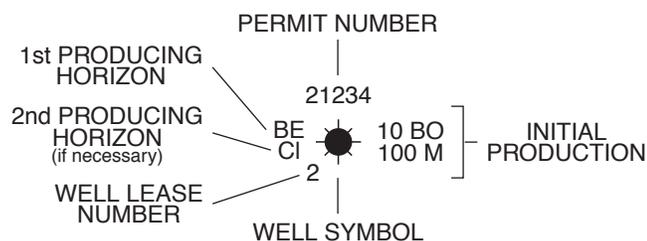


WELL SYMBOLS AND ABBREVIATIONS

WELL SYMBOLS

- Permitted location
- ⊘ Expired permit location
- ☀ Gas show
- ☀ Gas well
- ☀/ Plugged gas well
- ☀ Gas and oil show
- Oil show
- Oil well
- / Plugged oil well
- ☀/ Oil well with gas show
- / Oil well with gas show
- / Plugged oil well with gas show
- ☀/ Oil and gas well
- / Plugged oil and gas well
- ☀/ Plugged gas well with oil show
- Dry hole
- ☀ Dry hole with gas show
- Dry hole with oil show
- ☀/ Dry hole with oil and gas show
- Injection well
- / Plugged injection well
- Well producing oil and gas from multiple horizons
- / Plugged well that produced gas from multiple horizons
- Well producing gas with a show of oil from multiple horizons
- Well producing gas from multiple horizons
- Well producing oil from multiple horizons
- / Plugged well that produced oil with a gas show from multiple horizons
- / Plugged well that produced oil from multiple horizons
- / Well producing oil with a gas show from multiple horizons
- / Plugged well that produced gas with an oil show from multiple horizons
- / Plugged well that produced oil and gas from multiple horizons
- ^{PBWW}○ Well originally drilled for oil and gas, but converted to a water well
- Brine well for dust and ice control
- / Plugged brine well for dust and ice control
- Water supply well
- / Plugged water supply well
- ⊘ Lost hole
- ^{RAD}⊘ Radioactive geophysical tools lost in hole
- Observation/monitor well
- ★ Unknown status



PERMIT NUMBERS

- 20000-39999 Standard API permit number for wells permitted by the Division of Mines and the Division of Oil and Gas between 1935 to present. Does not include duplicate permit numbers issued by the Division of Mines.
- 60000-79999 Standard API permit number for duplicate permit numbers issued by the Division of Mines between 1935 and 1965, Division of Mines and Division of Oil and Gas "A" number wells, USGS Pepper numbers, Ohio Geological Survey "D" and "L" numbers, and wells with no identifiers.

MISCELLANEOUS ABBREVIATIONS

- () Old information
- AIR Air injection
- BO Barrels of oil per day
- DD Drill deeper
- DWELL Domestic
- ERP Enhanced recovery project
- IAERP Inactive enhanced recovery project
- I/O Idle/orphan
- IWDW Industrial waste disposal well
- LOC? Well location uncertain
- LH Lost hole
- M 1,000 cubic feet of gas per day
- MM 1,000,000 cubic feet of gas per day
- PB Plug back
- PBWW Plugged back to water well
- RAD Radioactive geophysical tools lost in hole
- RO Reopen
- SMP Solution mining project
- STEST Stratigraphic test
- STOR Storage well
- SWIW Salt water injection well
- CTEST Core hole

HORIZON ABBREVIATIONS
(Drillers' or informal names are within quotation marks)

PENNSYLVANIAN	Pgr	"Goose Run"	sandstone
	Pmt	"Mitchell"	sandstone
	Pwc	"Wolf Creek"	sandstone
	Pvn	"Vincent"	sandstone
	Ppk	"Peeker"	sandstone
	Pcr	"Cow Run"	sandstone
	Pbr	"Buell Run"	sandstone
	Pmb	"Macksburg"	sandstone
	Pgt	"Germantown"	sandstone
	Pss	"Salt Sand"	sandstone
	Pbl	"Brill"	sandstone
	Pmx	"Maxton"	sandstone
MISSISSIPPIAN	Mma	Maxville Limestone	
	Mke	"Keener"	sandstone
	Min	"Big Injun"	sandstone
	Msq	"Squaw"	sandstone
	Mwel	"Welch"	sandstone
	Mwr	"Weir"	sandstone
	Mhd	"Hamden"	sandstone
	Msu	Sunbury Shale	
	Be	Berea Sandstone	
	Mbed	Bedford Shale	
DEVONIAN	Doh	Ohio Shale	
	Dgd	"Gordon"	sandstone
	Dol	Olentangy Shale	
	Don	Onondaga Limestone	"Big Lime"
	Ddel	Delaware Limestone	
	Dsyl	Sylvania Sandstone	
	Dcol	Columbus Limestone	
	Dbb	Bois Blanc Formation	
	Dor	Oriskany Sandstone	
	Dhel	Helderberg Limestone	
SILURIAN	Sbi	Bass Islands Dolomite	
	Snb	"Newburg"	dolomite
	Slp	Lockport Formation	
	Sps	"Packer Shell"	limestone
	Sbf	Brassfield Formation	
Cl	"Clinton"	sandstone	
ORDOVICIAN	Med	"Medina"	sandstone
	Oqu	Queenston Shale	
	Out	Utica Shale	
	Otr	Trenton Limestone	
	Obr	Black River Limestone	
	Ouc	Upper Chazy	limestone
	Omc	Middle Chazy	
	Olc	Lower Chazy	
	Osp	"Saint Peter"	sandstone
	Obmt	"Beekmantown"	dolomite
	€kn	Knox Dolomite	
CAMBRIAN	€rr	"Rose Run"	sandstone
	€cr	"Copper Ridge"	dolomite
	Tpl	"Trempealeau"	dolomite
	€fr	"Franconian"	sandstone
	€kb	Kerbel Formation	
	€ec	Eau Claire Formation	
	€co	Conasauga Formation	
	€ro	Rome Formation	
€ms	Mount Simon Sandstone		
PRECAMBRIAN	PC	Precambrian	