

## **Life in the Atacama Field Journal**

September 15, 2005

Salar de Navidad and Antofagasta, Chile

### **Agenda**

- Deliver Zoë and cargo to Salar de Navidad
- Establish camp

### **Status and Progress**

- Zoë severely damaged. Upon arrival at the cargo drop location for our Site E investigation at Salar de Navidad it was immediately clear that Zoë had been damaged by the ride in the cargo transport from Salar Grande. This is a drive of over 400km with many kilometers over rough road. Both of the axles had buckled and the rear axle sheared off. We are still investigating the factors involved but it would appear that prolonged vibration and loading of the axles by the body mass, assuming that the supports for the body had been shaken loose by the ride, produced stress on the axles. (Failure aside, we have learned a weak point in the design and can correct it in the future.)





- Zoë systems assessed and repair planned. The Universidad Catolica del Norte in Antofagasta quickly arranged for the use of a garage to unpack and examine Zoë. Minor damage was found and repaired on the Fluorescence Imager. A cable for the spectrometer has been damaged and will be swapped out. All electronic systems have checked out. It appears that the only damage is to the axles.

The machined components that mate the axle to the body have been removed from the damaged axles. A spare set of axles in Pittsburgh are being strengthened and prepared to accept the mating parts. We will be assembling new axles and getting them to Chile by Monday, September 19.

- Remote investigation delayed. The remote science investigation at Site E will be delayed and extended. The rover will reach the landing site Wednesday afternoon so that the remote science team can examine the landing site panorama overnight and produce a traverse and observation plan beginning Thursday, September 22. We will extend the investigation at Site E into Sunday, September 25 so that Zoë will have 4 full days of traverse.

### **Upcoming**

- Repair and recovery