

to the range accuracy by the angle of intersection, at the mobile station, between the two Shoran range circles. This is illustrated in Figure D(b)-2. In normal geophysical operations, this angle of intersection is held between 30 and 150 degrees. Refer to Figure D(b)-4 for examples of areas of coverage for different angles of intersection of the Shoran range circles.

In computing (or determining graphically) the position from a pair of Shoran ranges, cognizance must be maintained that a position ambiguity may exist. Each pair of ranges (one to each base station) actually determines two independent positions, one on each side of the Shoran baseline, as illustrated in Figure D(b)-3. One position is the "mirror image", so to speak, of the other. Further, the Shoran mileage dials repeat every 100 miles of range. To eliminate this ambiguity one must know, from other means, the correct side of the baseline and the distance to each base station within the proper multiple of 100 miles.

AREA OF OPERATION

The area surveyed extended approximately 40 miles into the Tasman Sea off the southeast coast of Australia. It was bounded by the town of Sea Spray on the south and Conran Point on the northeast. (Plat 1)

The initial program assigned by the client consisted of approximately 250 miles of seismic lines distributed over the program area in a manner designed to detail previous surveys of the area.

Mapping and Basic Control - Coordinates for the Shoran base station locations were obtained from the Department of Lands and Surveys, Melbourne, Victoria, Australia. The final map was based on the Australian Transverse Mercator Projection, Belt 7 Central Meridian 146° West.

Following is a list of the Shoran base stations along with their coordinates and descriptions:

701 Mount Elizabeth (Plat 2)

Longitude	147°55'55"408	E	586,877.50 yards
Latitude	37°29'27"199	N	374,498.06 yards
Elevation	3085 feet		

731 Blackwarry (Plat 4)

Longitude	146°38'55"650	E	461,979 yards
Latitude	38°24'16"200	N	265,299 yards
Elevation	2100 feet		

728 Mount Raymond (Plat 3)

Longitude	148°36'01"791	E	650,793 yards
Latitude	37°42'48"852	N	345,904 yards
Elevation	975 feet		