# ROSE & ASSOCIATES, *the leader in risk analysis in the O&G industry, announces the release of their latest software tool,* APPRA

Developed using **Rose & Associates'** extensive expertise and industry knowledge in risk and resource assessment, and **3GiG's** programming expertise, **Appra** aims to deliver E&P leadership a more holistic approach to the consistent characterization of plays, prospects and portfolios.

Rose & Associates

*Jointly developed with*

3GiG

# WHAT IS APPRA?

Your customizable dashboard tracking project maturity and associated decisions to better manage your business across the E&P lifecycle

***Your*** **Data**

**Export** **Import**

## *Your* Appra System

Concept → Lead → Prospect → Drill Ready → Post Drill → Appraisal → Development

**Implement *Your* Evaluation Processes, Stage Gates, QC Approvals, Business Rules**

**VERSION CONTROL**

Track historical, approved versions of data

**VISIBILITY**

View progress reports, compare and rank evaluations

**SECURITY**

Sophisticated, tiered security

**SUPPORT DECISIONS**

Supports data and decision making, retain knowledge

**CUSTOMIZABLE**

Sustainable, easily-customizable technology

**NOTIFICATIONS**

Generate alerts for approvals

# APPRA's ADVANTAGES

Supports your decision processes and tracks opportunity progress
vital for a learning organization via a variety of meaningful, internal metrics

**Supports Data & Decision Making**

**Compare & Rank Evaluations**

**Implement *Your* Business Processes**

**Unlimited Data & Users**

**Comprehensive Post-Drill Analysis**

# About Rose & Associates

R&A assists companies improve their E&P effectiveness in quantitative prospect, play and portfolio analysis through software, training and consulting

**Appra Aides R&A's Mission as a** flexible tool that provides E&P companies with a robust, secure infrastructure to manage their portfolio of exploration and appraisal plays, prospects, and projects and implementation of risk analysis:

- Captures, aggregates and securely stores data
- Implements quality control and assurance through the approval process via a stage gate workflow
- Provides tracking and auditing of prospect estimate versions over time to better understand trends and patterns while allowing for effective comparison with post-drill analysis

**Clients Include**

devon
Apache
Chevron
CHESAPEAKE ENERGY
REPSOL
ConocoPhillips
Shell
Anadarko Petroleum Corporation
NEWFIELD
Hilcorp
PIONEER NATURAL RESOURCES
TOTAL
noble energy
OXY

# Business Process & Version Control

## ***Your*** **Processes**

*"What stage gate is this prospect at?"*

*"Who is / was responsible for the evaluation?"*

*Opportunities can be locked by Stage – key for post-drill analysis*

| Version | Target | Prospect | MZM? | # | Type | ID | Stage | Status | Created By | Created Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Final test, 3GiG Test Zone MMRA 2 | 3GiG Test Zone | Final test | | 2 | MMRA | 1243 | Submitted for Approval | Active | Kandy Lukats | 11/28/2017 11:47 AM |
| Final test, 3GiG Test Zone MMRA 1 | 3GiG Test Zone | Final test | | 1 | MMRA | 1241 | Submitted for Approval | Active | Kandy Lukats | 11/28/2017 9:05 AM |
| Rose Test, Rsoe Zone MMRA 2 | Rsoe Zone | Rose Test | | 2 | MMRA | 1229 | Set Up - New | Draft | Kandy Lukats | 11/8/2017 8:55 AM |
| Rose Test, Rsoe Zone MMRA 1 | Rsoe Zone | Rose Test | | 1 | MMRA | 1226 | Approved | Locked | Kandy Lukats | 11/8/2017 8:34 AM |
| x3GiG Demo Prospect, x3GiG Test MZM Zone 1 & 2 MZM 4 | x3GiG Test MZM Zone 1 & 2 | x3GiG Demo Prospect | Yes | 4 | MZM | 1232 | Submitted for Approval | Active | Kandy Lukats | 11/14/2017 11:53 PM |
| x3GiG Demo Prospect, x3GiG Test MZM Zone 1 & 2 MZM 3 | x3GiG Test MZM Zone 1 & 2 | x3GiG Demo Prospect | Yes | 3 | MZM | 1230 | Set Up - New | Draft | Kandy Lukats | 11/8/2017 8:59 AM |
| x3GiG Demo Prospect, x3GiG Test MZM Zone 1 & 2 MZM 2 | x3GiG Test MZM Zone 1 & 2 | x3GiG Demo Prospect | Yes | 2 | MZM | 1179 | Review Results (Draft) | Draft | Kandy Lukats | 11/6/2017 6:49 PM |
| x3GiG Demo Prospect, x3GiG Test MZM Zone 1 & 2 MZM 1 | x3GiG Test MZM Zone 1 & 2 | x3GiG Demo Prospect | Yes | 1 | MZM | 1177 | Set Up - New | Draft | Kandy Lukats | 11/6/2017 5:47 PM |
| x3GiG Demo Prospect, x3GiG Test Zone 1 MMRA 8 | x3GiG Test Zone 1 | x3GiG Demo Prospect | Yes | 8 | MMRA | 1202 | Approved | Locked | Kandy Lukats | 11/7/2017 4:12 PM |
| x3GiG Demo Prospect, x3GiG Test Zone 1 MMRA 7 | x3GiG Test Zone 1 | x3GiG Demo Prospect | Yes | 7 | MMRA | 1176 | Submitted for Approval | Active | Kevin Gross | 11/6/2017 5:39 PM |
| , x3GiG Test Zone 1 MMRA 6 | x3GiG Test Zone 1 | x3GiG Demo Prospect | Yes | 6 | MMRA | 1175 | Set Up - Import | Draft | Kevin Gross | 11/6/2017 5:38 PM |
| x3GiG Test Zone 1 MMRA 3 | x3GiG Test Zone 1 | x3GiG Demo Prospect | Yes | 3 | MMRA | 1169 | Submitted for Approval | Active | Kandy Lukats | 11/6/2017 3:33 PM |
| x3GiG Demo Prospect, x3GiG Test Zone 1 MMRA 2 | x3GiG Test Zone 1 | x3GiG Demo Prospect | Yes | 2 | MMRA | 986 | Set Up - New | Draft | Kandy Lukats | 11/5/2017 11:36 PM |
| x3GiG Demo Prospect, x3GiG Test Zone 1 MMRA 1 | x3GiG Test Zone 1 | x3GiG Demo Prospect | Yes | 1 | MMRA | 982 | Submitted for Approval | Active | Kandy Lukats | 11/5/2017 7:07 PM |

*Versioning – Multiple working hypotheses*

*Stage – Prospect maturity*

*Prospect generator and date*

# Approval Process Control

*"Who has Decision rights?"*
*"What is the Technical Basis of the Decision?"*
*"When was the Decision made?"*

*Company defined decision process*

C&C test Summary as of 01/08/2018

STAGE/STATUS  Current Stage: Development  Current Status: Active

Opportunties archived can be reactivated at any stage. Opportunties shelved can be reactivated at the Concept, Lead, Prospect or RTD stage.

| Stages | Concept | Lead | Prospect | Ready to Drill | Drilling | Post Drill Assesment | Appraisal | Development |
|---|---|---|---|---|---|---|---|---|
| Decisions | 1. Update to Lead<br>2. Shelve Concept<br>3. Archive Concept | 1. Update to Prospect<br>2. Shelve Lead<br>3. Archive Lead | 1. Prospect Assured - move on to Ready to Drill<br>2. Prospect Assured - Shelve Prospect<br>3. Archive Prospect | 1. Approved for Drilling<br>2. Shelve Prospect at the Ready to Drill Stage<br>3. Archive Prospect | 1. Input Drilling Information & move to PDA<br>2. Archive Prospect | 1. Approved for Appraisal<br>2. Archive Prospect | 1. Develop Prospect<br>2. Archive Prospect | |
| Rules | | | | | | | | |
| | At Concept | At Lead | At Prospect<br>Morrow MMRA 2<br>Morrow MMRA 1 | At Ready to Drill<br>Morrow MMRA 3 | At Drilling | At Post Drill Assessment<br>Morrow MMRA 4 | At Appraisal | At Development |

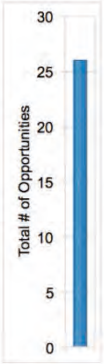
*MMRA Versioning by stage and maturity*

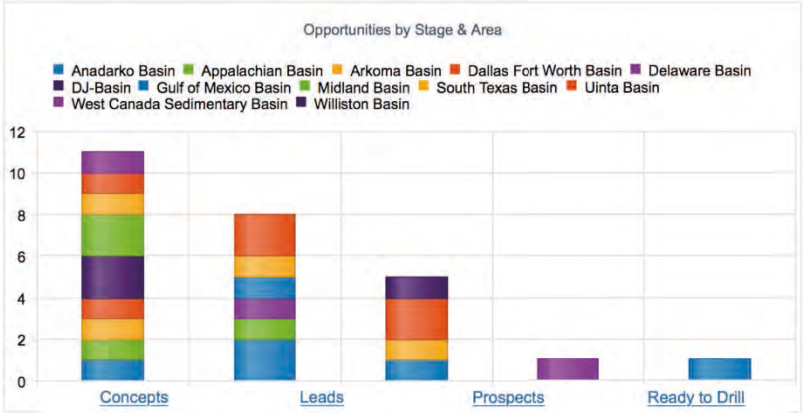
# Overview Inventory Dashboards

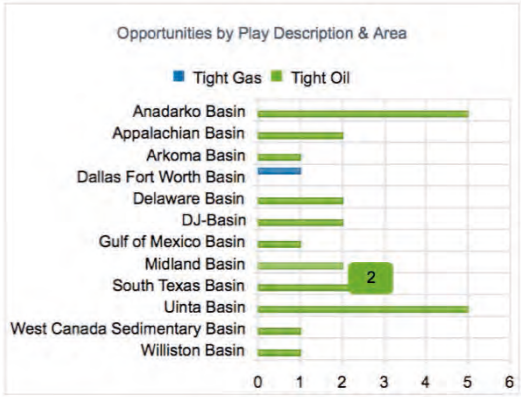
| Concept | Lead | Prospect | Ready to Drill | Drilling | Post Drill Assesment | Appraisal | Development |
|---|---|---|---|---|---|---|---|
| 1. Update to Lead<br>2. Shelve Concept<br>3. Archive Concept | 1. Update to Prospect<br>2. Shelve Lead<br>3. Archive Lead | 1. Prospect Assured - move on to Ready to Drill<br>2. Prospect Assured - Shelve Prospect<br>3. Archive Prospect | 1. Approved for Drilling<br>2. Shelve Prospect at the Ready to Drill Stage<br>3. Archive Prospect | 1. Input Drilling Information & move to PDA<br>2. Archive Prospect | 1. Approved for Appraisal<br>2. Archive Prospect | 1. Develop Prospect<br>2. Archive Prospect | |
| None | None | MMRA or MZM must be assured to moved onto Ready to Drill | Approved MMRA Version is Locked when Prospect moved to the Drilling Stage | None | None | None | None |

*Overview visualization of Opportunity inventory by stage*

| Concept | Lead | Prospect | Ready to Drill | Drilling |
|---|---|---|---|---|
| 3GiG test | Block B | Lease 50 | Lease 30 | Block D |
| Another test | Block C | Lease 70 | Area Y | |
| Valhal Extension | Block E | Area X | Concession 1 | |
| Orlov | Concession 2 | Concession 1 | Area Y | |
| Test Prospect for Glen | Area X | Area X | Concession 1 | |
| Test for W&T | Lease 80 | Concession 1 | Block D | |
| Anand Prospect | x3GiG Test Area | Lease 10 | Area Z | |
| Exxon Test | x3GiG Test Area | Area Z | Lease 90 | |
| | x3GiG Test Area | Lease 60 | Lease 99 | |

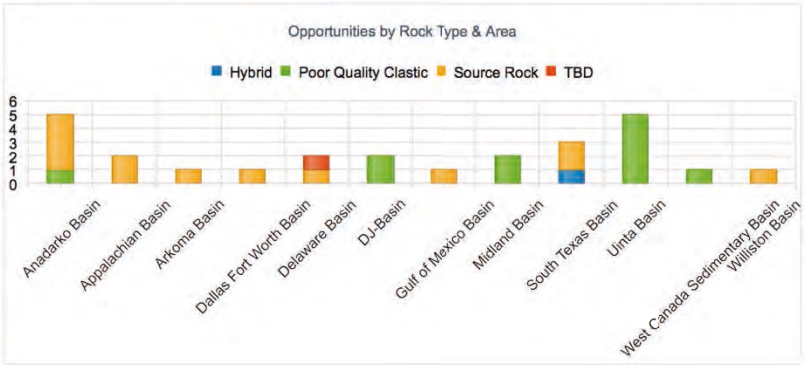


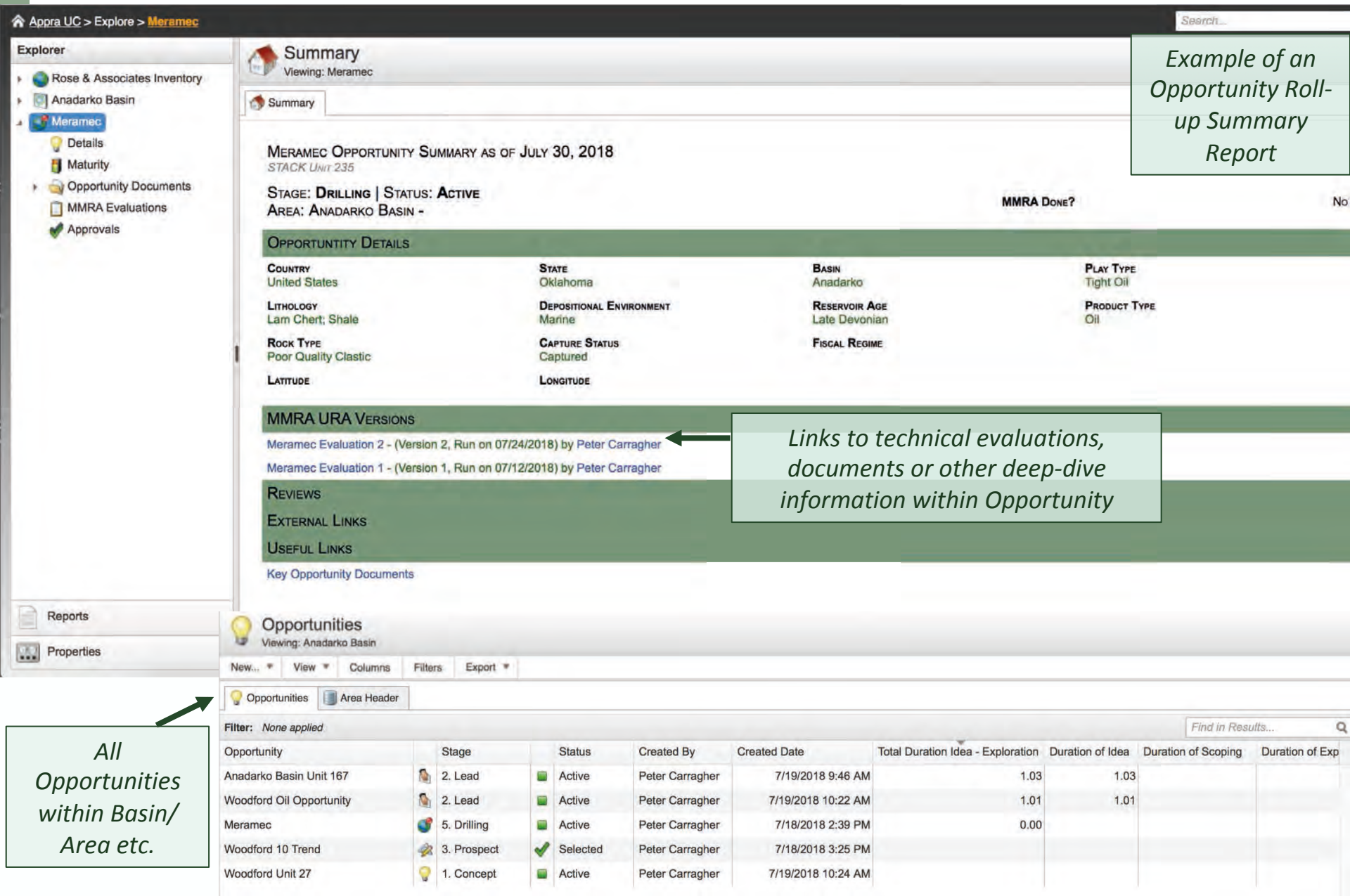




*Opportunity inventory by Rock Type & Area*

*Opportunity inventory by Play Description & Area*



# Roll-up Summary Reports



# How to Get Appra

Rose & Associates

3GiG

## LICENSING

Subscription-based license for Prospect Director Platform™
Unlimited data, unlimited users

## TIME TO IMPLEMENTATION

Days to weeks, depending on amount of customization
Aim: 2 weeks – 2 months set up time

## WHO TO CONTACT

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*"**Appra** is built to adapt to a company's decision framework. Exploration and risk managers are able to deploy company-wide processes to best manage their portfolio."*

**Peter Carragher**, Managing Partner, Rose & Associates

# APPRA FAQ'S

- **Who is developing Appra?**

  Appra is a joint development by Rose & Associates and 3GiG.

  3GiG is an integrated technology and services company for the oil & gas industry. 3GiG's Prospect Director™ platform is a proven solution that enables companies to manage, standardize and enhance the effectiveness of their unstructured, unautomated, collaborative business activities and processes. 3GiG combines a unique mix of innovative data-model driven technology along with highly knowledgeable, senior level E&P business-process consulting team to rapidly deliver measurable solutions for E&P companies globally. For more information visit www.3-gig.com.

- **What is Appra's primary function?**

  Appra provides an out-of-the-box integration with the Rose & Associates Prospect Risk Analysis Suite tools (MMRA and MZM) to import, export and capture all estimates impacting resource volumes and chance of success.

- **Can I load historical data, prospects and MMRA's?**

  Yes – there is a bulk data loader within application (file metadata, prospect inventory etc)

- **What if organization uses GeoX or internally-built system?**

  No problem! Additional customization is available to connect other commercial or proprietary tools to Appra system.

- **Can Appra be customized?**

  Yes – 3GiG's configurable application architecture means custom application needs met *fast* - no coding or developers required. Supports custom workflows, business rules, advanced security, notifications, alerts and more!

- **Where is Appra installed?**

  Installation on-premises or hosted by 3GiG within an Azure based cloud environment

# APPRA FAQ'S

- **Can data be visualized outside of Appra system?**

  Yes – basic graphing and visualizations available within application. For more advanced visualization and analytics, data in system can easily be connected to Spotfire, Tableau, Power BI, etc.

- **What is the underlying technology, infrastructure?**

  Appra built on 3GiG's Prospect Director™ Platform. Net based, web application available across multiple web browsers. Built to run on IIS, Microsoft SQL Server & Microsoft Server technology.

- **Is the Appra technology sustainable within organization over time?**

  Training provided to build, manage, govern the technology in house post- deployment. Technology is speedy, simple to build and change seamlessly on the fly to adjust to the constantly changing needs of the business as it evolves over time. Appra technology is a cost effective alternative to internally-built IT systems both in the short term and long term.

- **Can you pilot Appra?**

  Piloting of Appra is available for 3 months of use

- **What if there is information that can only be viewed by select users within organization?**

  There are sophisticated security features in Appra that allow privacy, read only, view only etc security settings for user groups.