Well Coordinates Prioritization

Surface Coordinates
SONRIS executes a process every 5 minutes to review well surface coordinate records (in table WELL_SURFACE_COORDS) to assign the COORDINATE_PRIORITY = 1 to any new or updated records. Anytime a surface coordinate is updated or created, the G_(*) records are updated immediately (ORACLE spatial conversion). The coordinate priority is determined based on the following hierarchy:

Value	Coordinate Type	Coordinate System	Coordinate Source
0	Lamberts and Zone	*	07 - CONS DETERMINED
1	Lamberts and Zone	01 - Nad27	04 - As Drilled Survey
2	Lamberts and Zone	02 - Nad83	04 - As Drilled Survey
3	Lat / Long	01 - Nad27	04 - As Drilled Survey
4	Lat / Long	02 - Nad83	04 - As Drilled Survey
5	Lamberts and Zone	01 - Nad27	01 – Survey
6	Lamberts and Zone	02 - Nad83	01 – Survey
7	Lat / Long	01 - Nad27	01 – Survey
8	Lat / Long	02 - Nad83	01 – Survey
9	Lamberts and Zone	01 - Nad27	05 - Geographically Located
10	Lamberts and Zone	02 - Nad83	05 - Geographically Located
11	Lat / Long	01 - Nad27	05 - Geographically Located
12	Lat / Long	02 - Nad83	05 - Geographically Located
13	Lamberts and Zone	01 - Nad27	02 – Permit
14	Lamberts and Zone	02 - Nad83	02 – Permit
15	Lat / Long	01 - Nad27	02 – Permit
16	Lat / Long	02 - Nad83	02 – Permit
17	Lamberts and Zone	01 - Nad27	03 – Legacy
18	Lamberts and Zone	02 - Nad83	03 – Legacy
19	Lat / Long	01 - Nad27	03 – Legacy
20	Lat / Long	02 - Nad83	03 – Legacy
21	Lamberts and Zone	01 - Nad27	06 – GPS
22	Lamberts and Zone	02 - Nad83	06 – GPS
23	Lat / Long	01 - Nad27	06 – GPS
24	Lat / Long	02 - Nad83	06 – GPS

The record with the smallest COORDINATE_VALUE and latest RECEIVED_DATE is assigned COORDINATE_PRIORITY 1. Explanation of COORDINATE_SOURCE_CODES as have been determined over the years (although no formal documentation has been discovered):
- 03 - Legacy- historic records from prior databases
- 02 - Permit- coordinates from a proposed permit plat (current practice- historic records may be estimates)
- 05 - Geographically Located- estimated coordinates when not available on plat; type assigned by ArcGIS tool
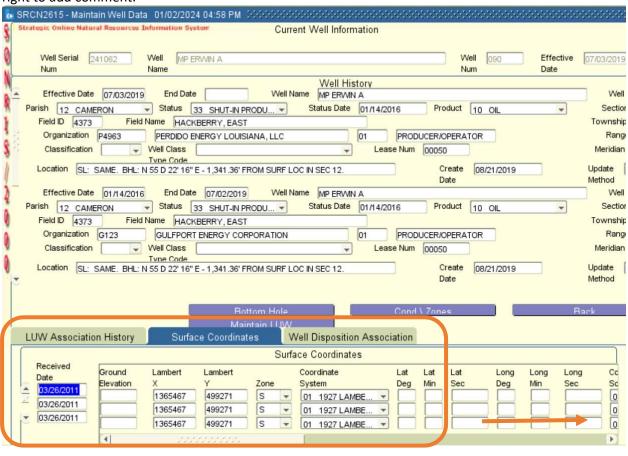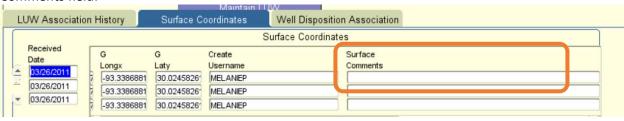- 04 - As Drilled Survey- coordinates from as-drilled permit plat

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- 01 - Survey- not sure. The latest records were created by IMD.
- 06 - GPS- not sure. When Permits Section corrects based on CES GPS records, we review plats, aerials, etc. and use 05 – Geographically Located
- ZZZZZ - Bad Data
- 07 - Cons Determined- IMD created this code in 2012. We use this type if the historic as-drilled plats have typos in the coordinates.

Each record must have a COORDINATE_SYSTEM_CODE and ZONE assigned in order for the proper COORDINATE_VALUE to be determined. If X Y's and Lat Long's are keyed into the same record, only the X Y's will be considered for the G_(*) assignment per the hierarchy in the table.

If a coordinate record is corrected based on a typographical error, include a comment when updating the record. No need to create a new record. Toggle to Wells > Maintain Well Data. Query well serial number, select Well History, then Surface Coordinates tab at bottom of form. Make corrections then scroll to the right to add comment.
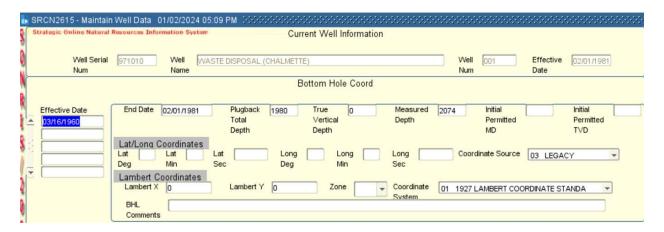

Comments field:

Bottomhole Coordinates
Since a well can have multiple laterals, there is not a prioritization for bottomole records. If a well has a BOTTOM_HOLE_COORDS record with END_DATE NULL and a G_(*) record set exists, GIS will create a line from the surface coordinate to the bottomhole location. A line will not be created if the line is <1-meter or >5500 meters. If XY's and Lat Long's are keyed into the same records, the Lat Long's will be utilized for the G_(*) record creation.
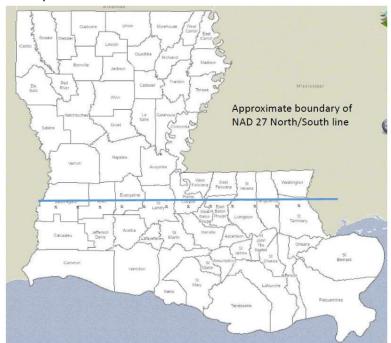
If a coordinate record is corrected based on a typographical error, include a comment when updating the record. No need to create a new record. Toggle to Wells > Maintain Well Data. Query well serial number, then select Bottom Hole Coordinates. Make corrections and include a comment.

Add end dates to prior records that are no longer valid (ie, a permit record [proposed location] should be end dated once as-drilled data keyed in).

Lagniappe
Approximate N/S boundary for Lambert X Y's: