

Air Operations

Martin Melles (Univ. Cologne)

(1) Helicopter Races Pevek - Lake E - Pevek (MI-8)

- Loading capacities: 2000 kg to Lake El'gygytgyn, 2400 kg from Lake E
- Costs per race as of May, 2008: 12.000 US\$

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MI-8 at Lake El'gygytgyn in spring 2003

(1) Helicopter Races Pevek - Lake E - Pevek (MI-8)

1	Lake E site visit by Grisha (AARI) and Georg (AWI)	May/June 08
2	Permafrost team to Lake E	Nov 08
1	Permafrost downhole loggers to Lake E	Nov/Dec 08
3	Permafrost cores and team back to Pevek	Dec 08
2	EBA team for ice thickening to Lake E	Dec 08
1	EBA team for ice thickening to Lake E	Jan 09
3	Lake scientists and drill crew to Lake E	Jan/Feb 09
3	Lake downhole loggers to/from Lake E, core transport	Mar/Apr 09
1	Lake crew change c. April 1	Mar/Apr 09
4	Lake cores to Pevek, bread etc. to Lake E	Feb-May 09
3	Lake team to Pevek, with remaining cores	May 09
2	Matt Nolan, UAF, to/from Lake E	Apr-Aug 09
26	Total races	

(2) Charter Plane for Permafrost Cores

- AN-12 for flight Pevek - St. Petersburg (presumably Dec. 2008)
 - to be hired from the Military Base Tiksi, Lena Delta
 - (as done previously for expeditions in the Lena Delta by AWI, AARI, PIY)
 - the loading space of the plane will remain unheated (for frozen state of cores)
 - cores will be stored in foam boxes (normally used by AWI for ice cores)
 - two participants (Grisha and Georg) will accompany the flight



payload:
20.000 kg
(44,090 lb)

- Further core treatment includes
 - storage in commercial freezer in St. Petersburg
 - transport by freezer truck to Bremerhaven
 - core opening and subsampling in freezer lab at AWI Bremerhaven

(3) Charter Plane for Lake Cores

- e.g. IL-76 for flight Pevek - St. Petersburg (presumably May/June 2008)

- to be hired by AARI from an aviation company
- capable to land at Pevek airport (2500 m runway)
- loading space: 3.4 x 3.4 x up to 20 m
- payload: 40,000 kg (88,000 lb)

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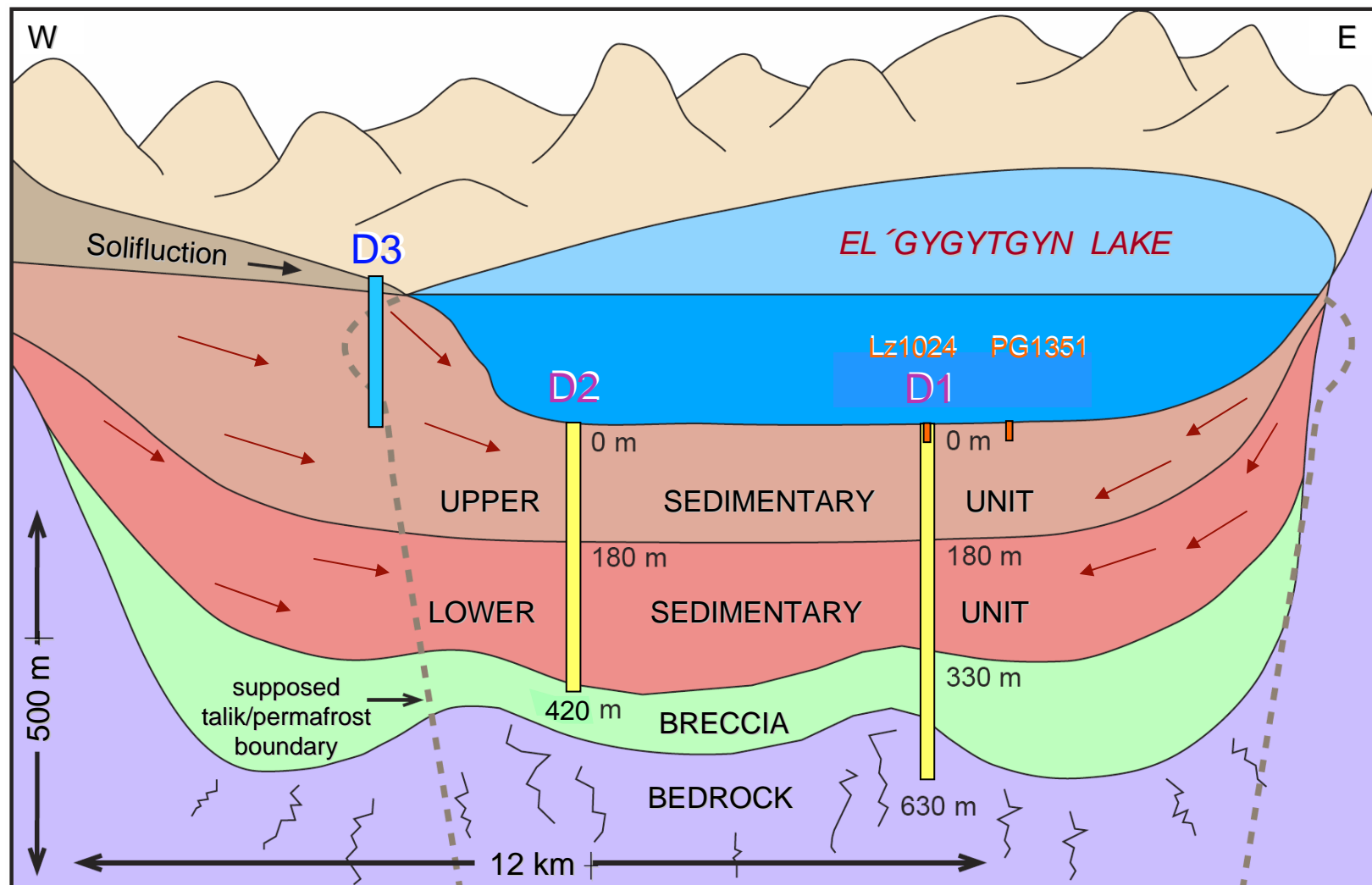
Lake Drilling Plan



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Site	Core	Lake Sediment	Breccia/Rock
D1	a	330	300
	b	330	
D2	c	420	100
	d	420	



(3) Charter Plane for Lake Cores

- IL-76: payload 40,000 kg (88,000 lb)

- Core transport in wooden boxes (155 x 75 x 50 cm inner size; 600 kg payload)
 - 1 core box = 10 x 6 cores x 1.5 m
= 90 m = 612 kg (with max. 6.8 kg/m)
 - 1 Helo load = 350 m = 2380 kg (max. payload = 2400 kg)
 - 1900 m core = 5.5 Helicopter flights
= 21 boxes
= max. 13.000 kg

→ leaves place for cargo in IL-76

→ or allows for use of AN-12

- Boxes will be transported to Cologne for core opening and subsampling
- Boxes will then be used for the shipment of D-Tubes with archive core halves to LacCore (Minnesota)



(4) Aviation Contracts

- Charters will be organised by AARI
 - without AARI overhead (if contracts are combined with other duties)
 - payment by ICDP, based on contracts between AARI and Cologne
- Charters by AARI now need > 1 month (due to 4 weeks tender period)
 - therefore, helicopter charters shall be split into
 - i) 15 fixed races to Lake E to be booked by AARI in May/June 2008
 - ii) additional up to 9 races to be paid directly in Pevek
 - ➡ this (together with other expenses) requires a bank account in Pevek; money source and transfer into that account still need to be decided and organised



Julie on E Lake Expedition 2000