



**IHS ENERGY GROUP**  
Log Services

# *DMWG Meeting*

**May 15th, 2001**

- **History of the IHS/MMS Offshore GOM Contract...**
- **IHS Role in Implementation of the MMS Contract...**
  - **MMS Requirements...**
  - **Data not required by IHS for the MMS Contract...**
- **IHS Energy Log Services Verification Process**
  - **Common Errors**
- **Questions & Answers**

## *History of the IHS/MMS Offshore GOM Contract...*

- **IHS Energy Log Services was selected as the sole service provider by the United States Department of Interior - Minerals Management Service to maintain their GOM Digital Well Log File.**
- **Contract began December, 1995 and continues through November, 2002.**
- **IHS Energy Log Services formed an internal department to facilitate the implementation of this contract.**
- **All personnel working on this project are submitted to Federal clearance facilitated by the U.S. Office of Personnel Management via Standard Form 85P - 5 CFR Parts 731,732 and 736.**
- **All data is held strictly confidential until granted release by the MMS.**

# *IHS' Role in Implementation of the MMS Contract...*

## *IHS Energy Log Services IS:*

**...an agent of the MMS, only with regards to digital and hardcopy log data from wireline and/or LWD/MWD acquisition.**

**...contracted to verify that all required data as outlined in NTL 97-06 has been received and is complete when comparing hardcopy to digital curve data.**

**...required to make one bona fide attempt to secure the complete, correct data set from an operator.**

**...required upon completion of the verification process, to pass the digital data set on to the MMS for their purposes.**

# *IHS' Role in Implementation of the MMS Contract...*

## *IHS Energy Log Services IS NOT:*

**...a division of the MMS**

**...an enforcement agency of the MMS and has no power, implied or otherwise in seeking enforcement, only in requesting compliance.**

**...making recommendations to the MMS regarding a particular operator or any particular issues.**

# *MMS Data Requirements as per NTL 97-06...*

- **Item 77 - Well Summary Report (Form MMS 125).** This document identifies the date the survey was recorded, the Service company, all log types, all intervals recorded, all run numbers and the associated curve scales.

Example Attachment to Well Summary Report  
Form MMS-125 - Item 77

AREA NAME \_\_\_\_\_ BLOCK NUMBER \_\_\_\_\_

API WELL NUMBER \_\_\_\_\_

LEASE NUMBER \_\_\_\_\_ WELL NUMBER \_\_\_\_\_

77. LIST OF ELECTRIC AND OTHER LOGS RUN ...

Date	Service Company	Log Type	Interval(MD)	Run No.	Scale
January 2	A	DISFL	1200-3800	1	1", 5"
		Sonic	1200-3800	1	5"
January 16	A	DISFL	3600-9600	2	1",5"
		Sonic	3600-9500	2	5"
		Density	3600-9500	1	5"

THE FOLLOWING OPEN-HOLE WELL LOGS (INCLUDING MWD LOG CURVES) RECORDED ARE TO BE LISTED AND SENT TO QC DATA INC.

(Gamma Ray, Spontaneous Potential, Caliper, Rwa, Resistivity [e.g., spherically focused, induction, phasor, etc.], Conductivity, Sonic/Acoustic, Density [e.g., bulk density, compensated, litho-density, etc.], Density Correction, Neutron, Tension, Dipmeter)

CONTACT NAME \_\_\_\_\_ TELEPHONE NUMBER \_\_\_\_\_

- If logs are not recorded, it should be indicated on this form.

## *MMS Data Requirements as per NTL 97-06...*

- **The MMS requires that data be submitted for each unique wellbore assigned with a permanent API well number. This number includes the original wellbore and all incremented, sequential wellbores (i.e., 01, 02..).**
- **Hardcopies Log Prints are required - This is not the field print provided by the service company from each run but a final composite log generated upon reaching the Total Depth (TD) of each individual wellbore. IHS Energy Log Services accepts blue line, black line and/or color hardcopy log prints.**

## *MMS Data Requirements as per NTL 97-06...*

- **Digital Data Files are required - LAS or LIS file formats only. This should contain Measured Depth (MD) composite curves including full headers for each and every run recorded on the well.**
  - **Full “Run Headers” include all run parameter information for each run recorded.**
  - **All curves from each “Run” must be intelligently spliced to accurately reflect the optical curves provided on the hardcopy log.**

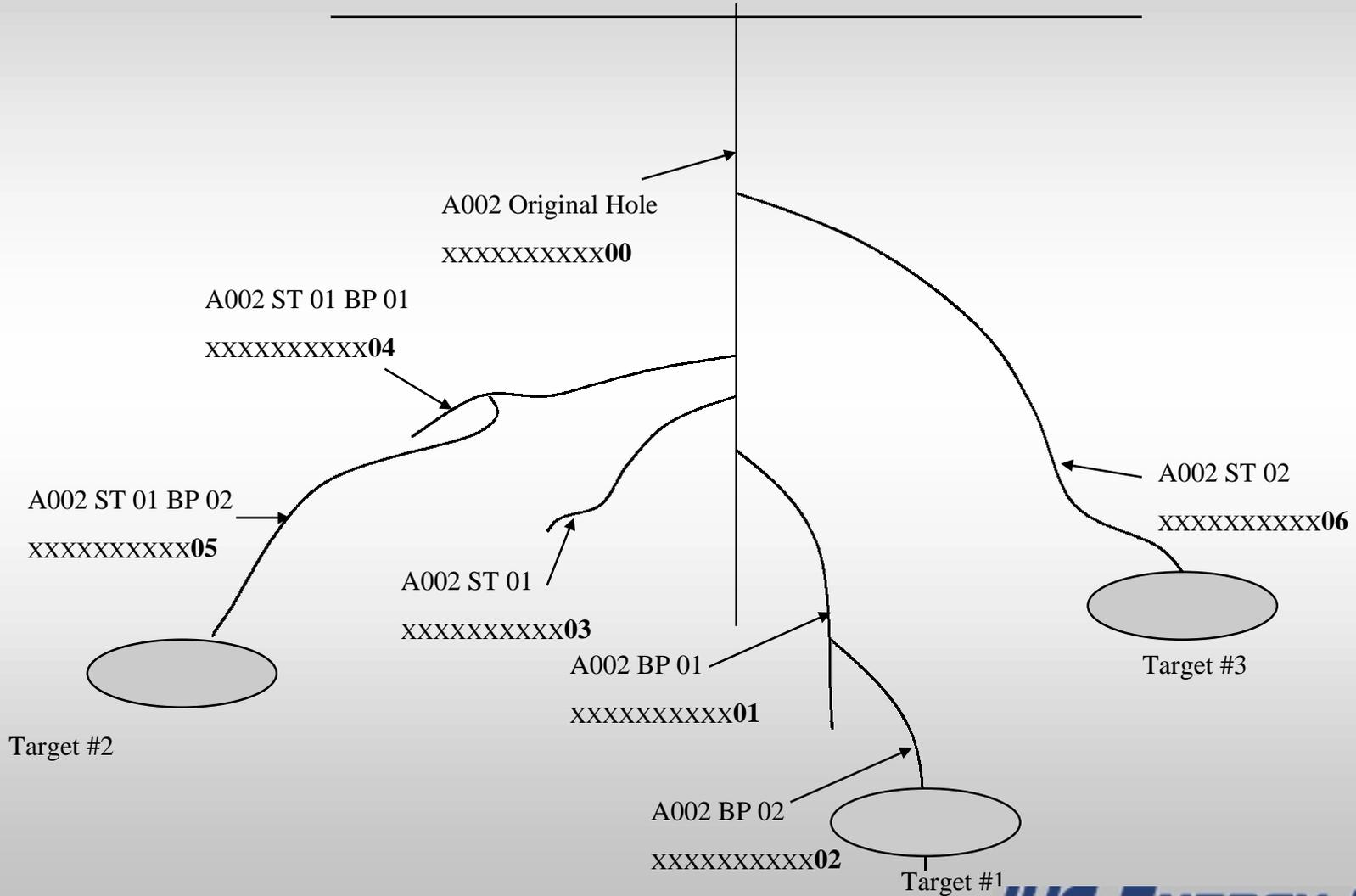
## *MMS Data Requirements as per NTL 97-06...*

- **Digital Data** may be submitted on diskettes, 4mm/8mm tapes, 9 track reels or CD-ROM in the formats described above.
- **Digital Data and Hardcopy data** should be submitted together so that the well validation process can be expedited.
- **All Data must be submitted to IHS Energy Log Services within 30 days after completion of a wellbore.**

“the Gulf of Mexico OCS Region will interpret the statement “30 days after suspension or temporary prohibition or within 30 days after the completion” to mean that date on which permanent abandonment or temporary abandonment have taken place, or completion operations are discontinued for that specific wellbore” *(excerpt taken from NTL 97-06)*

# MMS Data Requirements (cont.)

G12345 A002



## *Digital Data Not Required by IHS Log Services on behalf of the MMS...*

- **Pressure and Fluid Sampling Devices**  
(FMT, RCI, RFT, MDT, SFT, FT...)
- **Core Reports**
- **Directional Surveys**
- **End of Well Reports**
- **Nuclear Magnetic Resonance Logs (MRIL, CMR...)**

## *Digital Data Not Required by the MMS...*

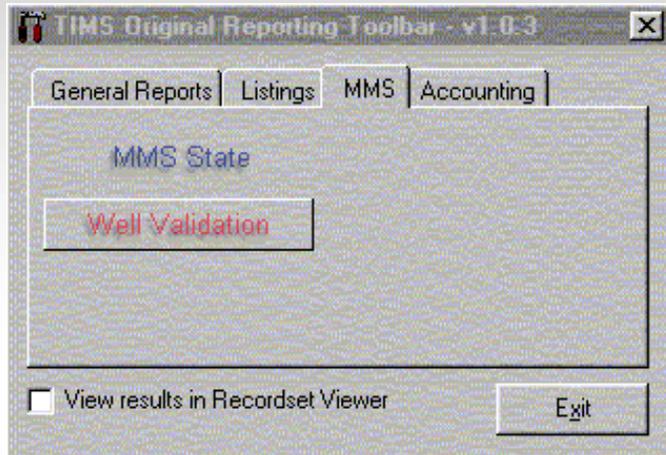
- **Imaging Logs (FMI, STAR, CBIL, CAST...)**
- **Waveform Data (XMAC, DSSI...)**
- **Cased Hole Logs (Perforation Records, Cement Bond Logs, Pulsed Neutron Logs)**

**\*(unless they are run in lieu of Open Hole Logs)**

## *IHS Energy Log Services Log-In and Verification Processes...*

- **Upon receipt of package all media are checked into our proprietary internal Database for tracking.**
- **Compare the media received with the MMS 5010 file to verify that all well header data is correct.**
- **If hardcopy prints and digital data for the well are received and location information is verified the data is sent to a technician for verification of digital data to hardcopy data.**
- **If data is missing or it does not match, a letter is sent to the operator requesting the correct data.**

# Well Validation Query...



# Well Validation Report Results...



## Well Validation

### API Validation **608044016802**

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API Number	608044016802	Surface Area	EB
Operator	2219	Surface Block	0642
Botm Lease Num	G09184	Bottom Area	EB
Well Name	001	Bottom Block	0643
RKB Elevation	85	Botm Fld Name CD	EB643
BH Total MD	11666	Spud Date	30 Oct 1997
		Total Depth Date	11 Nov 1997

### Lease Validation **G09184 001**

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API Number	608044016800	Surface Area	EB
Operator	2219	Surface Block	0642
Botm Lease Num	G09184	Bottom Area	EB
Well Name	001	Bottom Block	0643
RKB Elevation	85	Botm Fld Name CD	EB643
BH Total MD	11642	Spud Date	19 Aug 1997
		Total Depth Date	18 Sep 1997

API Number	608044016801	Surface Area	EB
Operator	2219	Surface Block	0642
Botm Lease Num	G09184	Bottom Area	EB
Well Name	001	Bottom Block	0643
RKB Elevation	85	Botm Fld Name CD	EB643
BH Total MD	11528	Spud Date	29 Sep 1997
		Total Depth Date	16 Oct 1997

# Database Entry Procedure...

**Wells** 87745

API:

Operator:

Total Depth Date:   Use

Override Release Date:   Use

Well Type:

Offshore

Lease:   OCS  
 OCSG  
 SL

Well No.:

Area:

Block:

Sidetrack:

Bypass:



# Media Log-in...

**Well State**

Project: 0 Job: 0 Job Task: 0 Well: 87745

Well State | Digits | REOs | MMS | Problems

File: E-714 Set

Media: 3 1/2 Floppy \*25 View

Format: LAS 2.0 Standard

Srv: Sperry-Sun

Rcvd: 06-Sep-2000 Count: 1

API	File	Media	C.	Format
608104010900	E-714	3 1/2 Floppy ...	1	LAS 2.0 Standard

Clear Cancel

**New Log...**

Service Company: Sperry-Sun

File: E-714 Get

Scale:  1"  5"  1", 5"  Other: [ ]

Measured:  TVD  Measured  N/A

Log Intervals: TL: 1966 BL: 7867

Date Logged (Last Run): 05-Aug-2000

Sent By: [ ] Get

0

Add Cancel

Tools:

Available Tools	Order
<input checked="" type="checkbox"/> Dual Gamma Ray	2
<input checked="" type="checkbox"/> Electromagnetic Wave Resist...	1
<input type="checkbox"/> Compensated Neutron Porosity	0
<input type="checkbox"/> Stabilized Litho Density	0
<input type="checkbox"/> Pressure While Drilling	0
<input type="checkbox"/> Natural Gamma Probe	0
<input type="checkbox"/> Electromagnetic Wave Resist...	0
<input type="checkbox"/> Directional Gamma While Drill...	0
<input type="checkbox"/> Simultaneous Formation Density	0

Cl 2

# Error Tracking Module...

**Well State** [X]

Project: 0    Job: 0    Job Task: 0    Well: 7091

Well State | Digits | REOs | MMS | Problems

Event: Missing Digits/Hrdcopy [v]    Set

Service Co: Schlumberger [v]    Attach File...

Description: 1st request    View Files

Resolve

File: [ ]

Event	Service Co.	Description	Files	Resolve
Missing Hardc...	Schlumberger	Zane sent...	1	
Missing Digits/...	Schlumberger	2nd Requ...	0	
Missing Digits/...	Schlumberger	1st Request	1	

Clear    Cancel

## *Weekly Reporting Requirements...*

- **IHS is required to submit weekly reports to the MMS**
  - **The MMS provides the following information**
    - Well Name and Operator information
    - Status as reported by the MMS
    - Spud Date and TD Date
    - Location information
    - Measured TD Depth

## *Weekly Reporting Requirements...*

- **IHS annotates this report with the following information**
  - List of Hardcopy Logs received
  - Receipt of Digital Data
  - Problems Identified
  - Age of problem in days
  - Data verification complete

## *Common Errors...*

- **Missing Digits (not sent as a comprehensive package)**
- **Missing Hard Copies**
- **Incomplete or missing Digital Header information**
- **Corrupt Media (blank media, physically damaged)**

# *Common Errors...*

- **Incorrect Digits**

**Curves Off Depth**

**TVD digits for a MD print**

**Wrong curve names**

**Spikes in the data**

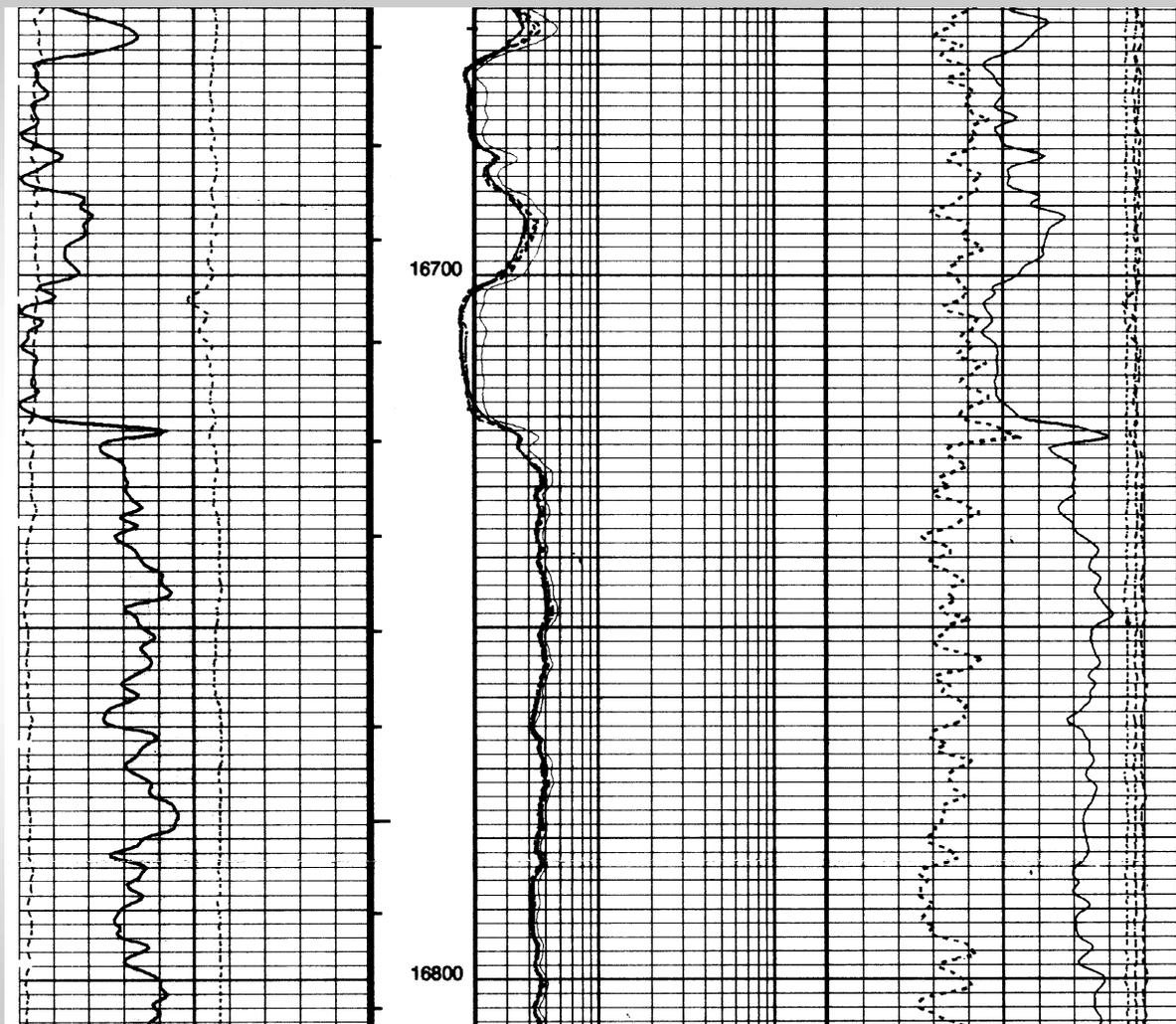
**Computer center digits that do not match the prints  
(i.e. SP Baseline, Reprocessed  $\Delta T$ )**

**Calculated curves that do not match the print**

**Runs not merged**

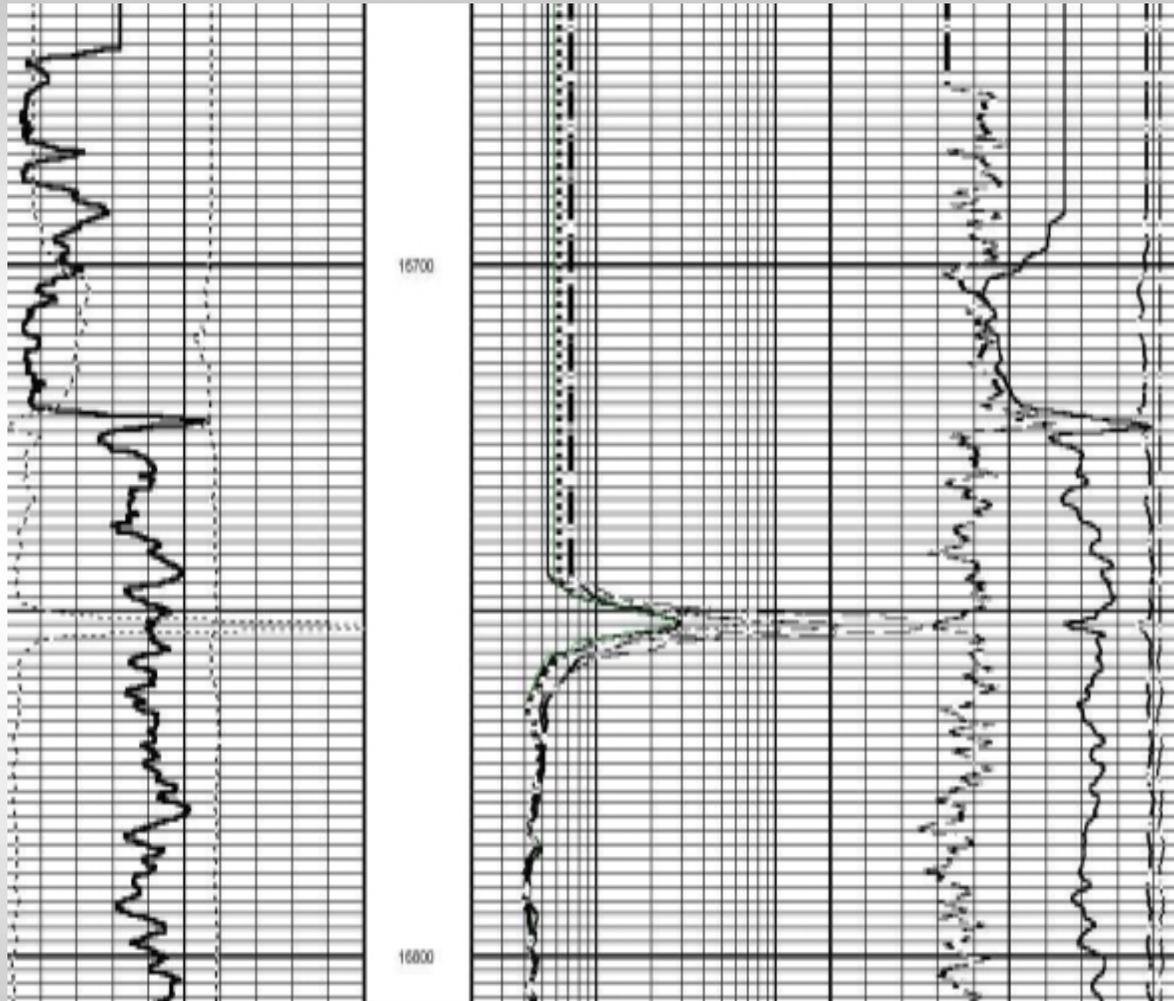
**Curves that do not match the print**

# *Problem Example - Data Mismatch...*



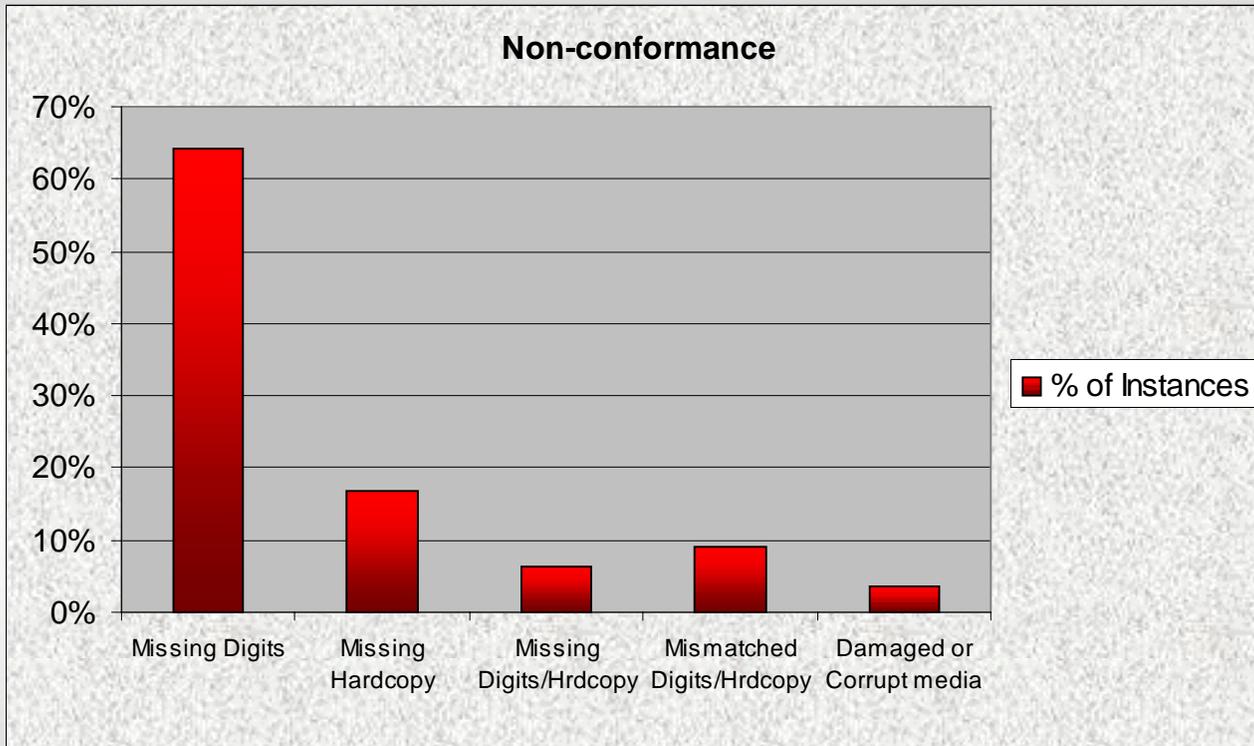
**Hard copy print showing valid curve data.**

## *Problem Example - Data Mismatch...*



**Plot of data submitted for previous log example.**

# Statistics of Common Errors...



*(cont.)*

# Notice to Lessees and Operators of Federal Oil and Gas Leases on the OCS

## NTL 30 CFR 250.66 (d) & (f)

**Electrical, Radioactive, Sonic and Other Well Logs:** For all wells spudded on or after December 1, 1995, the lessees shall provide under 30 CFR 250.66 (d) and (f) to Log Services Inc, at the address listed below, a single copy of each of the final composite log(s) for the following curves, if obtained in the well, in digital as well as hardcopy format. An additional hard copy of the composite log(s) is required to be submitted to the Regional Supervisor, Field Operations (MS 5200), 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123, in lieu of sending duplicate copies to the district supervisor, Consistent with current practice, the submittal of field prints and/or cased hole logs will be required only in special circumstances as requested.

# Notice to Lessees and Operators of Federal Oil and Gas Leases on the OCS

Digital well log data for all wells spudded on or after December 1, 1995, shall be submitted in the Canadian Log ASCII Standard (LAS) format or LIS format in a measured depth composite layout, including full headers for each for the following log curves that may be obtained from the well (including MWD Log curves):

# Notice to Lessees and Operators of Federal Oil and Gas Leases on the OCS

**Gamma Ray**

**Spontaneous Potential**

**Caliper**

**Computed Dipmeter**

**Rwa**

**Conductivity**

**Sonic/Acoustic**

**Density Correction Curve**

**Neutron**

**Tension**

**Density (e.g., Bulk Density, Compensated, Litho)**

**Resistivity Curves (e.g., Spherically Focused, Induction, Phasor, etc.)**

\*These curves must be provided from Wireline and/or MWD/LWD acquisition systems.

# Notice to Lessees and Operators of Federal Oil and Gas Leases on the OCS

These well log data shall be submitted on 3.5” or 5.25” high or low density diskettes, 4mm or 8mm data cartridges or nine-track tape. The nine track tape may use 600,1200,2400 foot reel tape size. LAS-formatted well log data may be compressed to fit on one diskette using the PKZIP compression program.

# **Notice to Lessees and Operators of Federal Oil and Gas Leases on the OCS**

**For Item 77 of the Well Summary Report (Form MMS 125), the date the survey was recorded, the service company, the log type, the interval recorded, the run number, and the scale(s) shall be provided on the form MMS 125 or on an attachment to Form MMS 125 as shown on the attached examples (Attachment (II)). For all wells spudded on or after December 1, 1995, a copy of either the form or the enclosure showing the appropriate information shall be submitted with the logs to IHS Energy Log Services Inc. at the following address:**

# **Notice to Lessees and Operators of Federal Oil and Gas Leases on the OCS**

## **IHS Energy Group Log Services**

**777 Post Oak Boulevard, Ste. 900**

**Houston, TX 77056**

**1.800.Well Log (935.5564)**



*We want to be a part of the solution, not a part of the problem.*