

RESPONSE TO FCC FORM 442 ITEMS NOS. 4, 5, 10, 15

Proposed Program of Research and Experimentation

The proposed program has been established to develop a radio telemetry seismic data acquisition system. This system consists of a master controller and a variable number (up to 250) of remote acquisition modules. The system will be tested in the following manner. First, a determination will be made as to which area should be surveyed and the appropriate distance between the remote acquisition modules. The modules will then be placed at the optimum intervals. Once the system is in place, the master controller will transmit set-up information to the remote acquisition modules. That is, the master controller will transmit operating parameters and information on when seismic events may occur. The modules will receive the information and will be capable of transmitting the requested information back to the master controller.

The frequencies and power information associated with the proposed system are set forth in item 4 of the attached FCC Form 442. Specifically, both the master controller and the remote acquisition modules will operate on frequencies in the 216.01-219.99 MHz band. The specific frequencies used will depend upon availability at the particular time of testing. (Applicant will use a spectrum analyzer to locate available frequencies in the band and will cease testing immediately if it results in interference.) As indicated at item 4, the master controller (which will use a directional antenna) will operate at a maximum RF output power of 25 watts (with a maximum ERP of 325 watts), while the remote acquisition modules will operate at a maximum RF output power of 1 watt (with a maximum ERP of 2 watts). The test transmissions will be 2-3 seconds in duration. With regard to location information (item 5), the master controller will be truck mounted and will therefore operate as a temporary-fixed facility. The remote acquisition modules will also be operated on a temporary-fixed basis. The system will only be in place at a particular location for a short duration (approximately 7 days). Testing of the radio telemetry link will be performed in typical seismic field conditions and locations throughout the continental United States. No market studies will be performed.

As indicated in item 15, the overall height above ground to the tip of the master controller antenna will be 30 meters. Because the antenna/transmitter will extend more than 6 meters above ground, Applicant will determine if notification to the FAA is required prior to setting up the proposed system for testing. If notification is required, Applicant will obtain any necessary clearance or ensure that clearance has already been obtained.

The proposed experimental radio service station is substantially similar to an expired experimental license previously granted to Applicant under call sign KK2XGP. (For reference, a copy of this license is enclosed.) It has recently come to Applicant's attention that after this license expired, Applicant failed to make the requisite renewal filing, but continued its research and experimentation on at least two or three occasions. Once this matter came to light, Appli-

cant immediately ceased operation upon advice of FCC counsel. Further, in cooperation with FCC counsel, new procedures have been instituted to ensure that all applicable filing requirements are met in the future.

Objectives/Contributions to the Radio Art

As discussed above, Applicant seeks to test a newly developed radio telemetry system in typical seismic field conditions and locations throughout the continental United States. As compared to currently marketed systems, this system will greatly reduce the RF band space needed to conduct geophysical exploration. If results of the program prove positive, a more efficient method of conducting geophysical exploration will be available on a widespread basis. This, in turn, will facilitate the location of oil and gas reserves.