ACCIDENT PREVENTION WITH ACCURATE WELL LOCATIONS
A. MINING WITHIN 500 FEET OF AN OIL AND GAS WELL

The mine operator should submit three copies of Form OG-44 (Notice by Coal Operator of Intention to Extend Workings Within 500 Feet of a Well) to the Office of Miners’ Health, Safety and Training and forward one copy to the oil and gas operator by certified mail, return receipt requested.

Upon receipt, the agency will return to the mine operator a permit to allow mining as projected within the 500 foot radius. (See WV code 22A-2-75(a))

Mining must be conducted in accordance with the map projections approved by the agency. Revisions may be made by simply filing a revised map prior to conducting mining.

WV Code 22A-2-75(a)

(a) Before a coal operator conducts underground mining operations within five hundred feet of any well, including the driving of an entry or passageway, or the removal of coal or other material, the coal operator shall file with the Office of Miners’ Health, Safety and Training and forward to the well operator by certified mail, return receipt requested, its mining maps and plans (which it is required to prepare, file and update to and with the regulatory authority) for the area within five hundred feet of the well, together with a notice, on a form furnished by the director, informing them that the mining maps and plans are being filed or mailed pursuant to the requirements of this section.

Once these mining maps and plans are filed with the office, the coal operator may proceed with its underground mining operations in the manner and as projected on such plans or maps, but shall not remove, without the consent of the director, any coal or other material or cut any passageway nearer than two hundred feet of any completed well or well that is being drilled. The coal operator shall, at least every six months while mining within the five hundred foot area, update its mining maps and plans and file the same with the director and the well operator.

B. MINING WITHIN 200 FEET OF AN OIL AND GAS WELL

(SEE WV CODE 22A-2-75(b))

The mine operator should submit three copies of Form OG-45 (Coal Operator’s Petition to Operate Within 200 Feet or to Mine Through a Well) to the Office of Miners’ Health, Safety and Training and forward one copy to the well operator by certified mail, return receipt requested. The agency will hold the permit application for ten
days in anticipation of any potential request for hearing from the well operator. Should no request for hearing be made or if the well operator files a letter stating no objection to the proposed mining operations, the permit will then be issued. The application must note exactly how close the mining will take place in the vicinity of the well.

The agency has established general guidelines for safe mining around wells. They are as follows:

1. **Active Wells:** Maximum = 100' radius; Minimum = 50' radius
   
   Tangent 8 degrees x overburden = distance to nearest mining.

2. **Abandoned wells:** Maximum = 100' radius.
   
   Tangent 4 degrees x overburden + 10' = distance to nearest mining.

3. Well plugged to mine through: Maximum = 100' radius. No spacing requirements. Refer to WV Code 22-6-24(d)(3).

4. Barrier pillar dimensions shall be determined in accordance with attachment.

Mining within the 200 foot radius must be done strictly in accordance with the map approved by the agency.

Revisions to permits for any changes between 150 and 200 feet of the well will require that a new map be filed showing the changes along with a copy of the original permit.

Revisions to permits within 150 feet of the well which are minor and do not affect the barrier pillar require that a new permit be filed and issued. A letter explaining the changes along with a copy of the original permit should also be submitted. The permits will require little technical review and will be issued without delay.

**WV Code 22A-2-75(b)**

(b) Application may be made at any time to the director by a coal operator for leave to conduct underground mining operations within two hundred feet of any well or to mine through any well, by petition, duly verified, showing the location of the well, the workings adjacent to the well and the mining operations contemplated within two hundred feet of the well or through such well, and praying the approval of the same by the director and naming the well operator as a respondent. The coal
1) As-built surface location of well-head is within 10-ft of permitted location

$\Theta = 8^\circ$ (for active wells), $4^\circ$ (for abandoned wells)

2) Hole is drilled vertically through the "lowest minable coal bed"

The MINIMUM buffer for advancing coal mines is the greater of $50^1$-ft. or $(D \times \tan 8^\circ)$. The law assumes holes are vertical.

$^1$ The MAXIMUM required distance is $\sim 100$-ft.
Hearing Requests

operator shall file such petition with the director and mail a true copy to the well operator by certified mail, return receipt requested.

The petition shall notify the well operator that it may answer the petition within five days after receipt, and that in default of an answer the director may approve the proposed operations as requested if it be shown by the petitioner or otherwise to the satisfaction of the director that such operations are in accordance with the law and with the provisions of this article. If the well operator files an answer which requests a hearing, one shall be held within ten days of such answer and the director shall fix a time and date and give both the coal operator and well operator five days' written notice of the same by certified mail, return receipt requested. At the hearing, the well operator and coal operator, as well as the director, shall be permitted to offer any competent and relevant evidence. Upon conclusion of the hearing, the director shall grant the request of the coal operator or refuse to grant the same, or make such other decision with respect to such proposed underground operation as in its judgment is just and reasonable under all circumstances and in accordance with law and the provisions of this article: Provided, that a grant by the director of a request to mine through a well shall require an acceptable test to be conducted by the coal operator establishing that such mining through can be done safely.

If a hearing is not requested by the well operator or if the well operator gives, in writing, its consent to the coal operator to mine within closer than two hundred feet of the specified well, the director shall grant the request of the coal operator within five days after the petition's original five day answer period if the director determines that such operations are just, reasonable and in accordance with law and the provisions of this article.

The director shall docket and keep a record of all such proceedings. From any such final decision or order of the director, either the well operator or coal operator, or both, may, within ten days, appeal to the circuit court of the county in which the well subject to said petition is located. The procedure in the circuit court shall be substantially as provided in section four (29A-5-4), article five, chapter twenty-nine-A of this code, with the director being named as a respondent. From any final order or decree of the circuit court, an appeal may be taken to the supreme court of appeals as heretofore provided.

A copy of the document or documents evidencing the action of the director with respect to such petition shall promptly be filed with the chief of the office of oil and gas of the division of environmental protection.
C. MINING THROUGH AN OIL AND GAS WELL
(SEE WV CODE 22A-2.75(b))

The mine operator should submit three copies of Form OG-45 (Coal Operator's Petition to Operate Within 200 Feet or to Mine Through a Well) along with copies of the affidavit of plugging showing the plugging of the well in accordance with WV Code 22-6-24(d)(3).

WV Code 22-6-24(d)(3)

(3) Where a request of a coal operator or coal seam owner filed pursuant to subdivision (1) of this subsection has been granted by the director, the well shall be plugged in the manner provided in subsection (a) of this section, except that expanding cement shall be used instead of regular hydraulic cement, to a point approximately two hundred feet below the lowest workable coal bed. A one hundred foot plug of expanding cement shall then be placed in the well beginning at the point approximately two hundred feet below the lowest workable coal bed and extending to a point approximately one hundred feet below the lowest workable coal bed. A string of casing with an outside diameter no less than four and one-half inches shall then be run into the well to a point approximately one hundred feet below the lowest workable coal bed and such string of casing shall be circulated and cemented into the surface. The casing shall then be emptied of liquid from a point approximately one hundred feet below the lowest workable coal bed to the surface, and a vent or other device approved by the director shall be installed on the top of the string of casing in such a manner that it will prevent liquids and solids from entering the well but will permit ready access to the full internal diameter of the coal protection string of casing when required. The string of casing and the vent or other device approved by the director shall extend, when finally in place, a distance of no less than thirty inches above ground level and shall be permanently marked with the well number assigned by the director. Notwithstanding the foregoing provisions of this subdivision, if under particular circumstances a different method of plugging is required to obtain the approval of another governmental agency for safe mining through said well, the director may approve such different method of plugging if the director finds the same to be as safe for mining through and otherwise adequate to prevent gas or other fluid migration from the oil and gas reservoirs as the method above specified.

(e) Any person may apply to the director for an order to clean out and re-plug a previously plugged well in a manner which will permit the safe mining through of such well. Such application shall be filed with the

Allows WV OMHS&T to approve alternate plugging requirements of other Regulatory Agencies.
WV OMHS&T maintains a database of abandoned and active mines in West Virginia.

director and shall contain the well number, a general description of the well location, the name and address of the owner of the surface land upon which the well is located, a copy of or record reference to a deed, lease or other document which entitles the applicant to enter upon the surface land, a description of the methods by which the well was previously plugged, and a description of the method by which such applicant proposes to clean out and replug the well. At the time an application is filed with the director, a copy shall be mailed by registered or certified mail to the owner or owners of the land, and the oil and gas lessee of record, if any, of the site upon which the well is located. If no objection to the re-plugging of the well is filed by any such landowner or oil and gas lessee within thirty days after the filing of the application, and if the director determines that the method proposed for re-plugging the well will permit the safe mining through of such well, the director shall grant the application by an order authorizing the re-plugging of the well. Such order shall specify the method by which the well shall be re-plugged, and copies thereof shall be mailed by certified or registered mail to the applicant and to the owner or owners of the land, and the oil and gas lessee, if any, of the site upon which such well is located. If any such landowner or oil and gas lessee objects to the re-plugging of the well, the director shall notify the applicant of such objection. Thereafter, the director shall schedule a hearing to consider the objection, which hearing shall be held after notice by registered or certified mail to the objectors and the applicant. After consideration of the evidence presented at the hearing, the director shall issue an order authorizing the re-plugging of the well if the director determines that re-plugging of the well will permit the safe mining through of such well. Such order shall specify the manner in which the well shall be re-plugged and copies thereof shall be sent by registered or certified mail to the applicant and objectors. The director shall issue an order rejecting the application if the director determines that the proposed method for re-plugging the well will not permit the safe mining through of such well.

D. PROGRESS MAPS

Progress maps must be filed every six months showing mining completed within the 500 foot radius. One copy only need be submitted denoting it is a progress map and with the permit number. When all mining is completed, a final progress map should be submitted stating that mining is completed and final progress map.

These progress maps are reviewed closely to ascertain permit compliance. Action will be taken for non-compliance.
E. SURFACE MINES
(SEE WV CODE 22A-2-75(c))

The mine operator must submit three copies of Form OG-59 (Surface Mining Agreement RE: Mining Within 200 Feet of an Oil and/or Gas Well) to the agency and forward one copy to the well operator by certified mail, return receipt requested.

WV CODE 22A-2-75(c)

(c) Before a coal operator conducts surface or strip mining operations as defined in this chapter, within two hundred feet of any well, including the removal of coal and other material, the operator shall file with the director and furnish to the well operator by certified mail, return receipt requested, its mining maps and plans (which it is required to prepare, file and update to and with the regulatory authority) for the area within two hundred feet of the well, together with a notice, on a form furnished by the director, informing them that the mining maps and plans are being filed or mailed pursuant to the requirements of this section, and representing that the planned operations will not unreasonably interfere with access to or operation of the well and will not damage the well. In addition, the coal operator shall furnish the well operator with evidence that it has in force public liability insurance, with at least the minimum coverage required by article three [§22-3-1 et seq.], chapter twenty-two of this code, and the rules promulgated thereunder.

Once these mining maps and plans are filed with the director, the coal operator may proceed with its surface or strip mining operations in the manner and as projected on such plans or maps, so long as such surface mining operations do not unreasonably interfere with access to, or operation of, the well or do not damage the well.

Public Liability Insurance
See 22-3-9 (d)
Examples of pillar plans for various depths of cover.

Cover 0 to 149'

Cover 150' to 249'

Cover 250' to 349'

(min. 10,000 sq. ft. bearing area)

Cover 350' to 449'

(min. 18,000 sq. ft. bearing area)

Cover 450' to 549'

(min. 25,000 sq. ft. bearing area)

Cover 550' to 649'

(min. 32,000 sq. ft. bearing area)

Cover 650' to 700'

(min. 40,000 sq. ft. bearing area)

Note: No place to extend 15' in width. Pillars to be a minimum of twice the width of the excavation driven.

Scale 1 inch = 100 feet.
COAL OPERATOR’S PETITION TO OPERATE WITHIN 200 FEET OR TO MINE THROUGH A WELL

Well Type: Oil / Gas / Liquid Injection / Waste Disposal / Coal Bed Methane

If Gas: Production / Underground Storage / Deep / Shallow

Location: Elevation: Watershed:

District: County: Quadrangle:

WELL OPERATOR:

AGENT:

Address:

Name of Person to receive this permit:

Printed Name:

Email Address:

The Undersigned coal operator hereby petitions for approval to do the following:

_____ Mine within 200 feet of said well
_____ Mine through said well when the same is properly plugged
_____ Proposed Gas well to be drilled within 200 feet of mine workings

On the reverse side hereof is a copy of the map and plan of the undersigned coal operator showing its projected mine workings within 500 feet of said well.

The undersigned coal operator hereby represents that it will file updated or new maps and plans with the Office of Miners’ Health Safety and Training every six months, until mining within 500 feet of the well has ceased or until the well has been mined through.

Prior to the actual mining through of said well, the undersigned coal operator will submit the Form WR-35, "Well Operator’s Report of Drilling, Fracturing and or Stimulating or Physical Change and the Form WR-38, "Affidavit of Plugging and Filling Well", to show that the well has been properly plugged in a manner to permit the safe mining through of the well.

Copies of this petition and enclosed maps and plans have been sent by registered mail to the well operator, as required by Code 22A-2-75.

Coal Operator:

By: Printed Name:

Title: Email:

STATE OF COUNTY OF TO WIT:

being first duly sworn, deposes and says that he is of the coal operator named above; that he is familiar with the facts set out both in the petition and on the accompanying maps and plans; and that the same are true.

Subscribed and sworn before me this day of , 20

My Commission Expires:

Notary Public
NOTICE BY COAL OPERATOR OF INTENTION TO MINE WORKINGS WITHIN 500 FEET OF A WELL

WELL OPERATOR: 
Address: 

AGENT: 
Address: 

Name of Person to receive this permit: 
Printed Name: 

Email Address: 

On the reverse side hereof is a copy of the map and plan of the undersigned coal operator showing its projected mine workings within 500 feet of said well or under a tract of land of which the indicated well operator is in visible possession for the purpose of drilling a well.

Pursuant to the requirements of Code 22A-2-75, you are hereby notified that the undersigned coal operator will proceed with its mining operations in the manner and as projected on said plan or maps, but will not mine or remove coal or conduct its mining operations nearer than 200 feet to said well without the consent of the Office of Miners’ Health, Safety and Training.

The undersigned coal operator hereby represents that it will file updated or new maps and plans with the Office of Miners’ Health, Safety and Training every six months, until mining within 500 feet of the well has ceased or until the well has been mined through.

Coal Operator: ________________________________
Printed Name: ________________________________
Title: ________________________________
Email Address: ________________________________

Copies with attachments to:
Well Operator
Designated Agent

Notes:
In the event a coal operator, prior to proceeding with any mining operations within 500 feet of a well, files form GG-45, “Coal Operators Petition to Operate within 200 Feet or to Mine through a well”, such form GG-45 petition shall serve as the notice to intention to extend mine workings within 500 feet of the subject well, and the form GG-44 is not required.
STATE OF WEST VIRGINIA
OFFICE OF MINERS' HEALTH, SAFETY & TRAINING

#7 PLAYERS CLUB DRIVE - SUITE 2
CHARLESTON, WV 25311-1026
www.wvminesafety.org

I. ________________ of_________________________
   (Name) ________________________________
   (Title) ________________________________
   (Coal Company Name) ____________________
   (WV Permit Number) ______________________

   (Address) ______________________________
   (City) __________________ (ST) ______ (Zip)

Agree that the planned operations submitted in this application will not unreasonably interfere with access to or operation of the well and will not damage well No: _______________ (API), located on ____________________________
(Farm Name) in ______________________ County.

Signed: ___________________________ Printed Name: ___________________________
Dated: ________________

Name of Person to receive this permit: ___________________________
Printed Name: ___________________________
Email Address: __________________________________________

STATE OF: ___________________________
COUNTY OF: ________________________

TO WIT:

being first duly sworn, deposes and says that
he is __________________________ of the coal operator named above; that he is familiar with the
facts set out both in the petition and on the accompanying maps and plans; and that the same are true.
Subscribed and sworn before me this ______________ day of ______________, 20 __________
My Commission Expires: ___________________________

_______________________________________
Notary Public

Note:
Documentation of public liability insurance, must accompany this application.
1) AFTER DRILLING, provide an as-built survey of each well location.

2) UPON ABANDONMENT, each well should be marked with a brass tag with its ID stamped on it, mounted permanently with steel and concrete so that when buried a metal detector can easily find.
3) Wells must be DRILLED VERTICAL until safely below the deepest coal bed that could be conceivably mined (either now or in the future).

4) COMMUNICATE!
The importance of accurate well location cannot be stressed enough. With the evolution of new technology in drilling it is hard to say how the surface location of wells will relate to the underground location of where the well will penetrate the mineable coal seams. That is of utmost concern to the Office of Miners’ Health, Safety & Training. When companies submit plans to us to mine near wells and they show a location of the well on the map we expect the well to be at that location. The formulas that we use to decide on approving the applications are not only to preserve the integrity of the well so as not to damage it but also to allow for the safe mining of the coal in that area.
Some of the issues we have had in recent years have been with old abandoned wells whose locations were unknown and the mines have intersected those wells. There are many old wells out there which have been abandoned for years with no information available to locate them. Let’s not make this mistake again. We now have the means to provide accurate information on well locations at the point that they penetrate the coal seams however this information is not always readily available. If we can prevent one incident in the future from occurring concerning inaccurate well locations it will be well worth the effort.
The Office of Miners’ Health, Safety & Training would like to work hand in hand with the gas industry in developing an acceptable system of sharing this invaluable information so that we may continue to recover these resources while protecting our most valuable resource, the Worker.