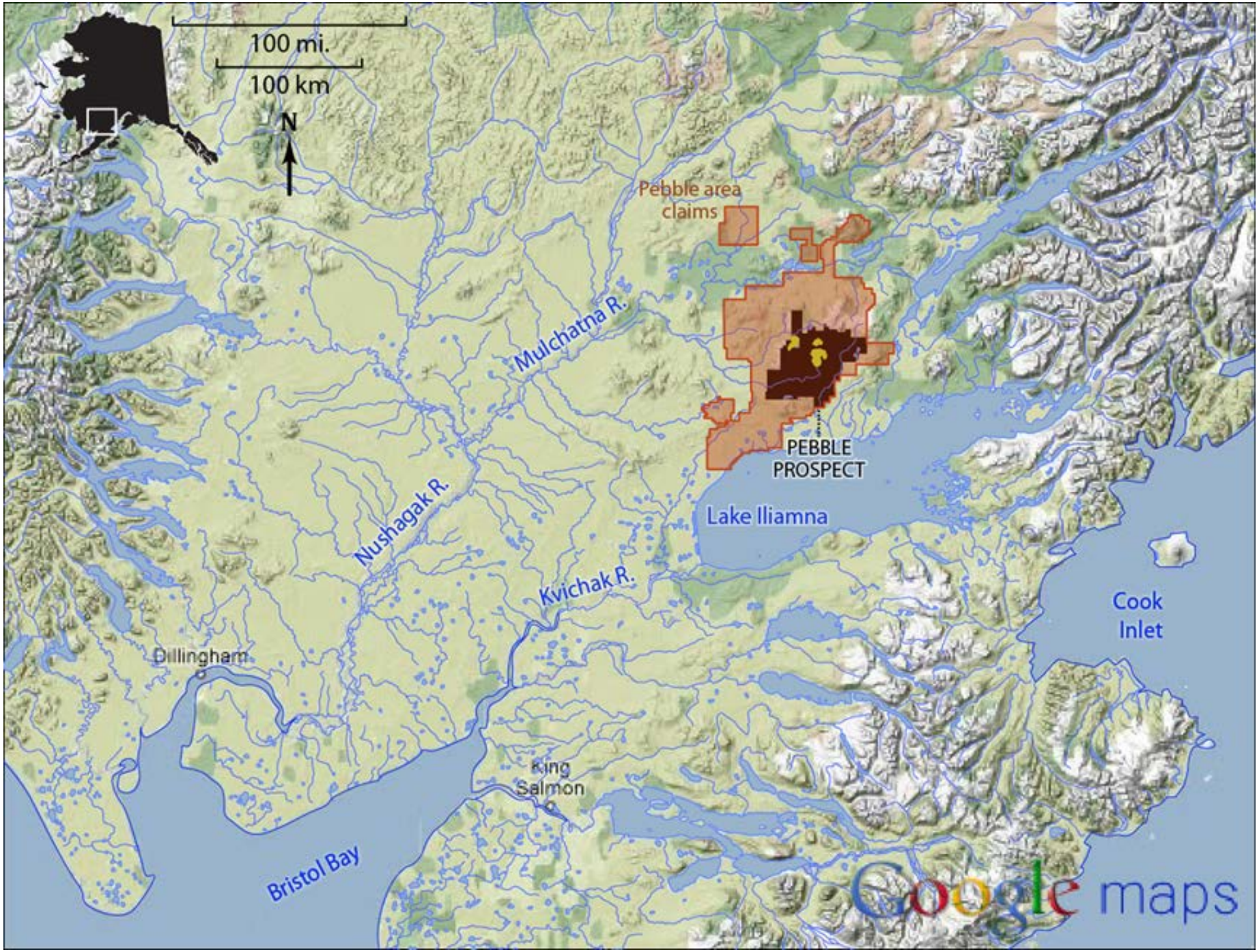
100 mi.
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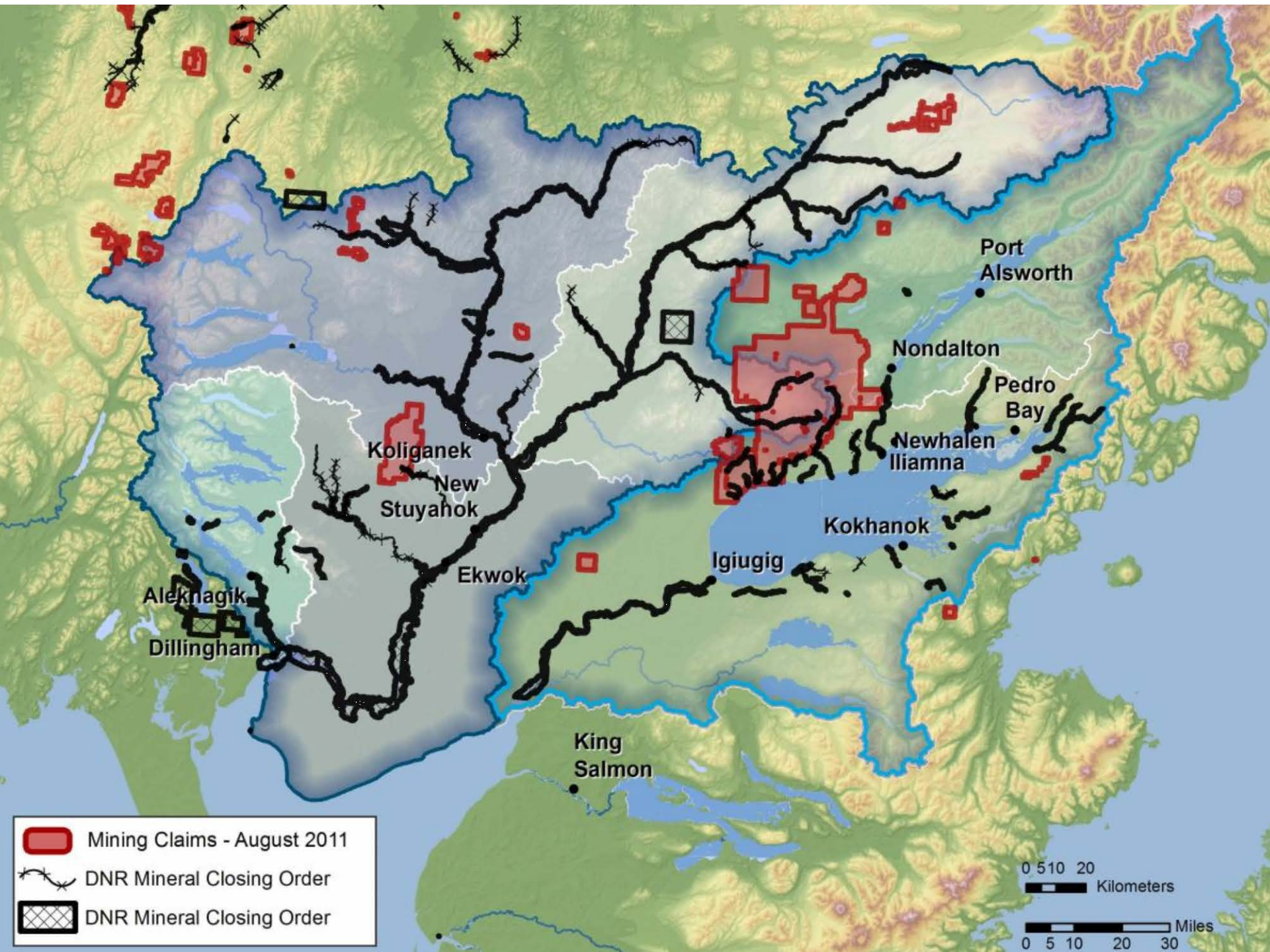
N
Pebble area claims
Mulchatna R.
PEBBLE PROSPECT
Lake Iliamna
Nushagak R.
Kvichak R.
Cook Inlet
Dillingham
King Salmon
Bristol Bay
Google maps


Port Alsworth
Nondalton
Pedro Bay
Newhalen
Iliamna
Kokhanok
Igiugig
Koliganek
New Stuyahok
Ekwok
Aleknagik
Dillingham
King Salmon
Mining Claims - August 2011
DNR Mineral Closing Order
DNR Mineral Closing Order
0 5 10 20
Kilometers
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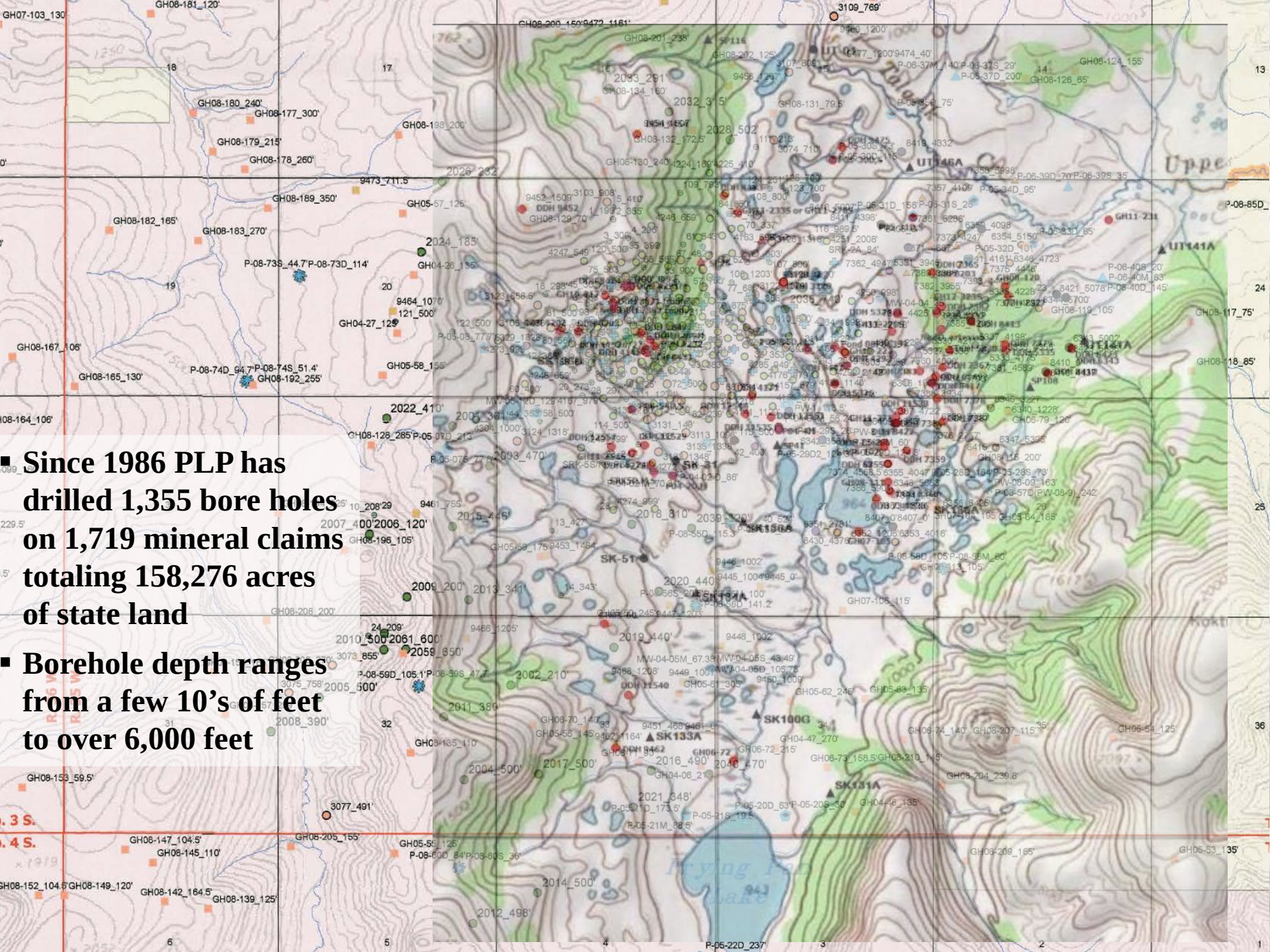
Miles



- **Since 1986 PLP has drilled 1,355 bore holes on 1,719 mineral claims totaling 158,276 acres of state land**
- **Borehole depth ranges from a few 10's of feet to over 6,000 feet**


- Visited 150 sites and documented 107 sites in 5 days
- Collected water & soil samples


Example of Multiple Drill Sites, near P04-4M, 3Aug16
08/03/2016 15:07

# SURVEY FINDINGS – Problems in 4 General Areas:

- Soil at seventeen sites had acidic soils with pH lower than 4.5
- Artesian dill holes with elevated levels of sulfate, copper, and other heavy metals
- Petroleum contamination detected around some drill sites
- Steel drill casings remaining above ground pose a danger to snow machines

| Initial Sites | Documented Sites | Sites with Environmental Issues | Sites with only Minor Issues | Fully Reclaimed Sites |
|---|---|---|---|---|
| *1,355* | *107 (8%)* | *44 (41%)* | *27 (25%)* | *36 (34%)* |

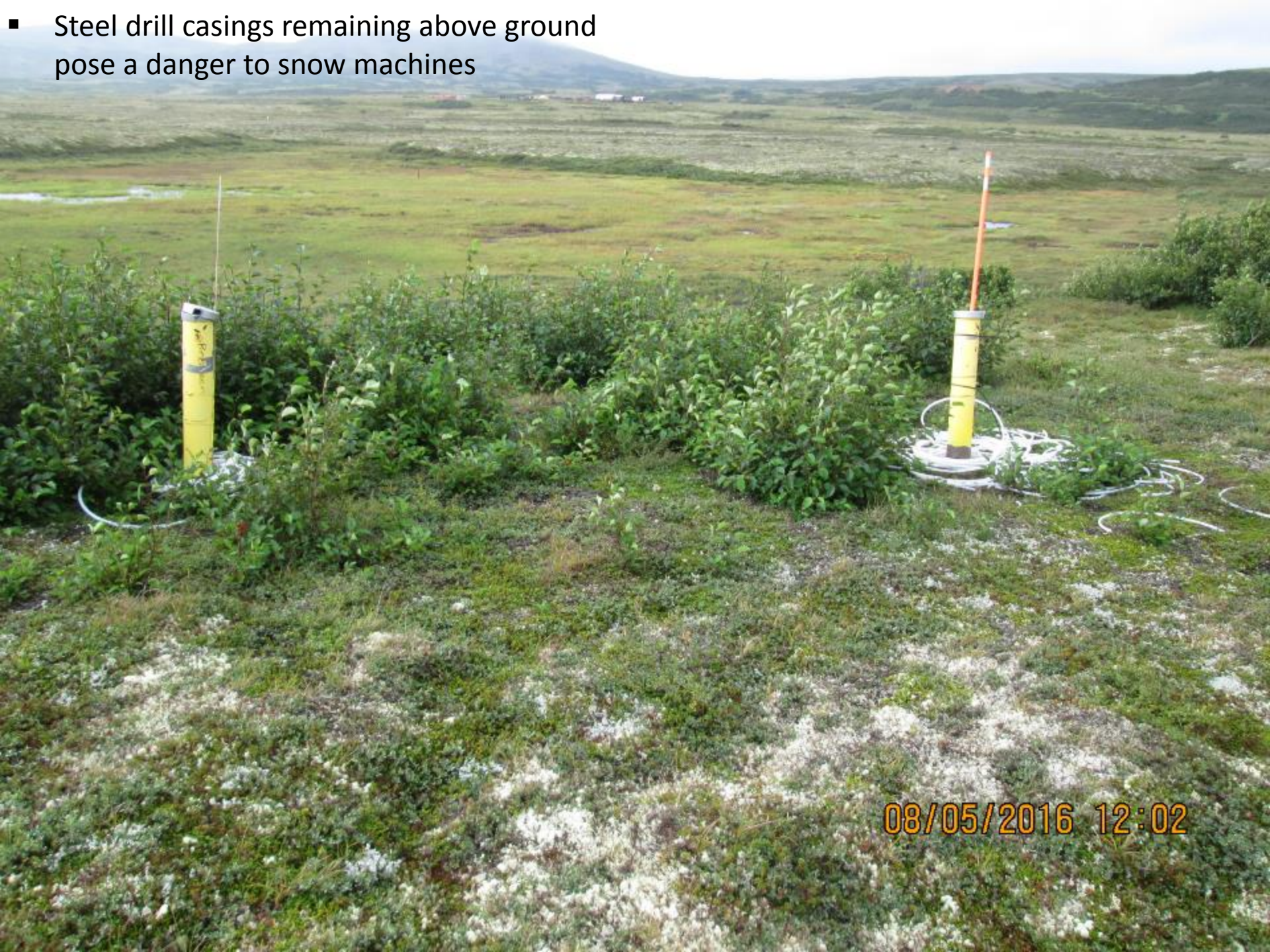
DDH 4202  1Aug16

- Petroleum contamination

DDH 7381, 1Aug16

- Steel drill casings remaining above ground pose a danger to snow machines

- Steel drill casings remaining above ground pose a danger to snow machines





GH05-60 1Aug16


- Artesian dill holes with elevated levels of sulfate, copper, and other heavy metals

Artesian Flow
DDH 7386
2Aug16



Artesian Flow with drill cuttings
DDH 9475
4Aug16



Artesian Flow with Drill Mud
DDH 7380
2Aug16

- Soil at seventeen sites had acidic soils with pH lower than 4.5


Soil Sampling near DDH 6355, 3Aug16

- Soil at seventeen sites had acidic soils with pH lower than 4.5


Soil Sampling near DDH 3129, 5Aug16



DDH 4145 3Aug16

DDH 4232 3Aug16

# What is the source of the contaminated soils?

Photo #14. Clay deposited in a dry depression by discharged drilling fluids.

***Drilling waste discharged to land.*** *(ADNR inspection report June 2005)*

**Figure 4.** Water and cuttings discharge on uplands.

***Drill cuttings discharged directly from the drill rigs.*** *(ADNR inspection report, April 5 2007)*

2006 Pebble East Drill Site


Drill Waste Sump DDH 11540, 22Oct11

Drill Waste Sumps
DDH 11540
22Oct11


Reclaimed Waste Sump near DDH 10486, 5Aug16
08/05/2016

# QUESTIONS?