

Gulf of Mexico Formation Pressure Database



The Source

for Critical Information and Insight™

Standardised, reliable and easy to access digital reference of formation pressures from publicly released offset wells

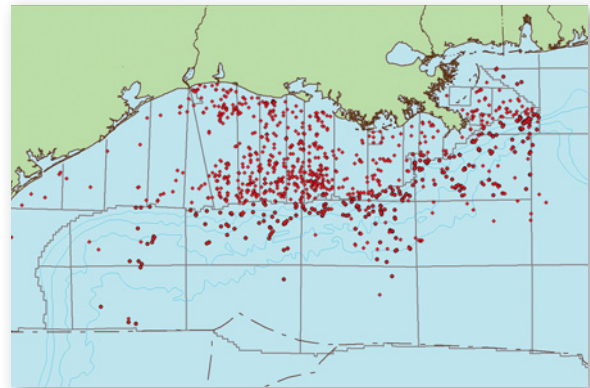
Understanding formation pressure data is an essential component of upstream hydrocarbon activity from exploration, through operations to appraisal and development. For example, in exploration, the data assists in the understanding of hydrocarbon migration and entrapment, hydrocarbon column integrity and hydrodynamics.

In the operational environment, pressure is invaluable for well planning with impact on casing design, mud programs and safety. Finally, in appraisal and development, pressure analysis will assist in determining reservoir connectivity, fluid contacts and lateral or vertical seals.

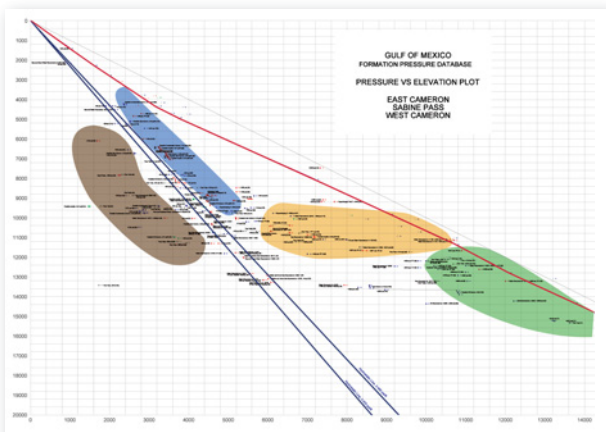
The Gulf of Mexico Formation Pressure Database from IHS provides a standardised, reliable and easy to access digital reference of formation pressures from publicly released offset wells. Explorationists and engineers are then able to make valid geological and engineering interpretations. Any trend or anomaly in the pressure data will have been quality controlled to ensure that the results are from subsurface conditions and not a result of poor data.

The database consists of pore pressures measured from wireline pressure logs (e.g. RFT™ / MDT™), fracture pressures interpreted from Leak-Off tests and mud pressures calculated from mud weights. Current uses of the database by US operators include:

- Mapping regional pore pressure distribution
- Reservoir fluid contacts and connectivity
- Fracture analysis
- Well program design
- Integration of proprietary pressure data with the IHS offset well data
- Calibration of pore pressure models from seismic velocities, mud weights and basin modelling with actual pressure measurements



Regional Coverage of RFT™ / MDT™ wells (as of June 2006)



Example GOM Shelf Pressure Depth plot

The representative Pressure vs Depth plot – as shown above, for the West Cameron, Sabine Pass and East Cameron areas illustrates how formation pressure varies with depth and imposes constraints on exploration and production. At shallow depths, formation pressures are close to hydrostatic (“normal”) but at greater depths, the formation pressures are approaching the rock strength and being limited by the fracture gradient.

Data Coverage (July 2006)

Shelf	RFT / MDT Wells	Leak-Off Wells	Mud Wells
Louisiana West	478	104	106
Louisiana East	231	81	69
Mississippi Delta	130	49	49
Texas shelf	40	51	0
Mobile Offshore	1	0	0
	880	285	224

DeepWater	RFT / MDT Wells	Leak-Off Wells	Mud Wells
Western	103	17	14
Central	409	33	58
	512	50	72

The July 2006 release contains 96 new wells with MDT / RFT measurements, 56 of which are in deepwater and are data rich. Several wells contain more than 50 RFT measurements.

Benefits

- Savings in time and money. The preparation of proprietary databases involves considerable in-house resources and budgets. The IHS database saves customers the effort of sourcing, processing, interpreting and storing the data
- Convenience. The database is easy to use with a specially designed user friendly Microsoft Access™ front-end and the data can easily be imported and stored within a corporate IT environment. Users can easily extract data by well or by areas for further analysis in third party geological or drilling software

Deliverables

- Digital formation pressure database in Microsoft Access™ format, Excel™ or ASCII as determined by the customer
- The digital database includes: Well header data, drilling comments, formation pressures from wireline logs, wells tests or kicks, casing and liner data, drilling mud data, formation water salinities and fracture data from LOTs, FITs and lost circulation events

Data Sourcing

The data is extracted from formation test logs and reports. The unique IHS data processing and quality control entails validation, corrections for gauge type and hole temperatures, standardisation of gauge depths to the vertical and unifying pressure units. In addition to the formation pressure data, many wells have fracture gradient information from formation integrity and leak-off tests – information crucial to well safety as it enables minimum rock stress to be calculated.

Data content per well may vary dependent on original data availability.

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