

257215

4.4 Energy Source

Overall source performance was reasonable for the survey. Total downtime resulting from source failures was less than seven hours and was predominantly the result of power supply failures within the source firing control unit. After two instances of this problem on the 14th and 16th the power supply unit was replaced and no further failures occurred.

The remaining downtime was accumulated on the 17th when the gunstrings became entangled and caused a circle.

Of the line segments recorded only 180, 181, 191, 191A, 194 and 190 were started with a volume of less than 2180 cubic inches and this was the result in most instances of faults developing on the final run in to lines. There was some sort of gun failure on most lines but the minimum source volume at the end of any line was 2080 cubic inches at the end of line 180, on the first day of the survey.

Individual gun faults and problems were largely caused by air leaks and timing faults and a number of the timing faults were the result of crossfeed problems with sense signals rather than actual mechanical timing problems.

Compressor power was adequate for this array and shotpoint interval, and source pressure was within tolerance at all times.

One area which is long overdue for improvement is the monitoring of both source depths and source signatures. The present equipment employed by this contractor are both antiquated and unreliable to a very great extent.

The current feelings about the contractor's sleeve gun source are fairly mixed within the industry, but more and more people are seeing that there is a distinct lack of low frequency content in this particular source. Comparison of data sets acquired with sleeve gun sources and with "conventional" can show some quite dramatic differences and it is felt by this author that HGS will have to do something soon to improve the low frequency content of their source signature.