

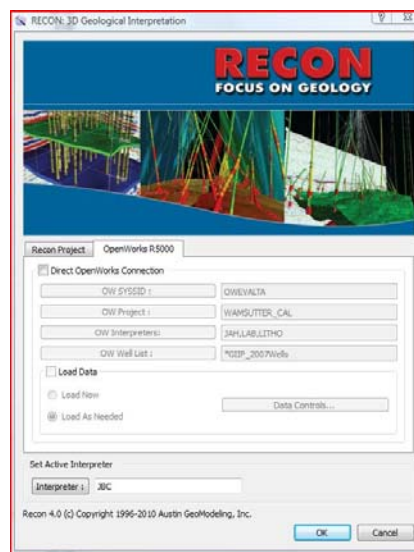


## AGM RECON® Interconnectivity with 3rd Party Applications

AGM places great importance on seamless integration with the various data stores commonly used by our customers. We have taken multi-pronged approach to this challenging and ever-evolving task to provide integration with third-party vendors on various levels. The primary ways we interact with Landmark's OpenWorks, Paradigm's EPOS and Gocad suites, Schlumberger's Petrel and GeoFrame, and ESRI's ArcSDE are through direct links to applications, OpenSpirit® connectivity, and ASCII imports/exports. These links appear directly in the Recon interface, in the interface of third-party vendors, and in our new ReConnect module. This document will succinctly outline the interactions by vendor and briefly explain the mechanics and logistics of each.

### Landmark OpenWorks

Landmark's OpenWorks is the first product Recon® connected to via direct link. AGM has joined the Landmark SDK (Software Developer Kit) program and uses both the OW2003 and R5000 SDK to connect to Landmark's databases directly in Recon. Recon reads and writes a wide variety of well specific data types such as well headers, deviations, logs, picks, point sets, grids, faults, lithologies, cores, well tests, production and culture data directly to and from OpenWorks. Recon reads SeisWorks seismic volumes, fault segments and horizons directly without the need to duplicate the data in a Recon project. Recon provides the option to write data dynamically back into OpenWorks as it is interpreted with a "live" connection to OpenWorks or at the user's discretion. The link also allows loading by data type and the "load now" and "load as needed" option. The "load now" option loads all data when you build the project the first time while the "load as needed" option loads only the header information upon project build and then loads the full data as it is accessed by the user. The latter option is very useful for managing large datasets.



The OpenWorks 2003 data link is commercially available now in Recon® 3.1 and runs on 32 bit Linux. With the release of Recon 4.0 in April we will support both OW 2003 and R5000.

The Recon 4.0 R5000 link will run on 64 bit Linux and Windows. The introduction of the new ReConnect module on the Recon 4.0 platform will add considerable data-mining and updating capability to both the OW 2003 and R5000 database links. Additionally ReConnect will provide access to OpenSpirit to provide another route for customers to connect to R5000 and then many other OpenSpirit partners. More details are provided in the ReConnect and OpenSpirit sections below.



## Petrel

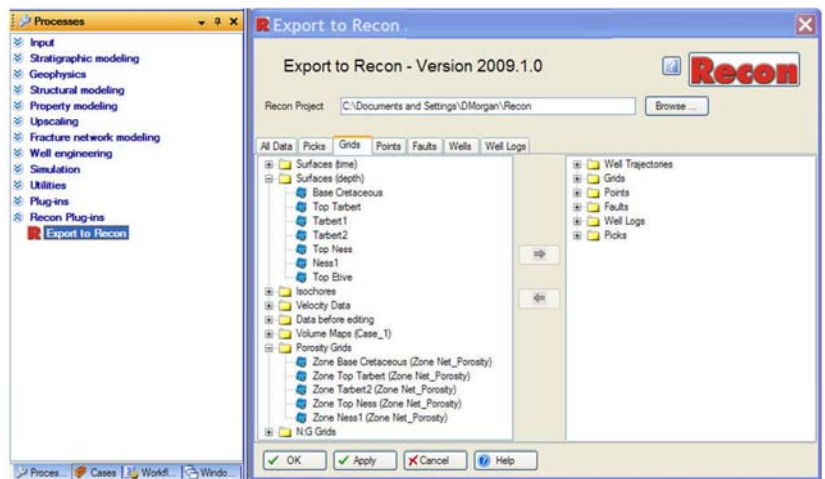
*OpenWorks links-* Many Recon® users currently running Recon 3.1 and Petrel® in common workflows use OpenWorks as the corporate database to transfer data back and forth between the two applications. Recon moves data from and back to OpenWorks as described above and Petrel moves data from and to OpenWorks via OpenSpirit or custom links created through the SIS Ocean SDK. In this way, OpenWorks acts as the middle-man to move data between Recon and Petrel without any ASCII import/export. When OpenWorks is not available users move data via ASCII import/export interfaces in Recon and Petrel.

*OpenSpirit-* Starting with the Q2 release of 4.0, Recon® users will be able to move data to and from Petrel, GeoFrame, and many other 3rd party applications using OpenSpirit. Workflows



leveraging Recon's OpenSpirit link can access GeoFrame, OpenWorks, or ArcSDE databases or communicate directly between applications. OpenSpirit provides access to 40+ partner applications and databases.

*Direct Petrel Plug-in-* Additionally AGM is pleased to announce the first release of a **direct Petrel® Plug-in** in Q2 2010. The Recon direct Petrel Plug-in supports data transfer both ways without the need for an intermediate database. The plug-in will reside in Petrel and is a set of menu items / command-items on the Petrel dialogs. Data types supported by this plug-in include wells, picks, grids, faults and points at a minimum. The first implementation will be push/pull only but future improvements may advance the solution to cover automatic updates, refresh options and dynamic “broadcast” of changed data.





## Paradigm

*OpenWorks*- Today users of Recon interface with Paradigm's Gocad via ASCII import/export or via OpenWorks with links built for Gocad using the Gocad Developer's Toolkit. When such a

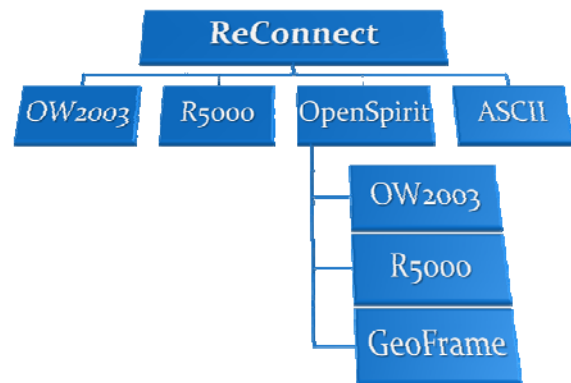
Gocad/OpenWorks link exists the OpenWorks database is used as a go-between for Recon and Gocad in the same way described above for Recon® and Petrel®. We know of no such customization capabilities for links between Paradigm Epos applications and OpenWorks, but they may indeed exist.

*OpenSpirit*- Connectivity to Paradigm's Epos and Gocad products will benefit from AGM's OpenSpirit implementation in much the same way that it will enable extended interaction with Petrel. In combination with an intermediary database OpenSpirit provides a clear pathway to move points, picks, intervals, surfaces, faults, seismic, wells and logs between Recon, Gocad and other Epos applications. Data types not supported by the OpenSpirit links will still be accessible by easy-to-use import/export routines in Recon.

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## ReConnect

ReConnect is the new data-mining module available in late Q2 2010. OpenWorks 2003 and R5000 links will be available directly in 4.0 but will be enhanced in ReConnect with the ability to mine for specific data to load and then update. For example, users will be able to search for and load well picks of a specific vintage for certain horizons by a specific interpreter. ReConnect will enable users to easily combine data from separate OpenWorks projects. Additionally ReConnect will contain OpenSpirit and enhanced ASCII loading options. The OpenSpirit link will enable data exchange with ESRI's ArcSDE and numerous other OpenSpirit-enabled apps.





## **Conclusions**

AGM is committed to providing integration with Landmark, Schlumberger, Paradigm and other geoscience and engineering software providers at different levels through a mix of fit-for-purpose solutions centered around RECON®. RECON 4.0, available in Q2 2010, demonstrates commitment to seamless interaction with third-party applications through the introduction of a direct Petrel Plug-in, ReConnect, and OpenSpirit. We will continue to fine tune our dataflow with other vendors taking cues from our clients.