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### BULK SAMPLING OF THERMAL COAL EXPLORATION IN SOUTH EAST BRITISH COLUMBIA

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BULK SAMPLING OF THERMAL COAL EXPLORATION  
IN SOUTH EAST BRITISH COLUMBIA

by

Orest E. Humeniuk\*

ABSTRACT

A bulk sampling program by Rio Algom Ltd. in south east British Columbia was carried out in August, 1980 in the Flathead area. Samples of 32.7 t were taken from seams 2 and 4a (upper) while 21.8 t was taken from 4b (lower). Samples were trucked in bulk to Calgary, Alberta for washability studies and pilot plant washing tests.

Sampling of the three adits was supervised by the author and Techman Ltd. engineers. Detailed adit crosscut and entry measurements and bearings are reported.

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## INTRODUCTION

The services of a government supervisor for sampling of adits was requested by Rio Algom Ltd. and arranged for by their consulting company, Techman Ltd. Engineers and Environmental Scientists of Calgary, Alberta. The bulk samples were shipped to Birtley Engineering Ltd. of Calgary for washability studies and pilot plant testing as a thermal coal. In 1972 - 1973 Western Research Laboratory supervisors were present in the same location when earlier samples were collected for coking tests from the same coal (1)(2). On August 25 - 29, 1980 the author along with project engineer Mr. V. Pobran and senior engineer Mr. H. Leistra of Techman Ltd. took the necessary measurements of crosscuts and offsets and made the necessary markings for obtaining a representative bulk sample of the adits.

## BULK SAMPLING

A sample of 32.7 t was taken from seam 2 whose crosscut is 8.23 m (Fig 1). The approximate bearings and distances of adit entry and crosscut are shown in Fig. 2. Offset measurements were measured 91 cm above the floor level (Fig. 3). The apparent specific gravity used for tonnage calculation was 1.55 which was obtained from previous washability data and reported by Techman Ltd. The sampling face height in seam 2 was 1.52 m.

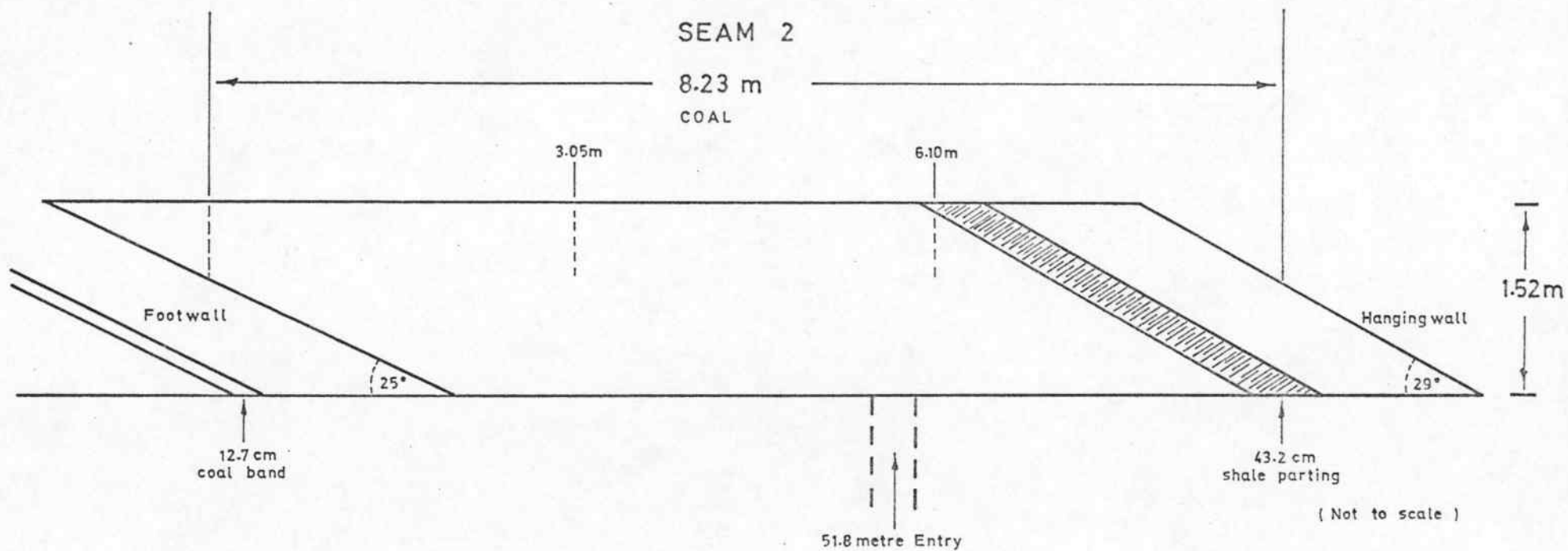
Samples of 32.7 t and 21.8 t were taken from seam 4a (upper) and 4b (lower) respectively. Seam 4a had a 21.95 m crosscut and 4b had a 14.63 m crosscut (Fig. 4). Bearings and distances of crosscuts in seams 4a and 4b are shown in Fig. 5. The offsets were also measured at 91 cm from the floor in both crosscuts (Fig. 6). The apparent specific gravity of 4a (upper) was 1.55 and of 4b (lower) was 1.67 with a face height of 1.2 m and 1.52 m respectively.

Mining excavation was carried out by Trina Maree Mining Ltd. The sampling of seam 2 started on August 26, 1980 and was completed on August 28, 1980. Due to the hardness of the coal some blasting was required for excavation in seam 2 but was not expected to be necessary in seams 4a and 4b.

Upon my departure on August 29, 1980 at 1600 hrs, approximately 8 t of coal had been hand - picked from seam 4a (upper). Futher supervision would be carried out by Mr. H. Leistra of Techman Ltd. according to markings and data already made available to him.

REFERENCES

- 1) Rozenhart, C.F.J. "Supervision of Sampling at Coal Exploration Sites in Western Canada During 1972" ; Divisional Report MREC 72/111-WRL; Energy, Mines and Resources Canada; 1972
- 2) Anderson, N.E. "Supervision of Coal Sampling in the Sage Creek Area Southeastern British Columbia"; Divisional Report MREC 73/96-WRL; Energy, Mines and Resources Canada



Rio Algom Exploration Co., Flathead area of S.E. British Columbia

Co-ordinates U.T.M. Zone 11 true origin

15766.75 N in metres

178167.51 E in metres

Elevation 1455.4 metres

Fig. 1 — Crosscut sampling face

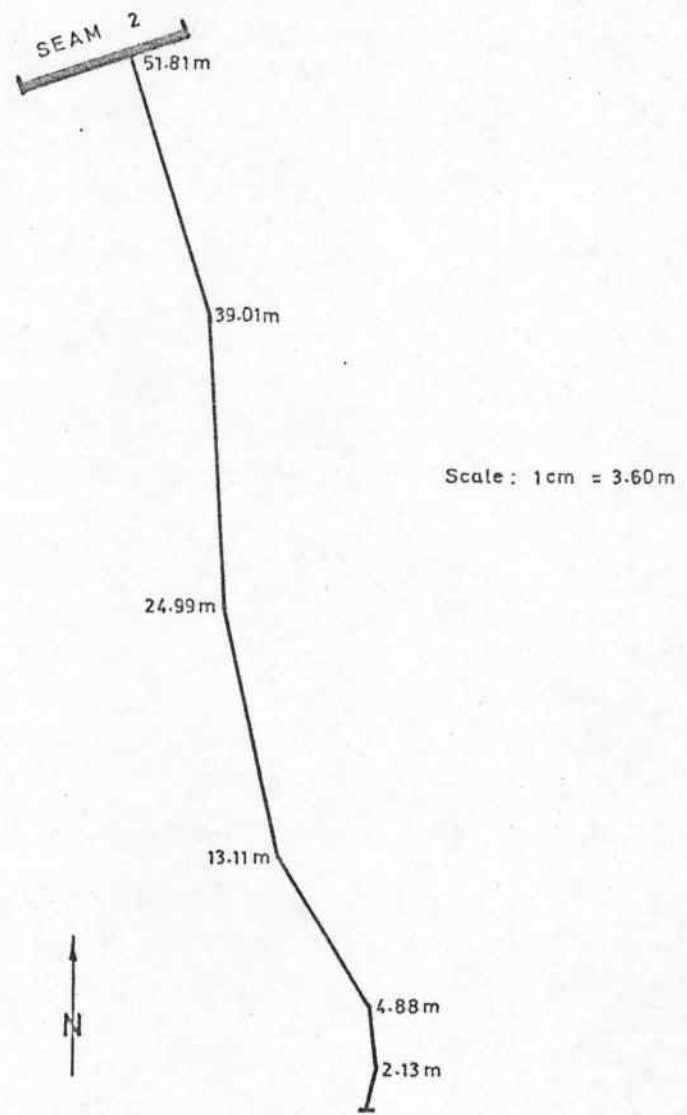


Fig. 2 — Approximate bearings and distances of adit entry and crosscut

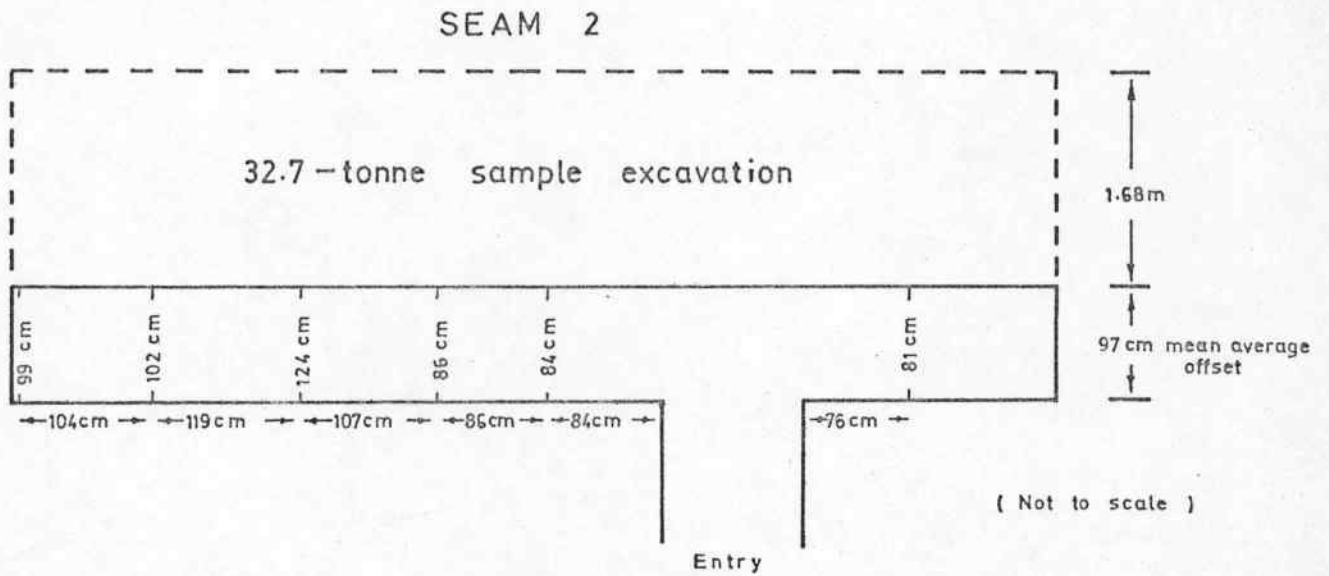
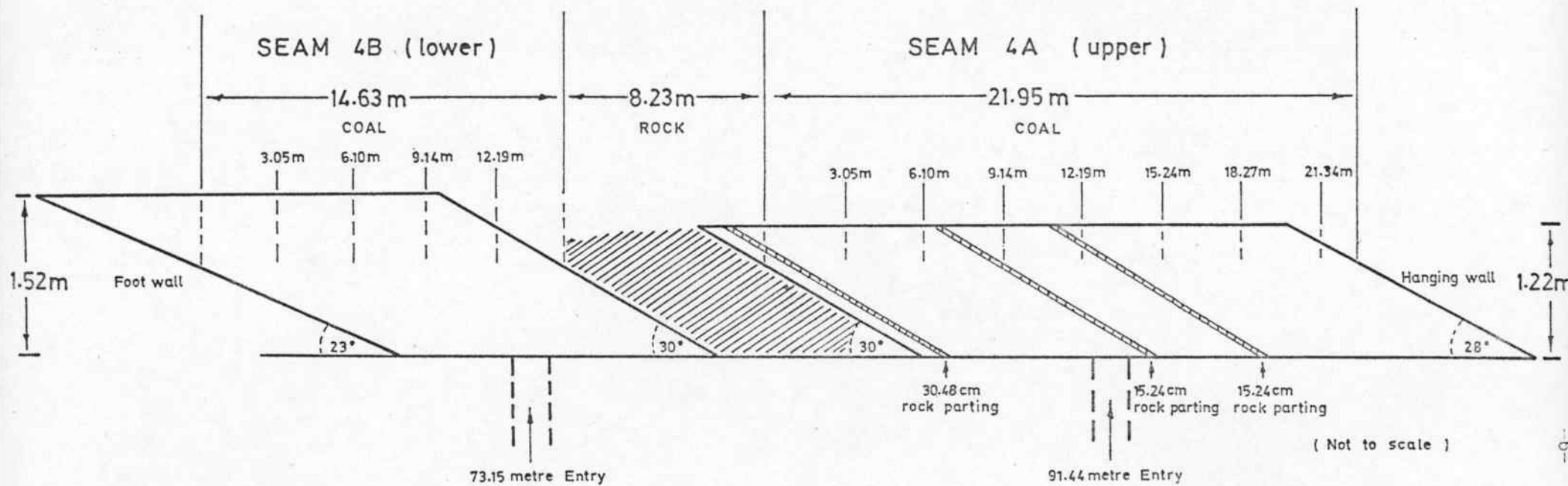


Fig.3 — Topview of floor area giving seam offsets for control of sampling



Rio Algom Exploration Co., Flathead area of S.E. British Columbia  
 Co-ordinates U.T.M. Zone 11 true origin  
 15971.44 N in metres  
 178009.93 E in metres  
 Elevation 1498.95 metres

Fig. 4 — Crosscut sampling face



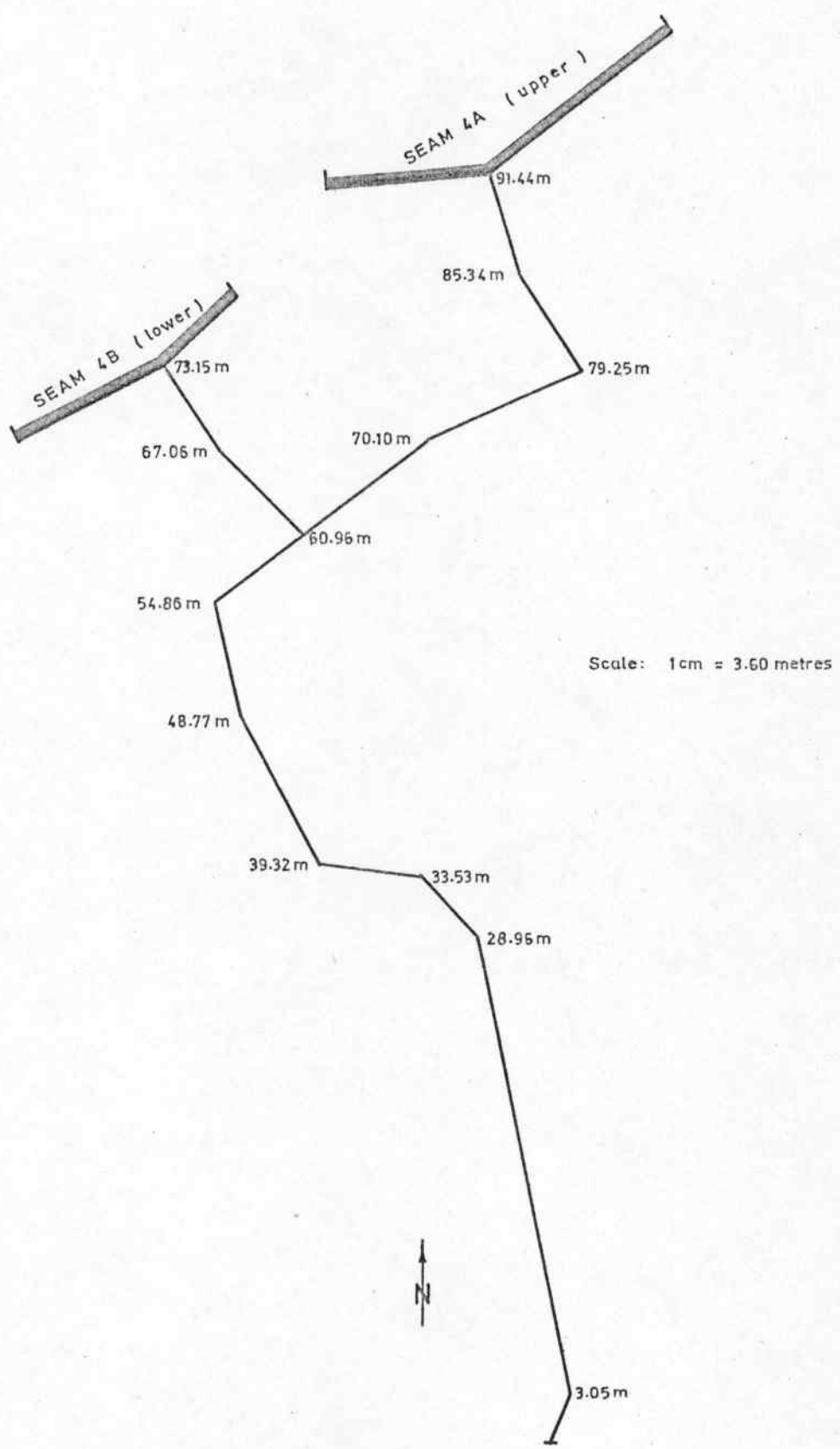
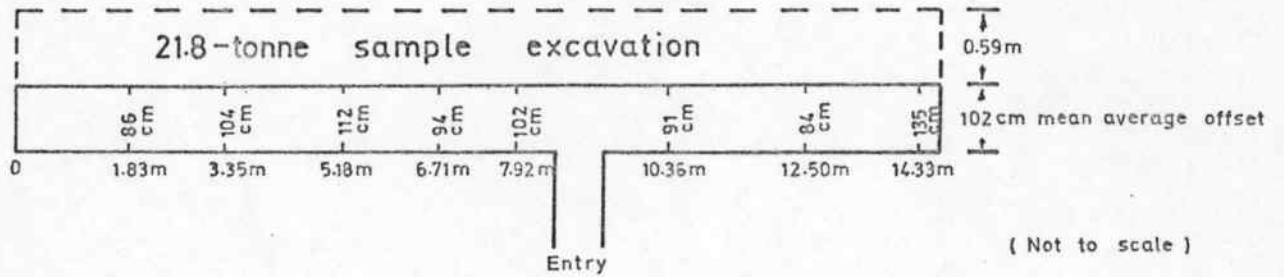


Fig. 5 — Approximate bearings and distances of adit entry and crosscut

SEAM 4B ( lower )



SEAM 4A ( upper )

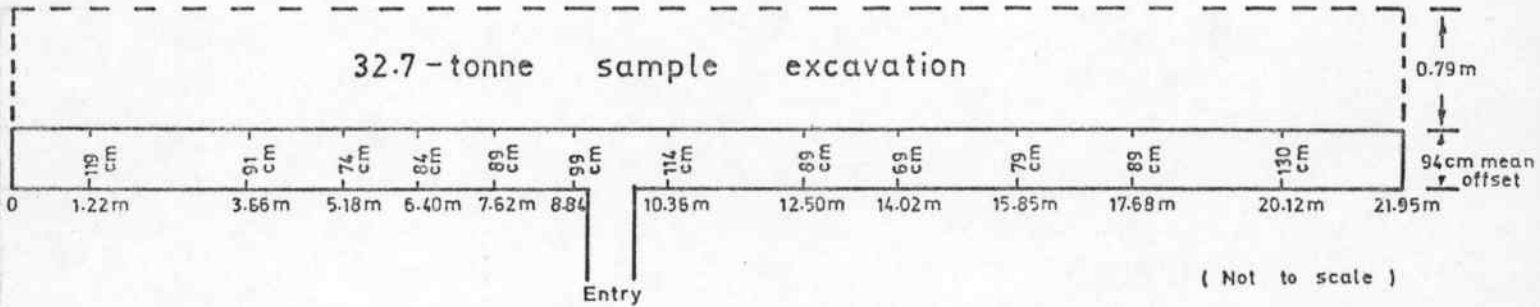


Fig. 6 - Top view of floor area giving seam offsets for control of sampling