

PHELPS DODGE MORENCI
Experimental License Application

EXHIBIT 1

In this Exhibit, Phelps Dodge Morenci presents an explanation of the spectrum which is proposed to be used under this experimental license.

The Global Positioning System (GPS) currently broadcasts on two frequencies (1575.42 MHz and 1227.60 MHz). These are known as the L1 and L2 frequencies, respectively. A third frequency (1176.45 MHz), known as L5, has been approved for future use. Phelps Dodge Morenci requests an experimental license to broadcast signals at the L-1 frequency to be used by GPS receivers of current design to improve their navigation accuracy and reliability.

The existing GPS satellite signals are spread spectrum signals occupying a band 24 MHz wide centered on each of the above frequencies. The signal from each satellite occupies essentially the entire band. Signals from individual satellites are distinguished using Code Division Multiple Access (CDMA) techniques.

Phelps Dodge Morenci intends to experiment with signals identical to the existing GPS satellite signals, occupying the same bandwidth. Phelps Dodge Morenci also intends to experiment with signals slightly different than the existing GPS satellite signals, with the goal of minimizing interference with the satellite signals. Exhibit 2 describes these signals in detail.

Because the intent of this experiment is to broadcast signals identical or similar to the existing GPS satellite signals, Phelps Dodge Morenci requests an experimental license covering the same spectrum as those existing signals (i.e. 24 MHz centered on 1575.42 MHz).

In an experimental license application filed in May 1998, file number 6167-EX-PL-98, Trimble Navigation applied for experimental use on the same spectrum, in conjunction with the same tests Phelps Dodge Morenci will be involved with. We are attaching as Attachment A, information from the FAA regarding the project that led to the experiments with pseudolites.