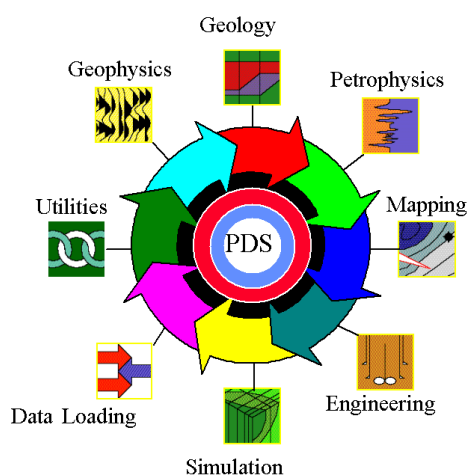




# Tigress PDS Data Loaders and Links

Tigress Data Loading applications enable E&P personnel to transfer data to and from the Tigress Project Data Store (Tigress PDS) for use in the Tigress applications. Data is loaded from a variety of 3rd party databases and file and tape formats using graphical interfaces and specially developed links. Links to other databases, applications and file formats can be written using the Tigress PDS Developer's Toolkit, transforming the Tigress PDS into an open integration platform and data distribution hub.



## Seismic Import/Export

### Import and export of 2D and 3D seismic and navigation data in a variety of different formats

- Import and export of 2D and 3D SEG-Y data in a variety of formats (SEG-Y, Charisma and Landmark SEG-Y in 8, 16 & 32 bit)
- 3D surveys can be specified using a single inline/crossline origin point and rotation, or three corner points
- Option to load 3D data in inline or crossline order
- 2D navigation data is read from UKOOA ASCII files on tape or disc
- Dump facility for EBCDIC, binary SEG-Y files, binary trace headers and data values to be decoded and viewed
- Elevation, static correction and water depth data can be extracted from the trace header and stored in the database for later display in the Seismic Interpretation application
- Post processing options include polarity reversal, filtering and scaling
- Import of cultural data from ASCII files
- Generation of time slices

## Log Load

### Import and export of log, core and interpreted trace data in a variety of formats

- Import and export of data in PBAAscii, LIS, LAS v2.0, BIT and TIF formats (Schlumberger and Atlas)
- Display and manipulation of trace values using spreadsheet editing tools or simple functions
- Definition of log and mud header, casing and bit-sizes for use in borehole and environmental corrections
- Definition of tool type and pre-processing applied to traces (e.g. temperature corrected)
- Interrogation of LIS tapes and TIF files prior to loading and conversion of LIS to TIF and vice versa
- Merging of log runs



## Deviation Survey

### Entry of the well trajectory and correction to true vertical depth

- Trajectory can be imported in PBAAscii format or typed in manually
- Display and manipulation of raw and computed survey values
- Computed deviation table can be generated by four methods:
  - Balanced tangential
  - Radius of curvature
  - Average angle
  - Minimum curvature
- Location of survey origin can be offset from the well header
- Location can be copied to or from the database

## Core Entry

### Spreadsheet entry/editing of conventional and special core analyses

- Fast entry of core data using spreadsheet editors
- Conventional core analyses include wettability index, grain density, porosity, CEC, permeability, fluid saturation
- Special core analyses include capillary pressure, formation resistivity factor, resistivity index, waterflood susceptibility, porosity and permeability compaction factors, relative permeability, gamma ray
- Definition of core and mud header with automatic generation of length drilled and core recovery

## RFT Load

### Spreadsheet entry/editing of formation test data

- RFT data can be imported in PBAAscii format or typed in
- Display and manipulation of base, header and test data values
- Base data includes initial, final and formation pressure definition
- Header data includes mud, choke and chamber parameters
- Test data includes time and pressure per sample point

## Well View

### Entry of a well's historical construction and production history events

- ASCII file and spreadsheet entry of all events
- Historical construction events are graphically illustrated as a wellbore schematic diagram
- Schematic can be displayed for any period in the well's history with display of well zonation to ensure correct completion
- Twenty one construction events including drilling, casing, cement, perforation, packers, liners, tubing, pumps etc.
- Five geology and production events including production data, flowmeter, static tests, logging, coring, production data includes rates, cumulatives, ratios, cuts, pressures and days
- General and naming events including well symbol, location, elevation, platform, rig and quadrant names

## Log Digitisation

### Import of paper based log data using a variety of supported digitisers

- Supported digitisers include; Microgrid; Calcomp 9500/9100; sketchpad; GTCO digipad
- Supports a variety of baud rates from 150 to 19200. Supports trace wrapping
- Point or stream digitising modes
- ASCII FILE CONVERTER
- Import of well dependent data in unrecognised ASCII file formats
- Imports data into the Project Data Store or converts the file into PBAAscii format
- Data types include log, core, deviation, zonation and RFT data
- Interactive definition of data location in the file and data type



## Mapping Import/Export

### Import and export of all map data to and from flat files

- Import and export of map data including well control points, faults, polygons, grids, simulation grids and seismic control points
- Import in a variety of industry standard ASCII formats including Tigress, CPS-3, IRAP, Landmark, ISM and Z-Map
- Import of generic free format ASCII data
- Import in a variety of industry standard binary files including CPS-3 and IRAP.
- Export in a variety of industry standard ASCII formats including Tigress, CPS-3 and Z-Map
- Export in a variety of industry standard binary formats including CPS-3 and IRAP
- Bulk export of map data
- Association of related imported map data (structure grid with fault set)

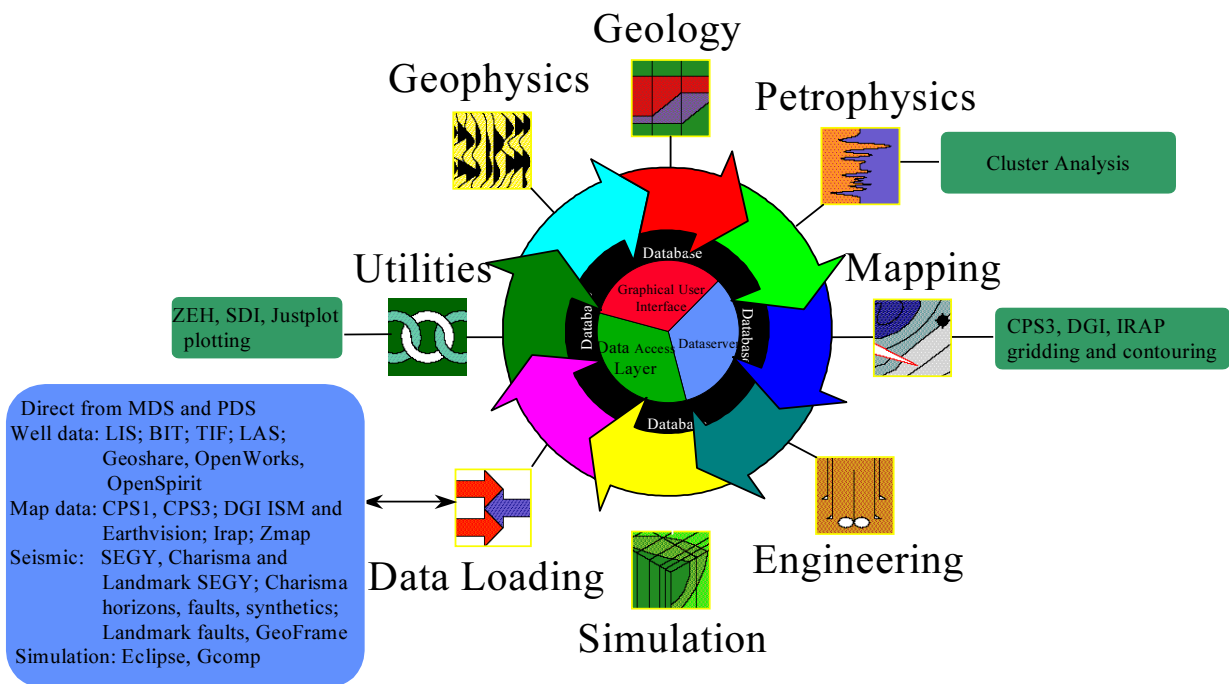
## Production Loader

### Import and export of ASCII files containing production related data into POSC compliant data model

- Any ASCII file format can be imported using Generic Data Loader
- Format templates can be defined to import data files, and saved for re-use
- Both pre-defined and saved format templates are platform independent
- User definition of null values, comment markers, number of lines to ignore etc.
- Flexible matching of data to the format definition by keyword, number of columns, field count and line position
- Data can be stored at any appropriate well hierarchy level – well, wellbore, conduit, reservoir element, perforation interval, completion
- Data can be stored in blocks, or as fixed length or delimited records
- Data types include, forecast, performance, production, production test, reallocated and reconciled data, special survey

## Data and 3rd Party Application Links

An API developer's kit is available to enable tight and loose integration of 3rd party applications and databases to the Tigress PDS. Tight integration enables data to be transferred directly, while loose integration enables data to be transferred by ASCII or binary file. The currently available links are summarised in the following diagram:





Tigress

# PDS Data Loaders and Links

## Data and Database Links

### The Import/Export System

A large number of industry standard and 3rd party file format and database links can already be used to transfer data using The Import/Export System (TIES), including Geoshare. A complete description of TIES is given in the document, The Import/Export System.

### OpenSpirit – TIES

OpenSpirit – TIES retains the basic features of standard TIES and connects to the OpenSpirit Application Integration Framework to transfer well header, log and deviation data between OpenSpirit enabled data stores and PBAscii data exchange format.

### The OpenWorks Link

This is a bi-directional tight link transferring well and map data between the two databases. The OpenWorks link is described in the documents, PDS/OpenWorks Link and PDS/OpenWorks Data Item Transfer.

### The Recall Link

This is a bi-directional tight link transferring well data between the Tigress PDS and Z&S Recall database. Contact Z&S Consultants for further information.

### MDS-PDS Link

This link transfers bulk seismic and log data stored in the PetroBank Master Data Store (MDS) to the Tigress PDS. Seismic data is exported from the MDS as Tigress 8, 16 or 32 bit format files. The MDS-PDS link is used to select the destination project data store for the data, define the survey location in the data store, move the file(s) to a specified Unix directory and then updated the data store pointers to the files.

### Eclipse Link

The Eclipse link has been developed to import and export Eclipse keyword files. The link imports and exports the controlling RUNDAT file and any include files of grid properties, PVT and saturation tables and well properties.

### GeoFrame link

This link displays seismic data stored in GeoFrame and interpreted in Charisma in the Tigress Cross Section application. The link also transfers seismic horizon and fault data from GeoFrame to the Tigress PDS.

## 3rd Party Application Links

Tight links have been developed with the following 3rd party applications:

- Geotracker from VoluMetrix, for 3D seismic data visualisation. Details are in the Tigress Geophysics brochure.
- Cluster Analysis from Agip, for log facies analysis. Details are given in the Cluster Analysis and Linear Analysis brochure
- Sure from HOT, for simulation
- Cheers from Chevron, for simulation

*Integrated by Design*



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