

Wizards in Base Business Mapping - Practice in Asset Development

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In the past two years our JV Asset Development has been using a series of GOCAD Wizards (guided workflows) for routine base business mapping. This effort of development and deployment was sponsored and reviewed by our management and asset team leaders and mentors. The objectives were to 1) standardize base business mapping among different asset teams for corporate and government reviews and audits, and 2) save labor time by guided workflows in routine base business mapping for reservoir management.

The wizard workflows generate a series of static maps including structural maps with well information (well symbol/type, interval, and name/label), original and current fluid distribution maps (gas, oil, water, and unknown fluids), original and current net pay maps, well drainage zone maps, facies pie chart map, and coordinate/grid map.

Several dynamic mapping workflows were also developed to allow earth scientists to map beyond static data and integrate static and dynamic data. These wizards include quick production downloading and preview, production bubble and pie chart mapping, production mapping (water cut maps), bottom hole pressure maps for reservoir compartmentalization analysis, and a quick oil-in-place click-and-display tool for a specified drainage area around a well in low, mid, and high cases. All these maps are plotted through time on the existing reservoir top surface and can be displayed with geological models in GOCAD projects.

Training was conducted at three levels - business unit, asset teams, and individuals. Currently about twenty to thirty earth scientists in our JV Asset Development are using these wizards in their routine mapping in reservoir management. From time to time we collected feedback and comment to improve the wizards. Till mid 2010 these wizard workflows have been used for business unit, corporate, third party, and government reviews/audits, and routine reservoir management activities such as in-fill drilling, non-rig work over, reserve booking, and reservoir reviews.

LESSONS LEARNED:

Keep workflow as simple as possible - A complex workflow would prevent asset earth scientists from using it.

Allow mistake and update during workflow. The mapping tool should be flexible enough for any mistake and data updating.