

## 2006 Science Support Project Plan



*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 •

<b>Lead Principal Investigator</b>	Elizabeth Morris
<b>Institute</b>	University of Cambridge, Scott Polar Research Institute
<b>Project Title / Grant #</b>	CryoSat Calibration / Validation (CRYOSAT)
<b>Program and NSF Manager</b>	Intl - ESA, Mr. Simon Stephenson
<b>VPR Project Manager</b>	Robin Abbott

### • Logistics Summary •

For this portion of the CryoSat Calibration/Validation project, researchers from the UK will take a number of measurements along the International Glaciological Expedition Greenland (EGIG) line that crosses central Greenland.

A team of 4 from the University of Glasgow, AKA "UK2," plan to spend about a month in 2004 and 2006 visiting sites in the west using site T0005 (69.83 N -47.27 E) as a base. A 2-person "UK1" team from Scott Polar Research Institute plans a 400km traverse between T0012 and Summit, conducting snow density measurements via the neutron scattering technique. The UK1 researchers will establish caches at locations T0012 and T0041 to aid them in their traverse.

In 2004, KMS provided Twin Otter support and snowmachines, while VPR provided communications gear and support at Summit, in addition to cost-reimbursable fuel and cargo transport. In 2006 VPR will provide cost-reimbursable air support, fuel, and cargo transport. Snowmobiles, Iridium phones, and a point of contact in Kangerlussuaq for daily check-in will be provided at no extra cost.

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=CRYOSAT](http://www.vecopolar.com/arlss_reports/arlss_projectsdetail.asp?cbPropNum=CRYOSAT)

## • Outstanding Issues •

Issue	Responsibility	Date Completed
Review support plan for accuracy and distribute to all field team members.	PI	
Obtain all necessary permits for fieldwork.	PI	DPC permit # will be 522-244
Contact the GEOSummit Science Coordination Office (SCO) <a href="mailto:sco@geosummit.org">mailto:sco@geosummit.org</a> regarding your project's plans for visiting Summit this season.	PI	
Visit all hyperlinks and review all documents referred to in the support plan.	Field Team Members	
Billing: Provide cost estimate for billable support Develop a Purchase Order with VPR Provide bill for actual support	VPR PI VPR	January, 2006 January, 2006
Discuss with Kenn Borek Air their Jet A-1 fuel requirement for the flight on 23 April.	VPR	

## • Allocations & Services •

### Allocations from VECO

Quant/Unit	Item
2 ea	Snowmobiles, Skandic Wide Trac SUV model, with covers
4 ea	Iridium phones, 1 ea for UK1 and UK2 for field season, (2 ea for T12 from 17-25 April)
5 ea	Benzine fuel, 55 gal drum (1 drum for Air Greenland Otter flight to T5, 3 drums for Kenn Borek flight to T41, 1 drum to Summit)
1 or 2 ea	Jet A-1 fuel for Otter to refuel (for Kenn Borek flight on 24 April)
35 lit	2-stroke oil for skidoos
2 gallon	Glycol (antifreeze) for neutron probe rescue kits

For more information on satellite phones, radios, manuals and other field communications support, please visit the VPR communications website at <http://vpr.sri.com>.

This support will be provided by VPR on a direct-billable basis. Please see Appendix I for an estimated cost.

### Other Services

Project Allocations	Comments
Daily check-ins with VPR Kangerlussuaq office from UK1 and UK2 field teams	Time of check-in will be established after arrival in Kangerlussuaq
Kenn Borek Twin Otter support will be provided on either 24 or 25 April	Timing critical, cannot happen sooner than dates mentioned
C-130 transport to/from Summit for two people, minimal cargo (~400lbs)	From Summit ~6 June To Summit ~10 July

## • 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 •

### Cargo List

VPR is not arranging for cargo shipment to/from Greenland for this project.

## • Support Schedule •

Date	Location	Activity
April 12	SFJ	Arrival of Liz Morris, John Pailthorpe, Peter Nienow via Copenhagen
April 17	SFJ	Arrival of Henry Chamberlan via Copenhagen
April 18/19	SFJ > icecap	Put-in flights by Air Greenland Twin Otter
April 24/25	T41, T12, T5	Depot fuel, transfer Julian Scott, return Henry Chamberlan
April 26	CPH	Henry departs SFJ
June 7	Summit	Liz and John return to SFJ via 109 <sup>th</sup> Air Guard LC-130
June 8	CPH	Liz and John depart SFJ
July 7/8	SFJ	Arrival of Liz Morris and Martin Hignell via Copenhagen
July 10	Summit	Liz and Martin fly to Summit via 109 <sup>th</sup> LC-130
Sept 4/5	icecap	Uplift from Icecap by Air Greenland
Sept 8	CPH	Liz and Martin depart SFJ

## • Project Contact Information •

### Research Team

Role	Name	Email	Phone / Fax
Principal Investigator	Elizabeth Morris	<a href="mailto:emmo@bas.ac.uk">emmo@bas.ac.uk</a>	+44 1223336568 +44 1223336549
Collaborator	Peter Nienow	<a href="mailto:pnienow@geo.ed.ac.uk">pnienow@geo.ed.ac.uk</a>	+44 1316509139 +44 1316502524

### VPR Team Members

Contact for	Name	Email	Primary Phone(s)
Greenland operations	Robin Abbott	<a href="mailto:robin@polarfield.com">robin@polarfield.com</a>	Denver: 303.748.8507 Greenland: 011.299.524218
Greenland operations	Mark Begnaud	<a href="mailto:mark@polarfield.com">mark@polarfield.com</a>	Denver: 720.320.6160 Greenland: 011.299.524281
Summit operations	Sandy Starkweather	<a href="mailto:sandy@polarfield.com">sandy@polarfield.com</a>	Denver: 303.518.8714
Sat phones & comms	Roy Stehle	<a href="mailto:roy.stehle@sri.com">roy.stehle@sri.com</a>	Menlo Park: 650.859.2552
Denver operations	Jill Ferris	<a href="mailto:jill@polarfield.com">jill@polarfield.com</a>	Denver: 720.320.6155
Scotia Operations & Customs	Earl Vaughn	<a href="mailto:earl.vaughn@nyscot.ang.af.mil">earl.vaughn@nyscot.ang.af.mil</a> <a href="mailto:vprscotia@direcway.com">vprscotia@direcway.com</a>	Scotia: 518.331.3103
Purchase Orders	Jan Zanetell	<a href="mailto:Janet.Zanetell@veco.com">Janet.Zanetell@veco.com</a>	303.268.3553

### 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 109 <sup>th</sup> 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	<a href="http://www.geosummit.org">http://www.geosummit.org</a> <a href="mailto:sco@geosummit.org">sco@geosummit.org</a>	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.

<b>Factors</b>
Skidoos complete traverse - depends on VECO preparation but also on Twin Otter pilot and on the field team maintaining them properly.
Depot laid at T41 - depends on VECO. Timing is not critical.
Passengers and kit transferred from and to Summit - timing not critical.
Transfer of Scott to T5 from T12. Timing critical in that transfer should not be earlier than 24th April or researcher will lose his chance to do radar survey work away from camp. Delay by a few days is not critical however.

• 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.