



Planner

Fully integrated well planning

Release Notes for GVERSE Planner 2016.1



© 2001 - 2016 LMKR Holdings. All Rights Reserved.

This publication is copyright protected. No part of this publication may be copied or distributed, transmitted, transcribed, stored in a retrieval system, or translated into any human or computer language, in any form or by any means, electronic, magnetic, manual, or otherwise, or disclosed to third parties without the express written permission of:

LMKR Holdings

Corporate Headquarters
Unit No. B1501, Latifa Tower
Sheikh Zayed Road, Dubai, UAE P.O.
Box 62163
Phone: +971 4 372 7900
FAX: +971 4 358 6386
Internet: www.lmkr.com

Trademark Notice

GVERSE™ WebSteering™, Predict3D™, Attributes™, Connect™, Planner™ are trademarks of LMKR.

DecisionSpace, Discovery, GeoGraphix (stylized), GeoGraphix Exploration System, GeoLink, GES, GESExplorer, GMAplus, IsoMap, LeaseMap, LogM, OpenWorks, OpenWorks Well File, PRIZM, SeisVision, Xsection are trademarks, registered trademarks or service marks of Landmark Graphics Corporation.

All other trademarks are the property of their respective owners.

Disclaimer

The information contained in this document is subject to change without notice and should not be construed as a commitment by LMKR. LMKR assumes no responsibility for any error that may appear in this manual. Some states or jurisdictions do not allow disclaimer of expressed or implied warranties in certain transactions; therefore, this statement may not apply to you.

Contents

- Introduction 1
- What is GVERSE Planner? 1
- Main Features 1
- Benefits 1
- System Requirements 2
- Software 2
- Operating System 2
- Hardware 2
- Licenses 2
- New Features 3
- Third Party Applications 5
- International Trade Compliance 6
- Definitions 6
- Contacting LMKR Support 7

Introduction

LMKR is pleased to announce the release of the GVERSE™ Planner™ 2016.1 software.

This document provides an introduction to the Planner software features and benefits. It also lists the system requirements necessary to install and run the software.

What is GVERSE Planner?

GVERSE Planner is integrated with GeoGraphix®, and is used to plan wells within GeoGraphix/Field Planner modules. It enables integrated well planning giving user the control to plan multiple wells. With the Planner software you can quickly visualize geological surfaces, create surveys and make changes to existing plans by adding target points on the go with the ability to export well plans for drilling. The Planner software is part of the GVERSE application suite by LMKR (<http://www.lmkr.com/gverse>).

LMKR GVERSE consists of geoscience and engineering solutions focused on workflow optimization and enhancing productivity of teams working on diverse geological and geophysical projects.

Main Features

The main features of the Planner software are as follows:

- Digitize target points and calculate a well survey based on restrictions such as DLS.
- Plan wells in GeoAtlas Field Planning mode, and also in single well planning mode in smartSECTION.
- Anticipate intersections with geologic beds and markers using the Geoprognosis feature.
- Export well trajectory data into a Microsoft Excel sheet.
- Display planned wells in a 3D view.
- Seamlessly transfer data between GeoGraphix and Planner.

Benefits

Using the Planner software, you can benefit from an integrated platform that gives solutions in different well planning modes and scenarios.

- **Increased User Productivity:** When using GeoGraphix, the GVERSE Planner can be used to plan wells by providing flexibility in creating numerous plans.
- **Quick Decision Making:** Digitize target points with the help of geological surfaces by taking DLS constraints into account to make sure that the well is actually drillable.
- **Easy Integration with GeoGraphix:** Save well information directly into the GeoGraphix database without a requirement to import/export.
- **Reduced Costs:** Provides an affordable and comprehensive solution for well planning, saving the user from an incurring monetary loss in the future.
- **Quick Adaptability:** The well survey and GeoPrognosis reports can be generated and exported into a spreadsheet for further use in terms of more accuracy.

System Requirements

The following sections list the system requirements for the Planner.

Software

The software that must be installed on the system running the Planner are as follows:

- GeoGraphix Discovery 2016.1.x
- LMKR License Management Tool 2016.1 for Planner license
The LMKR License Management Tool (LMT) must be installed to configure the Planner license.
- Microsoft® .NET Framework 4.5.1
- Adobe Reader for selected help files (optional).

Operating System

To run the GVERSE Planner, you need one of the following operating systems installed on your system:

- Windows® 7 Professional x64
- Windows® 7 Enterprise x64
- Windows® 7 Ultimate x64.

Note: It is recommend to use the latest Microsoft® service packs and security patches.

Hardware

The hardware requirements for the Planner are the same as the GeoGraphix hardware requirements.

Licenses

The following licenses are required to run the GVERSE Planner:

- GeoGraphix Discovery 2016.1 license.
- GVERSE Planner 2016.1 license.

Note: Refer to the LMKR Customer Support Portal (<http://support.lmkr.com/>) for up-to-date information on the requirements.

New Features

This section contains a brief description of the exciting new features included in the 2016.1 release.

smartSECTION / GVERSE Planner / WellBase Integration

Launch GVERSE Planner directly from the well list in smartSECTION cross section. You can also interactively digitize your well plan in smartSECTION, and adjust the well plan in either smartSECTION or GVERSE Planner. The well plan is automatically saved in the Proposed Survey tab of WellBase.

To launch GVERSE Planner from smartSECTION, right-click the well from the **Wells Selection Panel**, and then choose **Plan Well (GVERSE Planner)**.

Right-click the well, and then select **Plan Well (GVERSE Planner)**.

GVERSE Planner launches where you can adjust the well plan.

Well plan saved in the **Proposed Survey** tab of WellBase

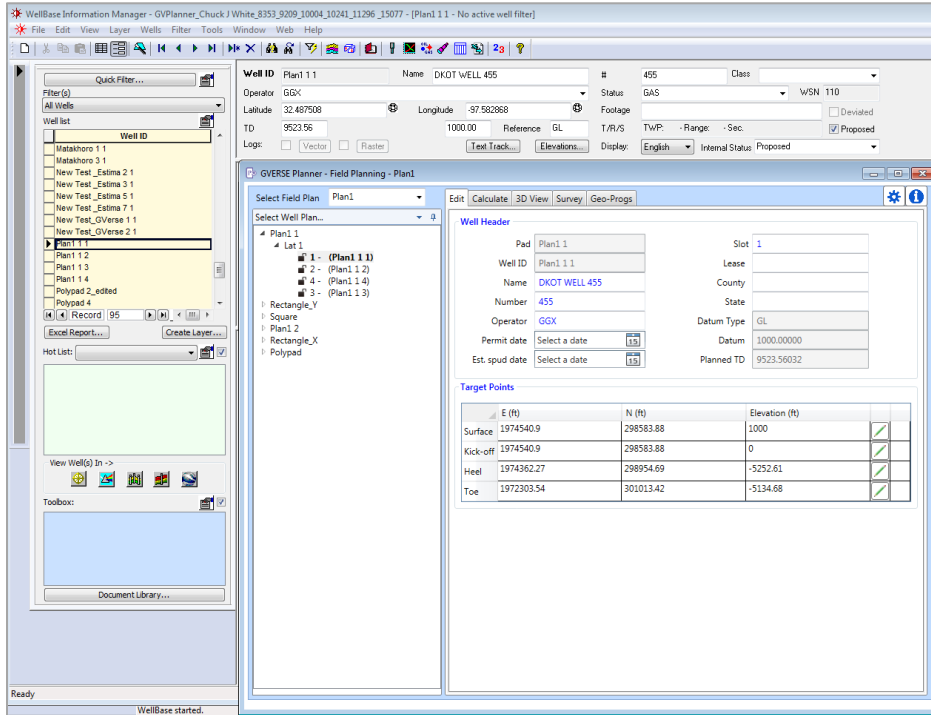
Survey Point Number	MD	TVD	N/S Offset	EW Offset	Latitude	Longitude	Inclination	Azimuth	DLS	Closure
1	0.00	0.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
2	50.00	50.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
3	100.00	100.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
4	150.00	150.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
5	200.00	200.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
6	250.00	250.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
7	300.00	300.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
8	350.00	350.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
9	400.00	400.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
10	450.00	450.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
11	500.00	500.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
12	550.00	550.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
13	600.00	600.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00
14	650.00	650.00	0.00	0.00	32.489272	-97.618561	0.00	359.94	0	0.00

Real Time Selection of Field Plans between GVERSE Planner and Field Planner

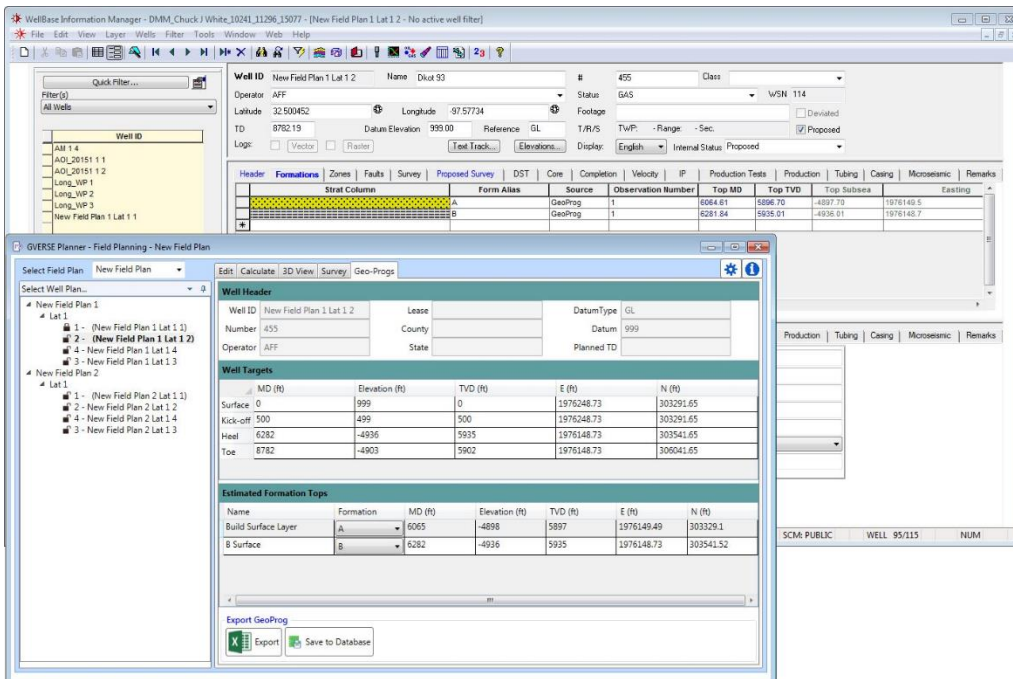
Field Plan is now synchronized between GVERSE Planner and Field Planner; such that when you select a field plan in one application, it gets selected in the other application simultaneously. Please note that this selection feature is only applicable to the field plans available in the GeoAtlas saved map.

GVERSE Planner / WellBase Integration

- Information updated in the Edit tab of GVERSE Planner also reflects on-the-fly in WellBase.



- Saving the Geo Prognosis data in GVERSE Planner automatically updates the formation tops in WellBase.



Delete Target Points from Vertical Section Plot

Delete target points from the vertical section plot. To do so, right-click on a target point, and then select the **Delete** option from the context menu.

Third Party Applications

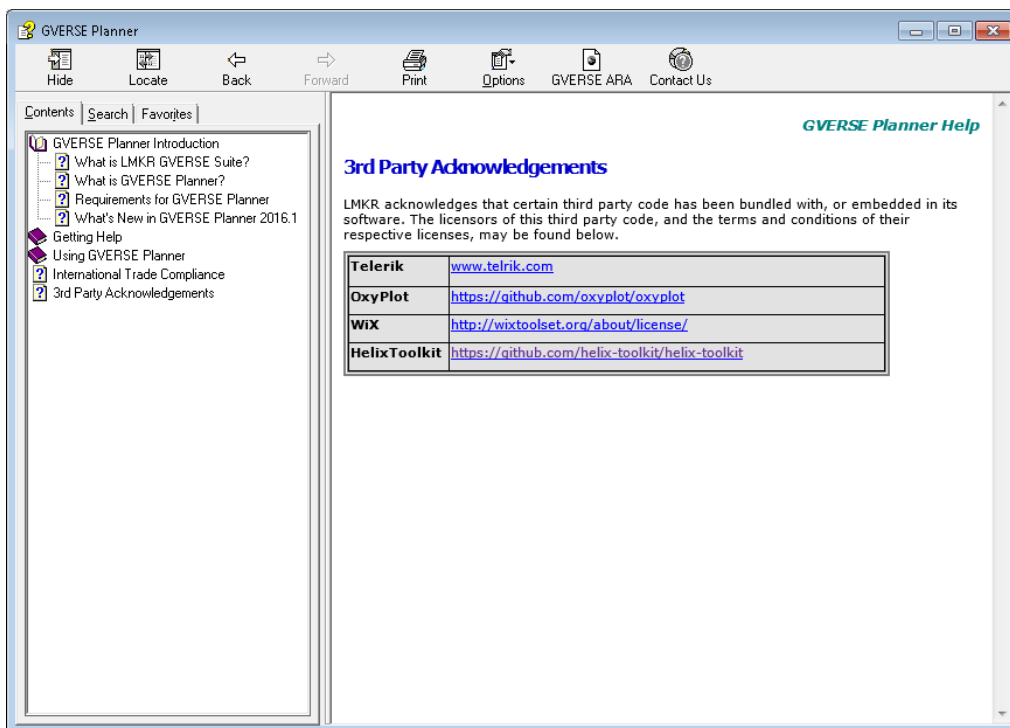
LMKR acknowledges that certain third party code has been bundled with, or embedded in, its software. The licensors of this third party code, and the terms and conditions of their respective licenses, may be found in the Planner help file.

To access the 3rd party license agreements:

1. In the GVERSE Planner Settings dialog, **Help** tab, click **Documentation**.

The Help window displays.

2. In the **Contents** pane, locate the **3rd Party Acknowledgements** help topic as shown in the image below.



International Trade Compliance

This application is manufactured or designed using U.S. origin technology and is therefore subject to the export control laws of the United States. Any use or further disposition of such items is subject to U.S. law. Exports from the United States and any re-export thereafter may require a formal export license authorization from the government. If there are doubts about the requirements of the applicable law, it is recommended that the buyer obtain qualified legal advice. These items cannot be used in the design, production, use, or storage of chemical, biological, or nuclear weapons, or missiles of any kind.

The ECCNs provided here (if available) represent LMKR's opinion of the correct classification for the product today (based on the original software and/or original hardware). Classifications are subject to change. If you have any questions or need assistance please contact us at support@lmkr.com.

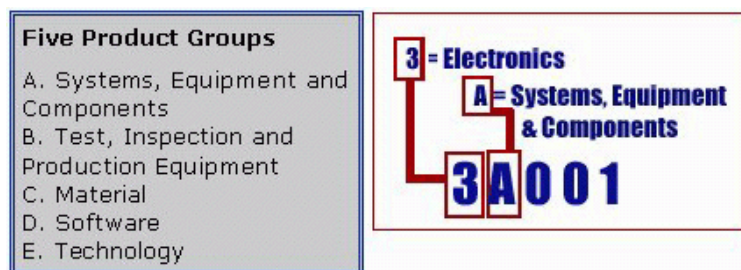
Under the U.S. Export Administration Regulations (EAR), the U.S. Government assigns your organization or client, as exporter/importer of record, responsibility for determining the correct authorization for the item at the time of export/import. Restrictions may apply to shipments based on the products, the customer, or the country of destination, and an export license may be required by the Department of Commerce prior to shipment. The U.S. Bureau of Industry and Security provides a website to assist you with determining the need for a license and with information regarding where to obtain help.

The URL is: <http://www.bis.doc.gov>.

Definitions

ECCN - Export Control Classification Number - The ECCN is an alpha-numeric code, e.g., 3A001, that describes a particular item or type of item, and shows the controls placed on that item. The CCL (Commerce Control List) is divided into ten broad categories, and each category is further subdivided into five product groups. The CCL is available on the [EAR Website](#).

The following illustration is a sample:



The ECCN number (if available) and License Type for this product are included in the table below. Also included is the date the table was last updated.

Product/Component/R5000	EAR Number	License	Last Updated On
GVERSE Planner	EAR99	EAR	11/23/2015

Contacting LMKR Support

LMKR is committed to providing the highest level of technical customer support in the industry. With an average tenure of more than thirteen years, our highly trained and experienced staff of technical analysts is comprised of geoscientists, engineers, land professionals, petrophysicists, and system specialists.

Please refer to our Customer Support timings mentioned below to ensure that you have access to our support analysts assigned to your region. When getting in touch with LMKR support, please remember that real-time support will not be available during bank holidays or after office hours. If you do get in touch with LMKR Support outside of work hours, please leave a voice message with a brief description of the issue that you are facing. Your voice message will be used to automatically create a support case for you. This will enable our analysts to attend to your issue and provide you with a resolution as soon as possible

North and South America	Europe, Middle East & Africa
<p>Monday – Friday 8am-6pm CST Toll Free (US/Canada) : +1 855 GGX LMKR (449 5657) Colombia : +57 1381 4908 United States : +1 303 295 0020 Canada : +1 587 233 4004 *Excluding bank holidays</p>	<p>UK Monday - Friday 8am - 5pm +44 20 3608 8042 *Excluding bank holidays</p> <p>UAE Sunday - Thursday (Dubai GMT+4) 8am - 5pm +971 4 3727 999</p> <p>Egypt Sunday - Thursday +0800-000-0635 *Excluding bank holidays</p>
Asia Pacific & Australian Continent	Southwest Asian countries
<p>Malaysia Monday - Friday (Kuala Lumpur GMT+8) 9am - 6pm +60 32 300 8777 *Excluding bank holidays</p>	<p>Pakistan Monday - Friday (Islamabad GMT+5) 9am - 6pm +92 51 209 7400 *Excluding bank holidays</p>

Helpful Links

Name	Website Address
LMKR Homepage	http://www.lmkr.com
LMKR GVERSE	http://www.lmkr.com/gverse
LMKR Support Portal	http://support.lmkr.com