pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

WELL RECORD INSTRUCTIONS

Top Right – DEP Only box – do not fill anything in.

Well Information Block

For recently issued permits the information in this block should have been preprinted down to the first dark line of the Well Information block – down to Quad map field. Correct any error noted in using a preprinted header form. If the preprinted form is not used or the information has changed, complete the information required below by entering it in a new blank form.

Well Operator – Name of operator as it appears on the well permit and the bond.

DEP ID # – eFACTS Client Id. Assigned to each client/operator and used by all DEP Programs. It can be found on the DEP web site on eFACTS.

Address – Address of the operator's office submitting the Well Record and where follow-up communication can be directed. Include:

City, State, ZIP + 4

Phone, FAX including area code.

Email address of person responsible for signing Well Record as agent of the operator. Signature Authority /Power of Attorney should have been provided to all applicable regional offices.

API # – The API number assigned to the well and laterals approved to be drilled under a permit. If the permit provides for drilling multiple laterals (XX-XXX-XXXXX-00-00 and 01-00), each lateral (00-00 and 01-00) should have a separate Well Record submitted identifying the information specific to each lateral.

Farm Name – Name given well by operator.

Well # - Alpha/Numeric identifier given to the well by operator. Typically ends in H when identifying a horizontal lateral.

Lat – Latitude in degrees, minutes, seconds to two decimal places in NAD 83 datum

Long – Already identified as negative -Longitude in degrees, minutes, seconds to two decimal places in NAD 83 datum

Project Number – If the well was identified as part of a "project" as defined in the O&G Act, it would have been assigned a project number by DEP and identified on the permit.

Serial # – An identifier given to the well by some operators as a cross reference for their internal identifier.

Municipality – Name of the local governmental unit in which the surface hole location of the well is found.

County – County name in which the surface hole location of the well is found.

USGS 7.5 min. quadrangle map – Name of the quad map on which the well can be located.

Check the applicable box to indicate if this is the **Original Well Record** (first) or if it is a revision to an earlier Well Record, i.e., an **Amended Well Record**.

Check Well Type:

Gas – producing gas as the marketable product.

Oil – producing oil as the marketable product.

Combination – producing gas and oil/condensate as marketable products.

CBM – Producing from a coal seam.

Injection – Purpose of well is only for injection to enhance production at other related well(s) by secondary or tertiary recovery.

Disposal – well will be used to inject oil and gas related waste into a disposal horizon. Must also have UIC permit.

Storage – well will be used to inject/retrieve product from a storage field.

Well Orientation – Check **Vertical** if well was not deviated from vertical by more than 3 degrees. Otherwise check **Deviated** and include: As built Top/Plan view diagram indicating Surface and Bottom hole locations and depiction of actual wellbore path between the two; Side view diagram that identifies at a minimum the Surface Elevation above sea level, KOP – Kick Off Point depth, Landing Point depth, Heel depth, Toe depth and deepest point of well if not any of the preceding points. The top of the Onondaga Limestone should also be represented on the side view diagram.

Drilling Method(s) – Check all that apply and to what depth that method was utilized by indicating length of the wellbore drilled by that method in the field following the applicable method;

Drilling Started – Enter **date drilling started** for the surface hole (Spud Date) (MM/DD/YYYY). Date first bit hit dirt.

Drilling Complete – Enter **date drilling** of wellbore was finished/**completed**. (MM/DD/YYYY). All laterals drilled under permit have been drilled or decision made to drill no further under this authorization.

Date Well Completed – Enter **date** wellbore was finished/**completed with casing and cemented** (MM/DD/YYYY). This is not the well completion date after stimulation, but may be if the well is not stimulated prior to producing.

Surface Elev. – Enter **Surface Elevation** as referenced by the ground surface at the well head in feet above mean sea level.

True Vertical Depth – Enter the **True Vertical Depth** of the deepest point of the wellbore (Feet from Surface elevation) in feet.

Total Measured Depth – Enter the **Total Measured Depth** of the wellbore indicating the length in feet of the total drilled distance of the applicable wellbore/lateral from the surface elevation. AKA drillers or loggers depth.

GW Depth: Enter the depth in feet from surface that a zone was encountered that was continuously saturated with groundwater that provides the basis for the hydrostatic head of the surface casing seat.

Depth of DFGW – **(Deepest Fresh Ground Water)** – enter the depth (TVD) in feet from the surface elevation that was determined to represent the base of the deepest fresh groundwater unit for this well. Indicate if deeper zones are encountered requiring additional surface casing string(s). If this is the first wellbore drilled at a pad, or the only well planned for a particular location, for subsequent operations in the well to drill deeper, or for additional lateral(s), indicate NA – Not Applicable – if the depth of the surface casing seat does not change for the operations. For additional wells to be drilled on the same well pad, identify this well as the DFGW depth determination unless drilling provides details that the additional wells have DFGW depths different than this well. Surface casing is required to be 50’ deeper than the DFGW depth and into consolidated rock.

DFGW decided by: Enter one or more of the following codes to identify what procedure was used to determine the deepest Fresh groundwater for this well”

1 – Use of surface casing set depths for offset oil/gas wells as explained above.

2 – Log of well while drilling, i.e., water quality meter testing.

3 – Borehole geophysical logging of open hole with known formation change.

4 – Monitoring well installation and sampling

5 – Drill stem testing

6 – Geologist determination.

Wellbore Conditioning – Detail how wellbore was conditioned for each string prior to cementing and time/volume/rate BPM/material used to condition the wellbore for cement bonding to the wellbore.

Cement Block

Cement return on surface casing – Indicate yes or no if cement was returned to the ground surface elevation for the surface casing. If not returned to the ground surface, provide the depth from surface for the top of cement and how top of cement was determined, i.e., tagged or logged and log type.

Cement returned on coal protective casing – Indicate yes or no if cement was returned to the ground surface elevation for the Coal Protective casing. If not returned to ground surface, provide the depth from surface for the top of cement and how top of cement was determined, i.e., tagged or logged and log type. If not a coal well and no protective string required, check N/A box.

Cement returned on intermediate casing – Indicate yes or no if cement was returned to the ground surface elevation for the intermediate casing. If not returned to ground surface, provide the depth from surface for the top of cement and how top of cement was determined, i.e., tagged or logged and log type. If no intermediate string was installed or hung from the prior string, check N/A box.

Casing String

Conductor – Indicate material used to seal annular space between inside of wellbore and outside of conductor casing. If conductor pipe is driven, indicate N/A.

Surface – Indicate type/class of cement used and any admixtures in blend. If varied weight and/or admixtures over course of cement job indicate how many sacks of which type in lead and tail volume.

Coal Protective – Indicate type/class of cement used and any admixtures in blend. If varied weight and/or admixtures over course of cement job indicate how many sacks of which type in lead and tail volume.

Intermediate – Indicate type/class of cement used and any admixtures in blend. If varied weight and/or admixtures over course of cement job indicate how many sacks of which type in lead and tail volume.

Production – Indicate type/class of cement used and any admixtures in blend. If varied weight and/or admixtures over course of cement job indicate how many sacks of which type in lead and tail volume.

Indicate any additional casing strings cemented in the wellbore, providing the type/class of cement used and any admixtures in the blend. If varied weight and/or admixtures over course of cement job indicate how many sacks of which type in lead and tail volume.

For each of the above casing strings:

- Enter the **Type or Class of Cement** used and if varied weight and/or admixtures over the course of cement job for that particular string indicate different type or class used.
- Enter the **Slurry Temperature F°** of the cement as it entered the wellbore. If substantially different for variable type/class or weight of slurry or lead to tail so note the temperatures in degrees fahrenheit.
- Enter the **Amount of Cement** (sacks =1 Ft^3) placed in the wellbore to cement the applicable casing string. If varied by a lead and tail over course of cement job indicate how many sacks of which type in lead and tail volume. Enter total sacks used. If consistent slurry is used throughout the cementing of the particular string, enter just the total.
- **WOC (hrs)**. Enter the elapsed time in hours and decimal parts thereof from the time of emplacement of the cement (latch down of float shoe) until any reentry into the well bore – except for wireline logging to determine top of cement when not returned to surface as detailed in 25 PA Code §78.85(c) or as approved by the Department under 25 PA Code §78.85(d).
- **Wt PPG.** Enter the weight of the slurry mix in pounds per gallon of the lead and tail if varied. At a minimum, the weight of the slurry emplaced in the zone of critical cement (25 PA Code §78.85(b) is to be entered.
- **Yld/ft^3/SK.** Enter the yield in cubic feet per sack achieved by the cement. If varied by a lead and tail over course of cement job indicate yield of each. (Ex.: 1.53/1.39)

Total line should total all sacks of all above entries for each (lead, tail, total) section of the wellbore cased and cemented.

Gas Migration Controls Used – Free form text box to provide detail of controls used to minimize gas migration in the cement sheath. Any special additives or hardware utilized should be listed along with relevant depth intervals, as necessary.

Casing and Tubing Block

Hole Size – enter the diameter in inches of the drilled wellbore for the various casing strings listed as used in the above block.

Pipe Size – enter the outside diameter in inches of the casing/tubing for the various casing strings listed as used in the above block.

Wt. #/Ft – enter the casing weight per foot.

Grade Casing / Tubing Type – Enter the **Grade** of the casing for the various casing strings listed as used in the above block and indicate if casing is new or used.

Thread / Weld – New/Used – Enter a T if **threaded** and a W if **welded** pipe is emplaced and **N** if the string is **New** or **U** if **Used** string is emplaced.

Amount in well (ft.) – Enter the length in feet of the applicable casing string emplaced in the well.

Hardware – indicate what hardware (Baskets, Packers, Centralizers were used and their position by depth in feet from surface for each type. For centralizers, the total number of centralizers on each string and the depth of the lowest and highest centralizers shall be indicated.

Date Run – Date the casing/tubing was installed in the well. It is the date the cementing is completed for that string or packer set for the string.

If welded pipe – Used for any casing or tubing in the well, enter the name(s) of the certified or grandfathered welders.

Well Service Companies Block

Casing Source/Manufacturer – Provide the name of the Service Company, the street address of the local company, City, State, and Zip Code, as well as their phone number.

Cementing Company, Hardware Supplier and Logging Company – Provide the information for the casing supplier, hardware supplier, cementing company, logging company and stimulation company, as applicable.

Log of Formations Block

API # – The API number assigned to the well. Should be the same as indicated on the reverse.

Formation Name or Lithology – Starting at the surface, provide the name of each formation and the feet from the surface to the top and bottom contact of each formation encountered as the well bore is being drilled. Enter each show of any gas, oil, or water, and the feet below surface at which it is encountered. For Water shows, indicate by type to show F- Fresh or B-Brineand depth encountered. If there are no shows of any fluids, explain why none were observed during the drilling of the well. If the formation name is unknown, describe the characteristics of the various rock units (general lithologies – e.g., sandstone, shale, limestone, etc.) drilled through and indicate the distance in feet from the surface to the top and bottom contact for each lithostratigraphic unit described.

Well Operator's Signature – Representative of the operator of the well that is authorized to sign on behalf of the operator. Signature authority should have been provided to the applicable regional offices.

Enter the Title of the signatory and the date signed.

Lower Right – DEP Only box – do not fill anything in.