2006 Science Support Project Plan

POLAR RESOURCES

Please review all of the following information, including the gear allocations and field team members, to ensure accuracy. This plan is an agreement between VPR and your group, documenting the logistics support you will receive.

• Project Information •

Lead Principal Investigator	Sridhar Anandakrishan
Institution	Pennsylvania State University, Earth System Science Center
Project Title / Grant #	SST: Sensor Network for 3-D Geophysical Imaging of Glaciers and Ice Sheets (0427714)
NSF Program and Manager	NSF/OPP CS, Dr. Dennis Conlon
VPR Project Manager	Sandra Starkweather

• Logistics Summary •

This project will develop and test GEOBRICKs, a network of wirelessly interconnected sensors that will allow researchers to carry out simultaneous geophysical experiments.

In early summer 2006, a field team of 2-3 people will travel to Summit and Swiss Camp to test the GEOBRICKs. VPR will provide flight support to Summit and Swiss Camp and infrastructure at Summit. VPR will arrange for commercial air travel to Ilulissat and for rooms while there. Finally, VPR will provide camping gear, snowmobiles and sleds, and safety gear for the team's Swiss Camp work.

For the complete VPR online project record for this grant, including science objectives, go to:
http://www.vecopolar.com/arlss_reports/arlss_projectsdetail.asp?cbPropNum=0427714

• Outstanding Issues •

Issue	Responsibility	Date Completed
Review support plan for accuracy and distribute to all field team members	PI	5/3/06
Obtain all necessary permits for fieldwork	PI	4/18/06 #512-256
Visit all hyperlinks and review all documents referred to in the support plan	Field Team Members	5/5/06
Contact the GEOSummit Science Coordination Office (SCO) mailto:sco@geosummit.org regarding your project's plans for the season	PI	5/5/06
Medical Clearance completed 8-6 weeks before desired deployment date	Field Team Members	1/24/06
Please note this important information for your field team: Bring 2 different forms of picture ID. Passports are now mandatory for entry into Greenland. Be sure to pack them!	Field Team Members	
Complete Critical Success Factors	PI	5/3/06

• Allocations & Services •

Allocations from Inventory

Quant/Unit	Item
2 ea	8x8 Arctic Oven sleep tents
4 ea	Thermal sleeping pads
2 ea	Wireless network cards
2 ea	Nansen sled
2 ea	Skidoo
1 ea	Supplemental emergency kit (stove, fuel, some emergency food)
2 ea	Snow shovels
2 ea	Thermoses

Other Services

Project Allocations	Comments
6' of table/desk space in the GH	This group's lab space needs will be accommodated in the mobile weatherport. They will have access to the camp power grid at this location for battery charging, etc.
Location/Schedule	This project will require that field team members spend long periods of time out of camp. They will coordinate with the camp manager regarding their plans, set up a check-in system via radio/Iridium, communicate with the cook about off-schedule meal service and follow camp safety protocols regarding travel off station.
Communications	The researchers will bring their own phones and radios. Once on station, these should be tested for compatibility with the camp communications. Any travel off station will require regular comms with station.
Steam Drill	Provided by Koni Steffen at the request of GeoBricks group.
Arrange commercial air flights to Ilulissat.	Not required if Swiss Camp is accessible by Twin Otter.
Arrange Helo or Otter to Swiss Camp	This will be a late decision based on snow surface conditions at Swiss Camp.
Arrange accommodations in Ilulissat.	Not required if Swiss Camp is accessible by Twin Otter.

• Location Information •

Please visit http://www.vecopolar.com and navigate to the Greenland menu for en route and location-specific Greenland information. Prior to deployment, your entire field team should be familiar with the content of the *Greenland Guide* and, if traveling to Summit, with the guidelines provided in the *Summit Users' Guide*. Both are available electronically via our web site's Greenland menu.

• Cargo and Customs •

All cargo required for your project should arrive in Scotia, NY, no later than 2 weeks prior to the desired northbound Air National Guard (ANG) flight, must be entered into our online Cargo Tracking System, and must be properly registered with customs.

- ✓ For the most current ANG flight schedule go to http://www.vecopolar.com and navigate to Greenland > Calendars/Schedules.
- ✓ If you are a new user requiring access to the Cargo Tracking System, contact Robin Abbott (robin@polarfield.com).
- ✓ Customs instructions are available on our website at http://www.vecopolar.com (go to Greenland > Customs)
- ✓ For Customs requirements please refer to the *Greenland Guide*, also available at http://www.vecopolar.com under Greenland.

The following is our current understanding of your overall cargo requirements:

Cargo List

Items	Weight/Cube
Total cargo weight estimate provided at right, cube and crate details provided in the Appendix.	790 lbs

• Support Schedule •

Date	Location	Activity
6/04	Scotia, NY	Field team members arrive in NY
6/05	Kangerlussuaq	Field team members arrive in Kangerlussuaq via ANG
6/06	Summit	Field team members arrive at Summit
6/06 to 6/09	Summit	Field team members will test GeoBricks on and off station.
6/10	Summit	Field team members leave Summit
6/12	Ilulissat	Fly commercial air to Illulisat.
6/13	Swiss Camp	One day turn-around at Swiss Camp by Helo out of Illulisat
6/15	Kangerlussuaq	Fly commercial air to Kangerlussuaq.
6/17	Kangerlussuaq	Field team members return to NY via ANG.

• Field Team Information •

Name	Location	Date In	Date Out	Email
Anandakrishnan, Sridhar	Kangerlussuaq	06/05/06	06/17/06	sak@essc.psu.edu
Anandakrishnan, Sridhar	Summit	06/06/06	06/10/06	
Voigt, Donald	Kangerlussuaq	06/05/06	06/17/06	voigt@geosc.psu.edu
Voigt, Donald	Summit	06/06/06	06/10/06	

• Project Contact Information •

Research Team

Role	Name	Email	Phone / Fax
Principal Investigator	Sridhar Anandakrishnan	sak@essc.psu.edu	814 863-6742 / 814 863-7823
Co-PI	David Swanson	dcs5@psu.edu	814 865-4700 /

VPR Team Members

Contact for	Name	Email	Primary Phone(s)
Greenland operations	Robin Abbott	robin@polarfield.com	Denver: 303.748.8507 Greenland: 011.299.524218
Greenland operations	Mark Begnaud	mark@polarfield.com	Denver: 720.320.6160 Greenland: 011.299.524281
Summit operations	Sandy Starkweather	sandy@polarfield.com	Denver: 303.518.8714
Denver operations	Jill Ferris	jill@polarfield.com	Denver: 720.320.6155
Scotia Operations & Customs	Earl Vaughn	earl.vaughn@nyscot.ang.af.mil earl.vaughn@gmail.com	Scotia: 518.331.3103

VPR Offices

Denver	Kangerlussuaq	Scotia	Summit
VECO Polar Resources Western Office 8110 Shaffer Parkway Suite 150 Littleton, CO 80127 Tel: 303.984.1450/1439 Fax: 303.984.1445	VECO Polar Resources Attn: Name of Employee/Researcher Postboks 1015 DK-3910 Kangerlussuaq, Greenland Tel: 011.299.841598 Fax: 011.299.841599	Earl Vaughn C/O 109th Aerial Port Bldg. 20 Stratton Air Base Scotia, NY 12302-9752 Fax: 518.884.2904	VECO Polar Resources Attn: Name of Employee/Researcher Postboks 1015 DK-3910 Tel: 321.953.9650 Fax: 321.953.9651

Other

Organization	Internet	Phone
Summit Science Coordination Office	http://www.geosummit.org sco@geosummit.org	John Burkhart 209.658.7142

• Safety, Environment, Health, and Permitting •

Permits

Please refer to VPR's *Greenland Guide*, available at http://www.vecopolar.com under Greenland, for information about permits required to conduct fieldwork in Greenland.

• Critical Success Factors •

Please list the factors that are most important for the success of your science. We track these factors in order to measure the success of VPR's support. Examples might be the availability of the helicopter or camp gear.

Factors
Travel to Summit camp where equipment can be tested.
Availability of a 110 VAC outlet for battery charger needed to charge batteries for radar. Team has the capacity to charge from their own PVs and will use solar power unless weather is such that PVs become inadequate to maintain battery charge.
Availability of snowmobiles and sleds in order to test the deployed radar units.
Availability of workspace needed for initial set up of radar and for repair of equipment if necessary

• Government Performance and Reporting Act of 1993 (GPRA) •

NSF/OPP requires your help in complying with the Government Performance and Reporting Act of 1993 (GPRA). One measure of VPR's performance is a "facility-performance metric" which counts the number of productive days your project has in the field while relying on VPR facilities or support. Please keep track of any "lost days" and report these to us at the end of the season.

• Appendix •

Packing List

Item	Description	Weight	Cube
1	Battery, non-spillable gel cell	62	1.5
2	Battery, non-spillable gel cell	62	1.5
3	Battery, non-spillable gel cell	62	1.5
4	Battery, non-spillable gel cell	62	1.5
5	Battery, non-spillable gel cell	62	1.5
6	Battery accessories, sm Zarges	25	1.5
7	Conduit, 5' lengths, Tools	45	1.5
8	Conduit, 5' lengths, Tools	45	1.5
9	Tools and support equipment, md Zarges	50	2
10	Solar panels, Sleep kits, lg Zarges	75	9
11	Geobrick radar systems, lg Zarges	100	9
12	Radar support equipment, half Zarges	75	5.5
13	Geode and seismic cables, GPS, half Zarges	75	5.5
14			
	Total Weight	790 lbs	