



Office of Oil and Gas Management

Well Record

Directional Survey As-Drilled GIS Standards and Definitions

April 1,2020

Well Record As-Drilled Directional Survey

A Directional Survey is a collection of measurements needed to calculate and plot a well path. Operators have the ability to upload and submit a As-Drilled Directional Survey in a shapefile format when submitting a Well Record via the eSubmission application through the DEP GreenPort website. The shapefile submission requirements for the “As-Drilled” Directional Surveys are the same as the shapefile submission requirements for the “Proposed” Directional Surveys that are required to be submitted for all non-vertical wells when submitting a well permit application via the ePermitting application.

The data that is submitted through Green Port eSubmissions portal will be viewable on the DEP Oil and Gas Mapping tool and will be publicly available in both the public eSubmission application and the DEP spatial Data Portal

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Shapefile Definitions:

The **Directional Survey As-Drilled Shapefile** is a shapefile that will spatially depict the location of individual survey points derived from the as-drilled position of a wellbore and utilizing the standards described in this document. The geometry format for all As-Drilled shapefiles must be POINT.

Horizontal Accuracy Statement:

GPS coordinates must have a horizontal accuracy of plus or minus 6.67 feet or better as required by 78a.55(i)3(ii) and all points must be in NAD 83 and reported to 5 decimal places.

Shapefile Uploads:

Shapefile uploads within Green Port for the Directional Survey As-Drilled record must be given the same file name and contain the following files extensions, .dbf, .prj, .sbn, .sbx, .shp, .shx as shown in the image below.

Document Types for this submission

Document Type Name	Template, if available (click to download)	
Well Record (Unconventional)	Well Record (Unconventional)	Required
Directional Survey As-Drilled (.dbf): database file	Not available	Optional
Directional Survey As-Drilled (.prj): projection description	Not available	Optional
Directional Survey As-Drilled (.sbn): a spatial index	Not available	Optional
Directional Survey As-Drilled (.sbx): a spatial index	Not available	Optional
Directional Survey As-Drilled (.shp): shape file	Not available	Optional
Directional Survey As-Drilled (.shx): shape index format	Not available	Optional

Submit

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Directional Survey As Drilled Shapefile components:

Attributes: X (longitude) and Y (latitude) values are measured in Decimal Degrees, Z value (elevation) is measured in feet (Ft) and should be the actual depth from surface. The surface is designated at 0Ft (zero) and the sign convention is negative(-) for all subsurface values.

Standard: Geographic Coordinate Systems NAD 83 **OR** Projected Coordinate Systems NAD 83 StatePlane Pennsylvania South FIPS 3702 (US Feet) / NAD 83 StatePlane Pennsylvania North FIPS 3701 (US Feet).

Frequency of Survey Points (this will determine how many points are in the shapefile):

Vertical Section: The survey point of the vertical section should be every 100ft or less. If there are any anticipated deviations prior to the kickoff point, add sufficient survey points to define trajectory of wellbore.

Kickoff Point to Bottom Hole: Survey points should be collected every 30ft to 50ft (operator's discretion).

Data Size Limit: Directional Survey Shapefiles should not contain more than 1,000 survey points.