

Casing, Water Testing and Other Permitting Requirements

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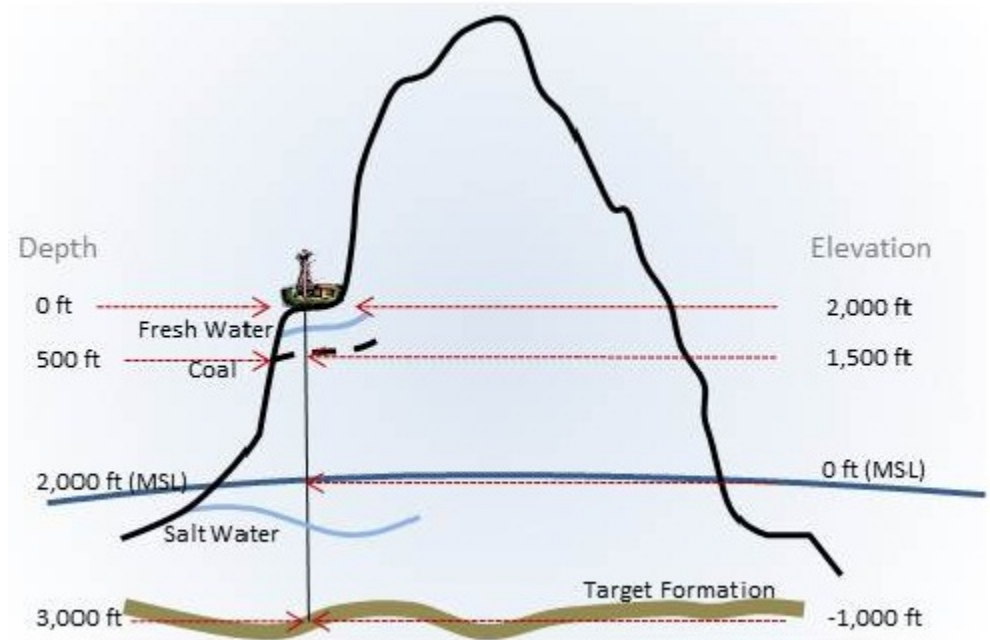
west virginia department of environmental protection

What does Sea Level / Elevation mean?

How to calculate elevations?

Mean sea level (MSL) is a measure of the average height of the ocean's surface (such as the halfway point between the mean high tide and the mean low tide); used as a standard in reckoning land elevation.

The elevation of any geographic location or a specific point within the length of a wellbore is its height compared to a fixed reference point, in this case, the MSL.



Freshwater Casing Standards for all wells

From 35-4-11.3

“In no case shall the freshwater casing penetrate salt water or gas bearing strata or extend below elevation”

Freshwater Casing: Conventional Wells

From § 35-4-11.3

- **Extend at least 30' below deepest freshwater horizon**
- **Cement circulated to surface**
- **If the coal protection casing is cemented to the surface it may also be considered a fresh water protective casing.**

Freshwater Casing : Horizontal Wells

From Casing Standards rev. 12/10/12

- **Extend at least 50' and no more than 150' below deepest freshwater horizon**
- **Cement circulated to surface**
- **Minimum of 300' of freshwater casing**
 - **Less can be installed to avoid penetrating saltwater, oil, or gas-bearing zones**
- **May be installed >150' below deepest freshwater to cover workable coal seams (20" or more)**

Coal Protection Casing: Conventional and Horizontal Wells

From § 22-6-18 and § 22-6A-5(a)(10)

“When a well penetrates one or more workable coal beds, a string of casing shall be run in the hole to a point at least 30’ below the lowest workable coal bed penetrated and shall be circulated and cemented to surface”

From Casing Standards rev. 12/10/12

Either freshwater casing or the intermediate casing may serve as the coal protection casing

Water Sampling: Conventional Wells

- ***Notice shall be given to surface owner of the right to request the operator sample and analyze a well or spring. (§ 35-4-19.2.a)***
- ***Notice shall be given prior to filing permit application. (§ 35-4-19.2.d)***
- ***Permit application shall list users identified and how they were noticed (ie personal service, posting notice at dwelling, mailing, etc). (§ 35-4-19.2.e)***
- ***At the request of surface owner, operator shall sample and analyze water from any wells or springs located within 1000' of proposed well. (§ 35-4-19.1.a)***
- ***If no request is made, operator shall select, sample, and analyze from any one well or spring within 1000'. (§ 35-4-19.1.b)***
- ***Chief may require sampling to 2000'. (§ 35-4-19.1.c)***
- ***Operator may sample & analyze any or all water wells or springs within 1000'. (§ 35-4-19.1.d)***

Water Sampling: Conventional & Horizontal Wells

Parameters (§ 35-4-19.3)

- ***pH***
- ***Iron***
- ***Total Dissolved Solids***
- ***Chloride***
- ***Detergents (MBAS)***
- ***Must use lab approved by the Chief (§ 35-4-19.3.d)
(list provided on OOG website)***
- ***Total coliform and dissolved methane***
- ***Any other parameter determined by the operator***

Operator shall, no later than 30 days after receipt of such analysis, provide results to the Chief and any of the users who requested it.

Water Sampling: Horizontal Wells

Notice is to be given to any surface owner or water purveyor who is known to the applicant to have a water well, spring, or water supply source located within 1500' of the center of the well pad, and the opportunity for testing their water well shall be given. (§ 22-6A-10(d))

***Registering of all water supply wells drilled & operated by the operator. All drinking water wells within 1500' of the water supply well shall be flow and quality tested.
(§ 22-6A-8(g)(5)(D))***

Rebuttable Presumption

Drilling was the cause of communication or deprivation of the fresh water source. (§ 22-6-35 and § 22-6A-18(b))

To Rebut Presumption

To rebut under § 22-6A-18(c), must prove one of the following:

- ***Pollution existed prior to drilling***
- ***Refused to allow sampling***
- ***Water supply not within 1500' of the well***
- ***Pollution occurred more than 6 months after drilling***
- ***Pollution occurred because of something other than drilling***

Replacing Water Supply

**Operator shall replace water supply where the secretary determines contamination, diminution, or interruption.
(§ 22-6A-18(e)and (f))**

Secretary may order such things as:

- ***Provide drinking water within 24 hrs***
- ***Provide temporary supply within 72 hrs***
- ***Provide permanent supply within 2 years***

Requirements for Permit Applications

Water Well Owner Information

- *Show water well owner names/addresses on the map of water wells next to their well.*
- *All water well owners within specified distance whether 1000', 1500', 2000' etc. must be noticed regardless of the condition of their well.*

Certified Mail Receipts

- ***Attach** a specifically-labeled certified mail receipt to **each** notice.*
- *Make sure name/address on notice form matches mail receipt.*

Fees

- *For H6A applications, do not send an extra \$100 pit fee.*
- *Send \$10,150 for first well, \$5,150 for subsequent wells on the pad.*

Cover Letter

- *Send a cover letter describing proposed well work with every permit application **and every modification.***

More Requirements for Permit Applications

6A1 Lease Information

Put lease names and/or numbers on the plat that correspond to names and/or numbers on the 6A.

Form Updates

- *Check our Horizontal Well Permit Packet Application Page regularly to obtain updated versions of our application forms.*
- *Per our updated checklist, put the water well map right behind the 6A.*

Plat

- *Information on plat needs to match exactly all other forms in application.*
- *Be consistent with well name, surface owners, and all info on the plat.*

Checking Application Status

Go to: https://apps.dep.wv.gov/oog/permitsearch_new.cfm

Search to find out:

API# of your app

Activities Completed

Please use the API# of
your application
whenever you call OOG
to request information.

The screenshot shows the 'Oil and Gas Permits' search page. At the top is the DEP logo and the text 'west virginia department of environmental protection'. Below this is a horizontal line, followed by the title 'Oil and Gas Permits'. A paragraph of instructions reads: 'To search for permits, enter data into the areas provided and select the check box indicating which fields you want to use in your search. Fewer fields used as search criteria results in a greater amount of data returned, but may take a longer amount of time.' The search fields are arranged in two columns. The left column includes: 'County' (dropdown), 'Permit Type' (dropdown with 'Not Available' selected), 'Target Formation' (dropdown with 'Not Available' selected), 'Well Number' (text input), 'Farm Name' (text input), 'Operator Name' (text input), and 'App Received Date' (two date inputs labeled 'From (mm/dd/yyyy)' and 'To (mm/dd/yyyy)'). The right column contains checkboxes for each field: 'Use county in search', 'Use permit type in search', 'Use target formation in search', 'Use well number in search', 'Use farm name in search', 'Use operator name in search', and 'Use application received date in search'. Below these fields is an 'API Number' field consisting of two text inputs separated by a hyphen, with a checkbox 'Use API number in search'. At the bottom left of the search area is a checkbox 'Check here for MS Excel Format.'. At the bottom center are 'Search' and 'Reset' buttons. The footer contains the text 'Privacy, Security and Accessibility | WV.gov | USA.gov | © 2012 State of West Virginia'.

What questions do you have?

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