NORALIS®

REFRESHING MWD TECHNOLOGY

NISE

Noralis Integrated Software Environment

Combining all MWD software and advanced analytics into a single, powerful and cost-effective solution.
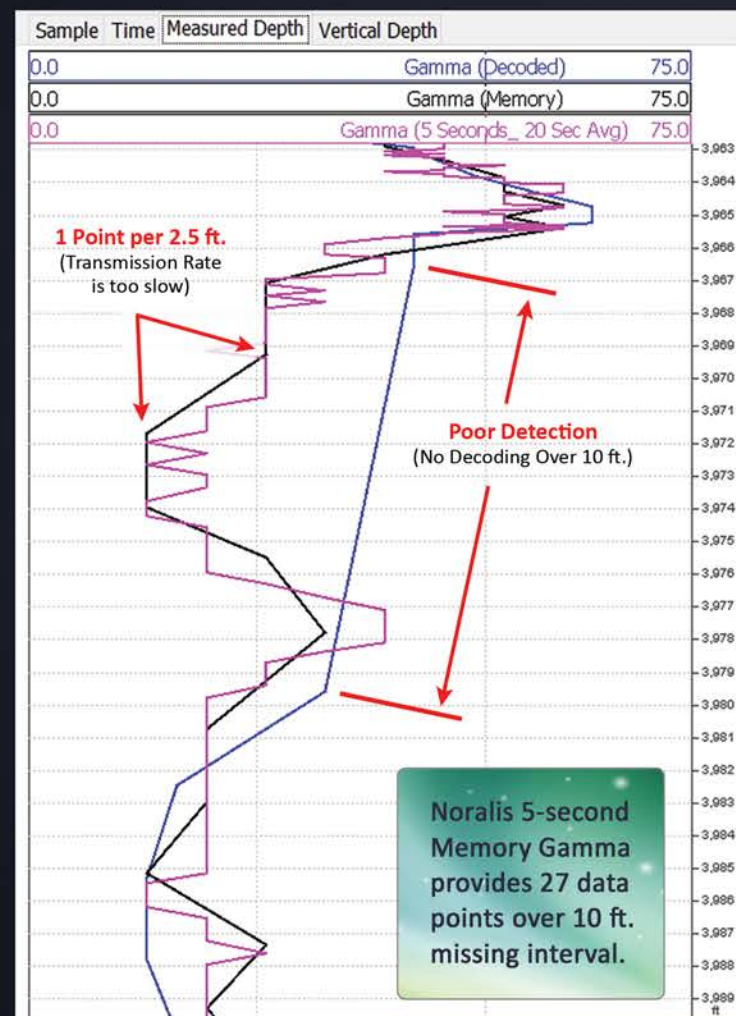
Compatibility

- Use NISE for M-ARY decoding compatible tools - NDM purchase not required.
- Import & export .LAS files
- Merge data seamlessly.

Control Your Data

- Configuration files, software set-up files are all stored on the data HUB.
- Coordinator can pre-determine what files are available to field users.

Customize Your Data

- Choose as many curves as you like.
- Share the perfect customized graph configuration with your team members through the Noralis Data Hub (cloud storage)

Remote Operations

Start the job on the rig and let your operator run it from the office (or from home).

- Built-in instant-messaging to communicate with rig floor or operator on location.
- Generate advanced reports and logs from anywhere.

Advanced Gamma Logging

Download tool's memory and instantly compare decoded vs. recorded data post-run.

- Graph transmitted memory or the 5-second file, or both. You choose.
- Export 1", 2", or 5" PDF logs with simple right-click.
- Use a 20-second gamma average period after memory download or pick your own.

Survey Correction Solutions

Built-in to the software; choose an advanced survey correction technique*

- Short Collar Correction (SCC)** to adjust surveys for axial magnetic influence
- Multi-Station Analysis (MSA)** for the tightest ellipse of uncertainty available

* Survey correction techniques require an accurate magnetic field model. Noralis does not provide this information but can be readily sourced.
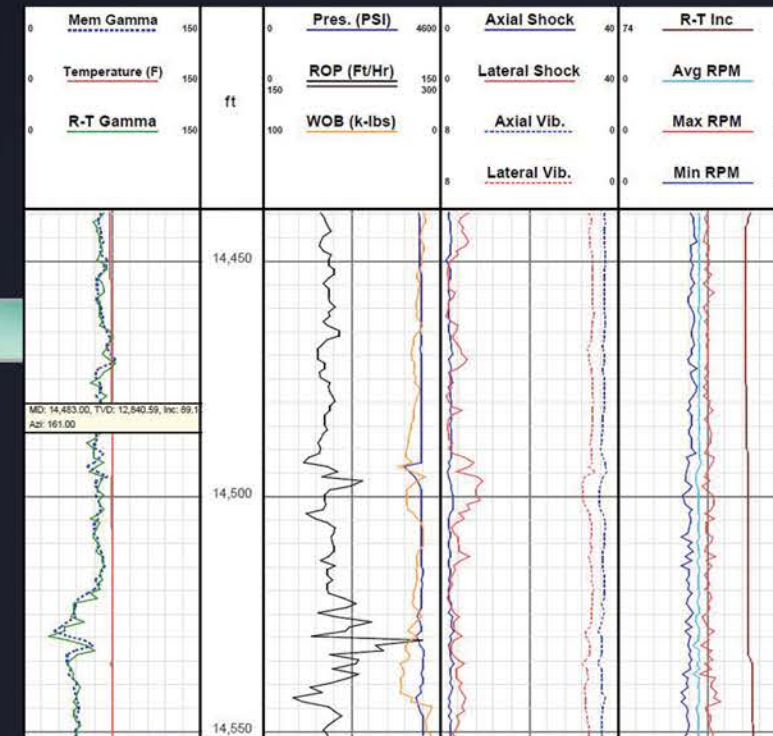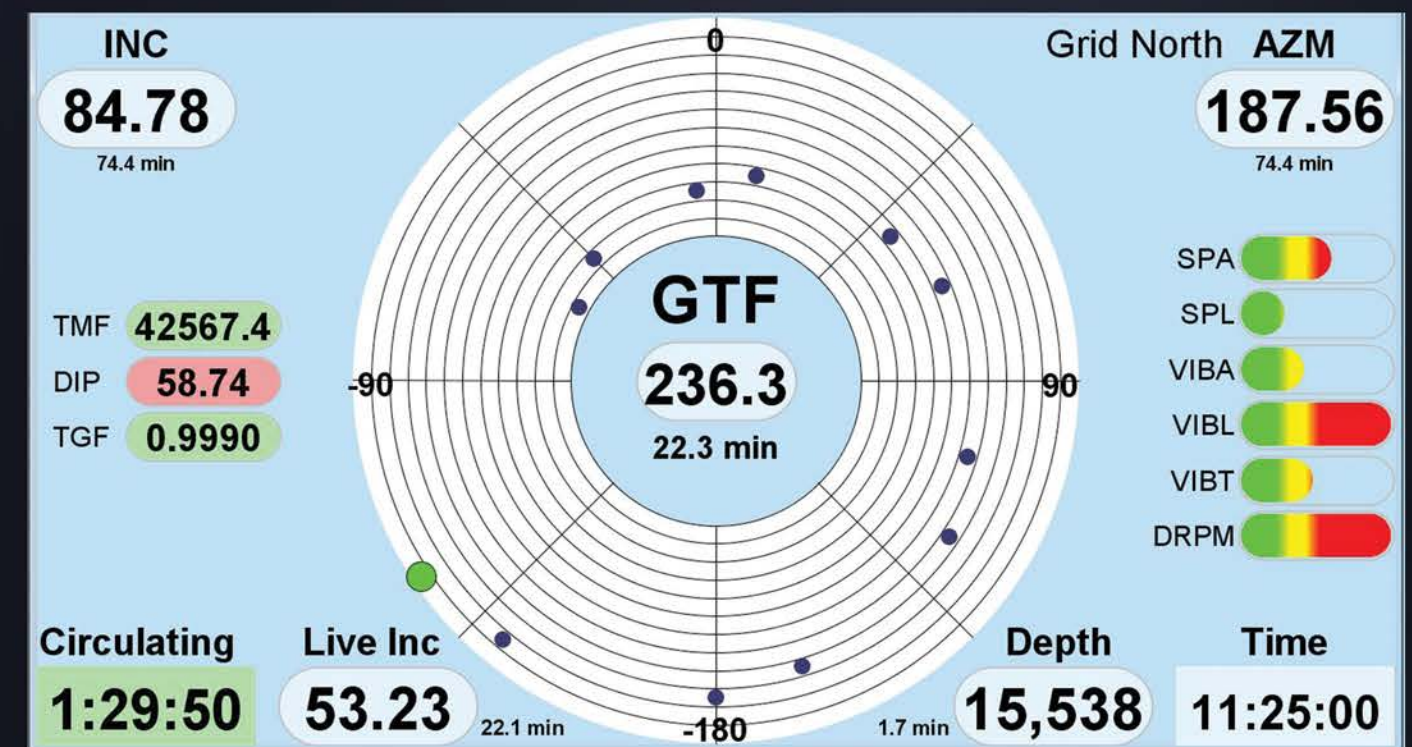
** Noralis algorithms automatically detect and exclude poor survey shots. Some surveys may still not be suitable for advanced survey correction techniques. It's important for an operator to review the correction prior to acceptance for gross error.

Competitive Pricing

The software is free to install.

- No "subscription" or "annual licensing" fees.
- Software functionality such as:
  - ❖ Decoding
  - ❖ Gamma logging
  - ❖ Advanced survey corrections
  - ❖ Remote operations are charged on a per day/per survey basis.
- Low Rates; only pay when actively generating revenue
- We will Never charge for:
  - ❖ Downloading tool data
  - ❖ Graphing data against time
  - ❖ Routine decoding tests in shop.

See our "Pay-as-you-go" brochure or website for more details.

Driller's Display

- Choose to display values as color-bars instead of numerical format.
- Add additional components if you choose.

Advanced Gamma Logging chart

Sample	Time	Measured Depth	Vertical Depth
0.0		Gamma (Decoded)	75.0
0.0		Gamma (Memory)	75.0
0.0		Gamma (5 Seconds_ 20 Sec Avg)	75.0

1 Point per 2.5 ft. (Transmission Rate is too slow)

Poor Detection (No Decoding Over 10 ft.)

Noralis 5-second Memory Gamma provides 27 data points over 10 ft. missing interval.

Driller's Display

INC			Grid North	AZM
84.78		0		187.56
74.4 min				74.4 min

TMF 42567.4
DIP 58.74
TGF 0.9990

GTF
236.3
22.3 min

-90 ... 90

SPA, SPL, VIBA, VIBL, VIBT, DRPM

Circulating	Live Inc		Depth	Time
1:29:50	53.23	22.1 min	15,538	11:25:00

MD: 14,483.00, TVD: 12,840.59, Inc: 89.1
Azi: 161.00

NISE Specifications

NORALIS ®

Decoding

- Optimized decoding requires no manual adjustment.
- Powered by Noralis RAID* Technology.
- Will decode inadvertent downlinks.
- Works even if your Tool re-synchronizes unexpectedly.

  * Redundant Array of Intuitive Decoders

Gamma Logging

- Plot against time, MD, or TVD
- Produce 1", 2", or 5" PDF logs
- Produce .las files, interpolated or raw

HUB Direct

- All data stored online in cloud
- Configuration files "synced" with NISE software for customized applications.

Networking

- Any authorized PC on rig-site or office can connect and view live data.
- Restricted mode setting for rig-floor use
- All connected PC's have the same reporting capabilities.

Survey Corrections

- Standard (Declination/Grid Correction)
- Short Collar Correction
- Multi-Station Analysis
  - ❖ Magnetic Bias Only
  - ❖ Magnetic Bias & Scale
  - ❖ Mag/Accel Bias Only
  - ❖ Mag/Accel Bias & Scale

Remote Operations

- Control MWD service from office
- Instant Messaging embedded
- Multiple "modes" for office users

Tool Communication

NISE integrated software allows:

- Programming Tool
- Roll Testing
- Downloading tool memory
- Automatic upload of Lifetime logs to Hub Direct

Rig Floor Display

- Same software in "restricted" mode
- Customizable alarms on any data value
- Visually see shock or vibration levels on Rose Display with "stop-light" coloring

System Requirements (for best operation)

Operating System	Windows® 10 (64-bit) (Latest Service Pack) Windows® 8 (64-bit) Windows® 7 (64-bit)
Processor	Intel® Core™ i3 or AMD Phenom™ X3 8650
Memory (RAM)	8 GB RAM
Hard Disk	(SATA) SSD - 10 Gig's available (Job data storage)
Resolution	1024 x 768 or higher
JAVA	Java 8 (64-bit)
Internet	Offline-Mode runs all job functions. Required for Remote Operations and HUB File Management.