EPSG Co-ordinate System Description in UKOOA Positioning (P) Formats

For improved machine readability and/or to enable integrity checking of co-ordinate systems definitions in UKOOA P1, P2, P5 and P6 formats, provision is made to describe co-ordinate system by reference to the European Petroleum Survey Group (EPSG) database of geodetic parameters. This allows an industry-standard name to be quoted where the geodetic co-ordinate system used is a common system. Defining parameters and units are then as given by EPSG and are not strictly required to be explicitly given in the P-formats records. However, as an integrity check, it is considered good practice also to include the explicit definition.

The new records which can be used as extensions within P1/90, P2/94, P5/96 and P6/98 formats are:

TYPE	ITEM	FORMAT
Col 1-6	*Col 7-32*	*Col 33-80*
H8000	**EPSG Geographic CS Name**	**A40**
H8001	**EPSG Geographic CS Code**	**I5**
H8002	**EPSG Projected CS Name**	**A40**
H8003	**EPSG Projected CS Code**	**I5**
H8004	**EPSG Vertical CS Name**	**A40**
H8005	**EPSG Vertical CS Code**	**I5**
H8006	**EPSG Database Version**	**F4.1**

Geographical co-ordinate systems may be two- or three-dimensional. A vertical co-ordinate system is one-dimensional. Ellipsoid heights are part of a three-dimensional geographical co-ordinate system and never exist on their own as a vertical co-ordinate system . Vertical co-ordinate systems are used for gravity related heights and depths which are often referenced to the geoid (approximately mean sea level).

For the P1, P2 and P5 formats:

a. The H8002, H8003 and H8006 records are required when latitude, longitude, easting and northing but no height or depth are given;

b. The H8002, H8003, H8004 and H8006 records are required when latitude, longitude, easting, northing and gravity related height or depth are given;

c. The H8000, H8001, H8002, H8003 and H8006 records are required when latitude, longitude, easting, northing and ellipsoidal height are given.

For the P6 format, the H8002, H8003 and H8006 records are required.

UKOOA Surveying and Positioning Committee
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