

UKOOA P1/84 FORMAT

B.2 Tape specification and tape layout

Half inch magnetic tape	:	IBM compatible, non-label
Number of tracks	:	9
Number of bytes per inch	:	1600 (800 or 6250 are permissible alternatives)
Mode	:	Coded EBCDIC
Record length	:	80 bytes
Block size	:	Blocks physically separated by inter-record gap.

An 'EOF' statement followed by an IBM tape mark shall be written after the end of a file and a tape shall be closed by two IBM tape marks.

The tape layout is detailed in paragraph 4 below. In general, a tape may contain one or more files depending on the type of survey. Each file shall start by a number of 'Header Records' followed by data records and closed by an EOF statement and an IBM file mark

B.3 Header record specification

Each file shall start with a number of header records which contain information about, and parameters controlling, all the data records which follow.

The general format for a header record shall be:

	<u>Cols</u>	<u>Format</u>
a. Record identifier 'H'	1	A1
b. Header record type	2-3	I2
c. Header	4	I1
d. Parameter description	5-32	7A4
e. Parameter data	33-80	See below

Header record types H1 to H10 and H12 to H20 inclusive are mandatory for all surveys even if a 'N/A' entry is required. Header record type H11 is mandatory for offshore 3-D surveys but is not needed for other surveys. Header records of types H21 to H25 are mandatory as far as they are applicable to the projection used.

Requirement for projection definition include the following header records.

Transverse Mercator	H220 H231 H232 H241 H242
UTM	H19 H220
Stereographic	H231 H232 H241 H242
Oblique Mercator	H231 H232 H241 H242 H259 and H256 or H257 or H258
Lambert Conical	H210 H220 H231 H232 H241 H242

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Header record type H26 is a free format statement of any other relevant information such as base station coordinates, description of additional data in receiver group records, etc. H26 may be repeated as often as required.

Formats of parameters data fields for each of the header record types shall be:

<u>Types</u>	<u>Items</u>	<u>Col</u>	<u>Format</u>
H01	Description of survey area	33-80	12A4
H02	Date of survey	33-80	12A4
H021	Date of issue of post-plot tape (d.m.y.)	33-80	12A4
H022	Tape version identifier	33-80	12A4
H03	Details of client	33-80	12A4
H04	Details of geophysical contractor	33-80	12A4
H05	Details of positioning contractor	33-80	12A4
H06	Details of positioning processing contractor	33-80	12A4
H07	Description of positioning and on-board Computer system(s)	33-80	12A4
H08	Coordinate location, e.g. centre of source	33-80	12A4
H090	Offset from ship system position to coordinate location (incl. Method of angular offset used)	33-80	12A4
H09X	Other specified offsets, e.g. antenna, X in range 1-9	33-80	12A4
H10	Clock time in respect of GMT (clock display in Advance of GMT expressed as GMT + N hours)	33-80	12A4
H11	Number of receiver groups per shot	33-80	12A4
H12	Spheroid definition as used for survey (name, semi-major axis, reciprocal flattening (1/f)	33-80	6A4, F12.3, F12.7
H13	Spheroid definition as used for post plot (name, semi-major axis, reciprocal flattening)	33-80	6A4, F12.3, F12.7
H14	Geodetic datum description as used for survey (including transformation parameters to WGS72)	33-80	12A4
H15	Geodetic datum description as used for post plot (including transformation parameters to WGS-72)	33-80	12A4
H160	Full details of datum transformation parameters between H12/14 and H13/15 for	33-80	12A4
H161	up to seven parameters, if applicable	33-80	12A4
H17	Vertical datum description for water depths	33-80	12A4
H18	Projection type	33-80	12A4
H19	Projection zone (including hemisphere for U.T.M.)	33-80	12A4
H20	Description of grid units	33-56	6A4
H210	Latitude of standard parallel(s) (d.m.s. N/S)	33-56	2 (I3, I2, F6.3, A1)
H220	Longitude of central meridian (d.m.s. E/W)	33-44	I3, I2, F6.3, A1
H231	Grid origin (latitude, longitude, d.m.s. N/E)	33-56	2(I3,I2,

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<u>Types</u>	<u>Items</u>	<u>Col</u>	<u>Format</u>
H231	Grid origin (latitude, longitude, d.m.s. N/E)	33-56	2(I3,I2, F6.3, A1)
H232	Grid coordinates at grid origin (E, N)	33-56	2(F11.2, A1)
H241	Scale factor	33-44	F12.10
H242	Latitude, longitude at which scale factor is defined	33-56	2(I3, I2, F6.3, A1)
H256	Latitude, longitude of two points defining initial line	33-56	4(I3, I2, F6.3, A1)
H257	Circular bearing of initial line of projection (d.m.s.)	33-44	I3, I2, F7.4
H258	Quadrant bearing of initial line of projection (N/S, d.m.s., E/W)	33-44	A1, 2I2, F6.3, A1
H259	Angle from skew to rectified grid	33-44	I3, I2, F7.4
H26	Any other relevant information	5-80	19A4

B.4 Data record specification

The data record will vary depending on the type of survey and data content.

Conventional surveys

The data set consists of one file with header records followed by a series of 'Point Records' containing one shotpoint position each. Header record H08 indicates whether the shotpoints represent the power source or the CDP. When one parameter changes the complete header record shall be rewritten.

Other surveys

The data set contains one file. Following the header records, the positions of the shotpoints are given in 'Point Records' and the positions of the receiver groups in 'Receiver Group Records' immediately following the 'Point Record' of the related shotpoint.

The format of the data records shall be

a) Point Records

<u>Item</u>	<u>Description</u>	<u>Col</u>	<u>Format</u>
1.	Record identification 'S' = shotpoint or CDP (See Header rec. H08) 'G' = receiver group 'Q' = bin position 'A' = antenna position	1	A1
2.	Line name (left adjusted, including reshoot code)	2-17	4A4

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3.	Point number (right adjusted)	18-25	2A4
4.	Latitude (deg., min., sec., N/S)	26-35	I2, I2, F5.2, A1
5.	Longitude (deg., min., sec., E/W)	36-46	I3, I2, F5.2, A1
6.	Map grid easting	47-55	F9.1
7.	Map grid northing	56-64	F9.1
8.	Water depth in metres (datum defined in header record H17)	65-70	F6.1
9.	Day of year	71-73	I3
10.	Time hhhmss, (GMT or as stated in header)	74-79	3I2
11.	Spare	80	IX

Followed by 'Receiver group' records for 3-D surveys with streamer positioning.

b) Receiver group records (3-D offshore surveys)

12a	Record identification 'R'	1	A1
12b	Receiver group number	2-5	I4
12c	Map grid easting	6-14	F9.1
12d	Map grid northing	15-23	F9.1
12e	Cable depth in metres (or additional information as specified in H26)	24-27	F4.1
12f	Receiver group number	28-31	I4
12g	Map grid easting	32-40	F9.1
12h	Map grid northing	41-49	F9.1
12i	Cable depth (etc.)	50-53	F4.1
12j	Receiver group number	54-57	I4
12k	Map grid easting	58-66	F9.1
12l	Map grid northing	67-75	F4.1
12m	Cable depth (etc.)	76-79	F4.1
12n	Spare	80	IX

End of file record

Each file shall be terminated by a record with 'EOF' in col 1-3 followed by an IBM t tape mark.

The tape shall be closed by two tape marks.