

MMS GOMR

Spatial Data Reporting Requirements

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Americas Petroleum Survey Group
November 1, 2000 Meeting

56 FR 20020: (published 5/1/91)

MMS prescribed datum implementation plan - Phase in for NAD 83

- Phase I - submit spatial data in either NAD 27 or NAD 83 datums.
- Phase II - Submit data in NAD 83 only.
- Phase III - Full compliance with NAD 83 usage.

57 FR 5168: (published 2/12/92)

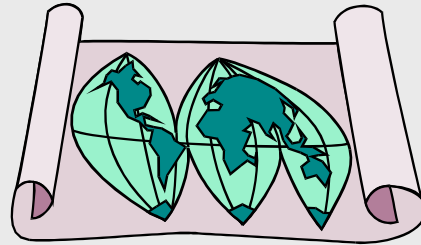
- NAD-converted equivalents must use NADCON version 2.0 or better.

NTL 99-G17: (7/8/99)

- Summarizes GOMR datum implementation phases.

- For legal and economic reasons the GOMR has chosen not to regrid from the NAD 27 Datum to the NAD 83 Datum.
- The GOMR-utilized offshore cadastre will continue to be defined on NAD 27.

*In an Effort to Improve the Quality of MMS
GOMR Basemaps and
Digital Spatial Data Products...*



MMS GOMR efforts:

- Data Management Work Group (1998-ongoing)
- Spatial Data Team (1998-2000)
(research issues and produce findings)
- Spatial Data Workshop (2000)

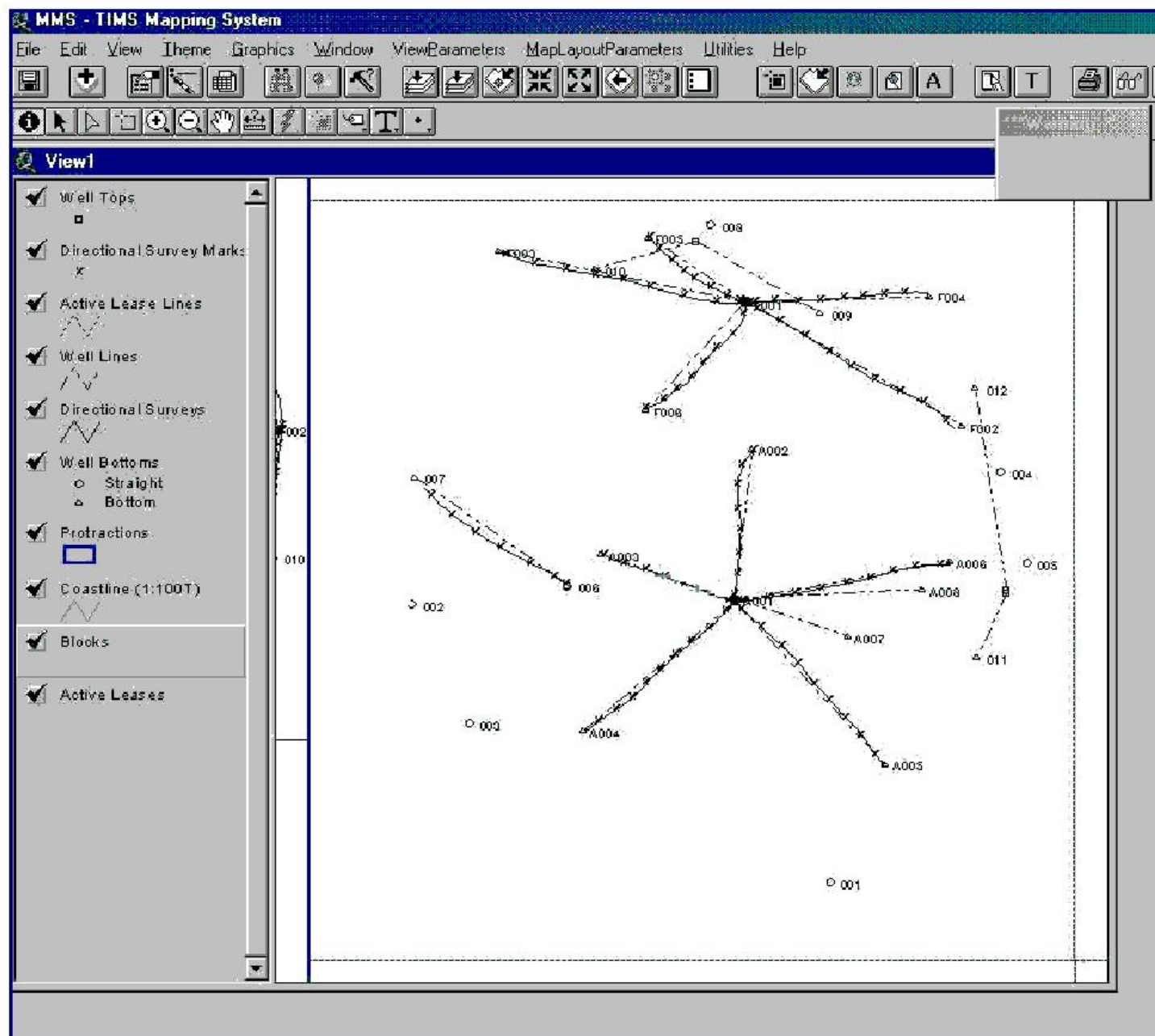
Spatial Data

Any object that can be mapped ...

- Point Data - well locations
- Line Data - directional surveys
- Polygon Data - block boundaries

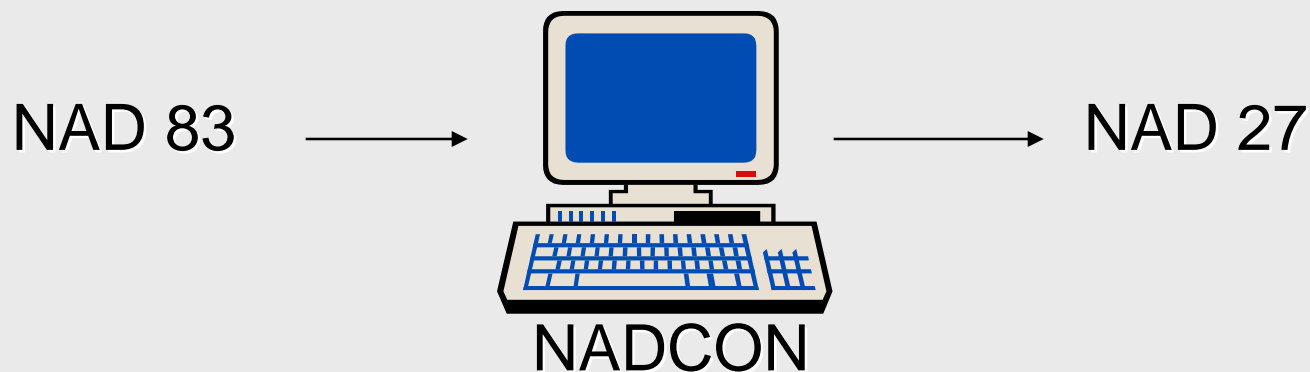
Inaccurate Spatial Data

- must check and correct map data before using
- possible safety risk for those trying to accurately locate platforms, pipelines, and wellbores
- inaccurate reserve estimates, etc...



Currently:

MMS requires the use of NADCON to convert data collected in the NAD 83 datum to the NAD 27 datum.



Major Problems and Issues:

- NADCON may not be best program for GOMR mapping
→ **Determine best datum conversion program for GOMR needs through discussions with survey/mapping experts.**
- NADCON is not being used consistently. (*Informal survey of local operators*) → **Should GOMR move to Phase II - collect data in NAD 83?**

Spatial Data Team Recommendations:

- MMS form an alliance with Gulf industry and marine surveyors to discuss spatial issues.
- Mixing data collected in different datums can result in up to 100's of feet of error in the Gulf. Once datums are mixed, the accuracy of the data becomes unknown. Therefore, collect data in only one datum.
- MMS consider issuing an NTL requiring GOMR spatial data only in the NAD 83 datum.
- GOMR convert to NAD 27 in-house using known, reliable conversion program.

Problem:

MMS forms and digital formats frequently assume that the horizontal datum is NAD27, the vertical datum is mean sea level, the projection is the native projection for the OPD, that north is grid north, that straight holes are perfectly straight.

SDT & Workshop Recommendations:

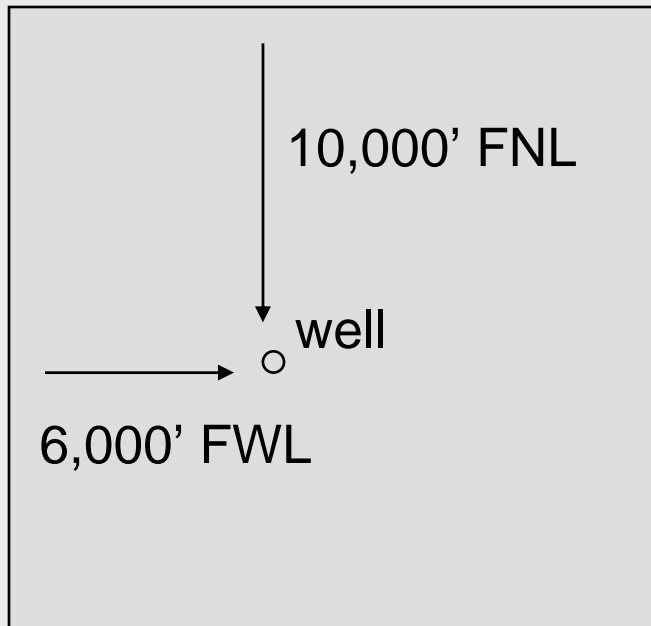
Require operators to submit metadata for line data. (issue NTL/revise Regs)

Examples:

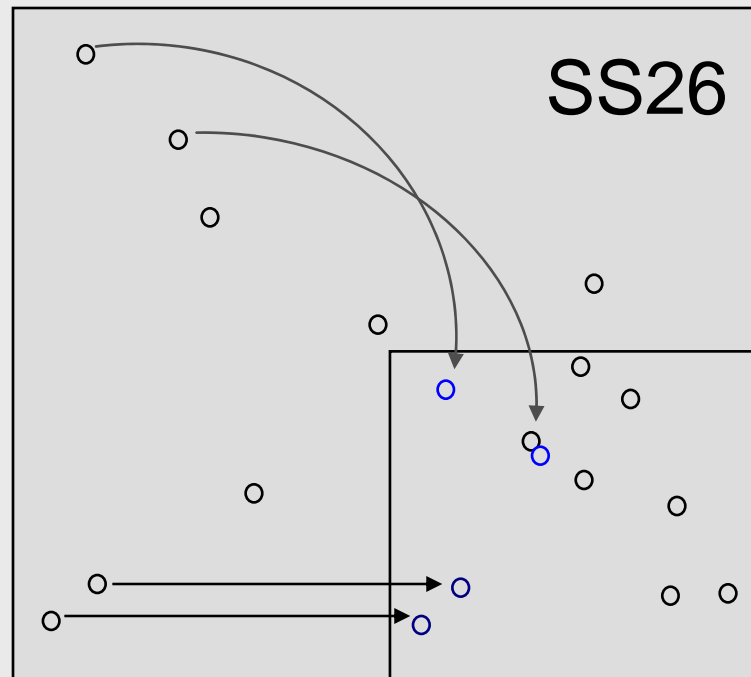
- north references
- map location of first point of sidetrack
- vertical datum
- ellipsoid, datum, projection...

Currently:

MMS does not require that point data
be submitted in lat/long formats -
departures on forms and plats are standard.

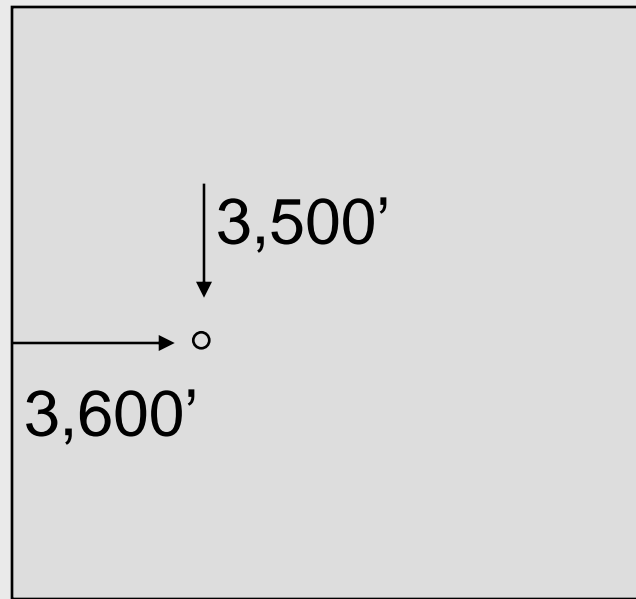


Problem with just departures



- Wells spotted from wrong lease line.
- MMS computers can't plot point data in some irregular blocks.

Advantage of departures



- Allows engineers and geoscientists to quickly locate wells and to complete work without waiting for scaled basemaps to plot.

Problem with just lat/long:

28.18580127 degrees latitude

-95.48480543 degrees longitude

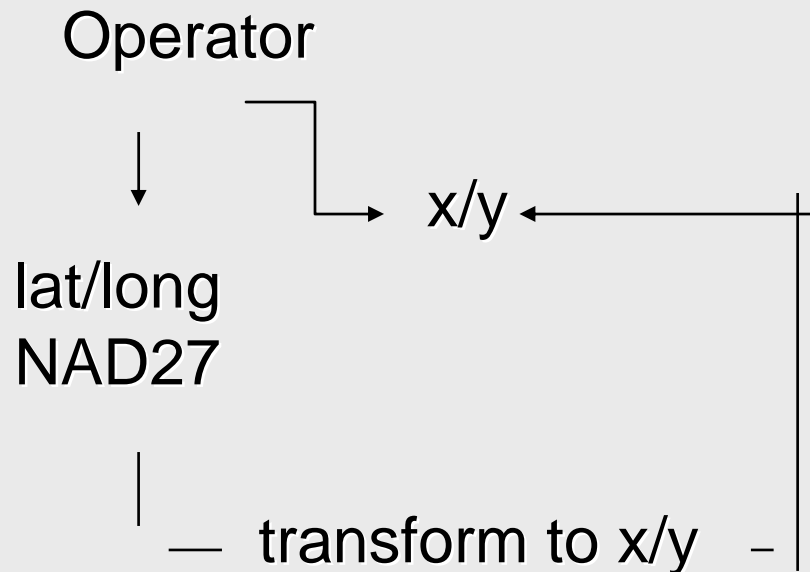
Transcription errors in the ten-digit latitude and in the ten-digit longitude numbers could be a major source of error in manually-submitted point data.

Advantage of point data in lat/long:

- Operators originally collect data in lat/long.
- Lat/Longs needed for computer workstations.
- (plot in irregular blocks)
- In-house programs require lat/longs.
- In-house programs use lat/longs to plot in irregular blocks.

x/y's needed too...

x/y's and lat/long's together provide
a crucial datum check:



If transformed
x/y location
is not the same as
operator's x/y, then
datum is not
NAD27.

Point Data Summary:

- Departures alone are just not working
- Need departures for efficiency within MMS
- Lat/longs required for irregular blocks/computers
- Lat/longs, departures (and x/y's) already provided by most surveyors
- Lat/longs and x/y's needed for critical datum check

SDT Recommendation:

- Issue NTL and revise regulations to require submission of point data, such as wellbore and platform locations, in all three formats:
 - lat/long
 - departures
 - x/y

Note: Lat/Long information is captured during initial surveying operations. Not an additional reporting burden.

MMS REFERENCE LINKS:

<http://www.gomr.mms.gov> (HOMEPAGE)

<http://www.gomr.mms.gov/homepg/fastfacts/DataManagement/index.html> (DATA MANAGEMENT WORK GROUP)

<http://www.gomr.mms.gov/homepg/fastfacts/DataManagement/presentations.html> (SPATIAL DATA WORKSHOP PRES.)

NTL/LTL:

<http://www.gomr.mms.gov/homepg/regulate/regs/ntls/ntl99-g17.html>

<http://www.gomr.mms.gov/homepg/regulate/regs/ntls/ntl99-g17.html>

Forward Comments and Questions to:

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THANK YOU