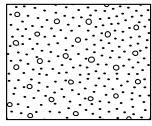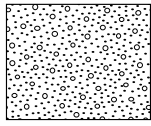# 37—LITHOLOGIC PATTERNS

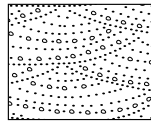[Lithologic patterns are usually reserved for use on stratigraphic columns, sections, or charts]
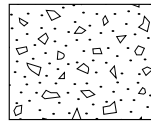
37.1—Sedimentary-rock lithologic patterns

601
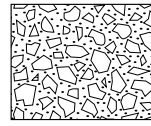Gravel or conglomerate (1st option)
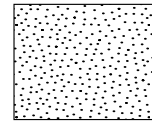
602
Gravel or conglomerate (2nd option)

603
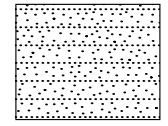Crossbedded gravel or conglomerate
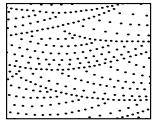
605
Breccia (1st option)
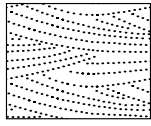
606
Breccia (2nd option)
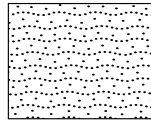
607
Massive sand or sandstone
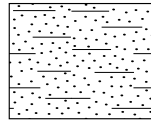
608
Bedded sand or sandstone

609
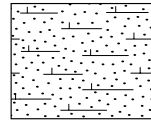Crossbedded sand or sandstone (1st option)
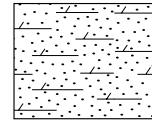
610
Crossbedded sand or sandstone (2nd option)

611
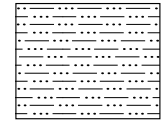Ripple-bedded sand or sandstone
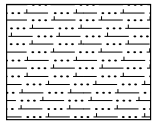
612
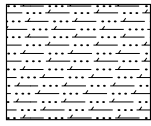Argillaceous or shaly sandstone

613
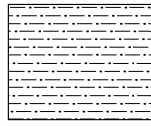Calcareous sandstone

614
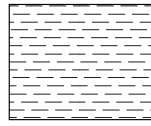Dolomitic sandstone

616
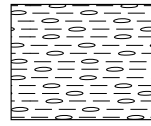Silt, siltstone, or shaly silt

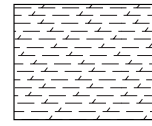**617**
Calcareous siltstone

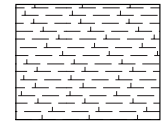**618**
Dolomitic siltstone

619
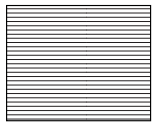Sandy or silty shale

620
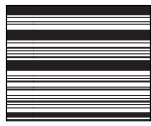Clay or clay shale

621
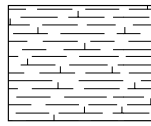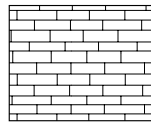Cherty shale

622
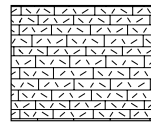Dolomitic shale

623
Calcareous shale or marl

624
Carbonaceous shale

625
Oil shale
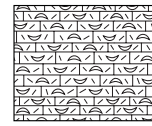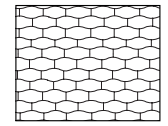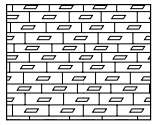
626
Chalk

627
Limestone
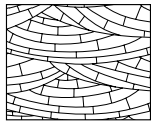
628
Clastic limestone

629
Fossiliferous clastic limestone

630
Nodular or irregularly bedded limestone

631
Limestone, irregular (burrow?) fillings of saccharoidal dolomite

632
Crossbedded limestone
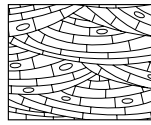
633
Cherty crossbedded limestone
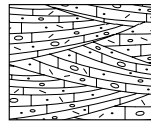
634
Cherty and sandy crossbedded clastic limestone
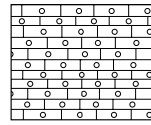
635
Oolitic limestone
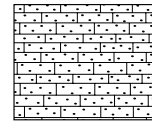
636
Sandy limestone
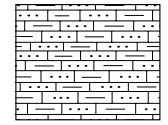
637
Silty limestone
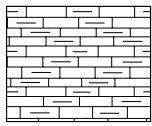
638
Argillaceous or shaly limestone
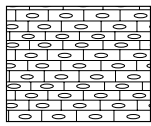
639
Cherty limestone (1st option)
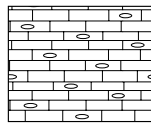
640
Cherty limestone (2nd option)
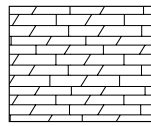
641
Dolomitic limestone, limy dolostone, or limy dolomite

642
Dolostone or dolomite

643
Crossbedded dolostone or dolomite

644
Oolitic dolostone or dolomite

For more information, see general guidelines on pages A-i to A-v.

37—LITHOLOGIC PATTERNS (continued)

[Lithologic patterns are usually reserved for use on stratigraphic columns, sections, or charts]

37.1—Sedimentary-rock lithologic patterns (continued)

645
Sandy dolostone or dolomite

646
Silty dolostone or dolomite

647
Argillaceous or shaly dolostone or dolomite
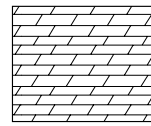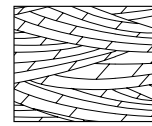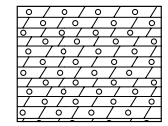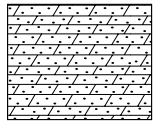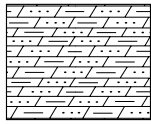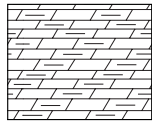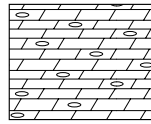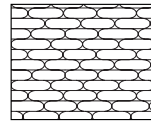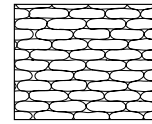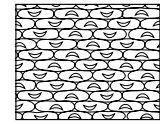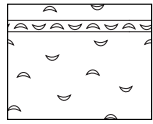
648
Cherty dolostone or dolomite
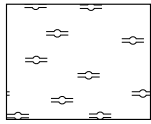
649
Bedded chert (1st option)

650
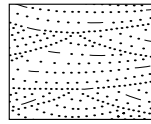Bedded chert (2nd option)

651
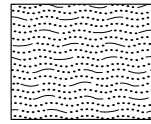Fossiliferous bedded chert

652
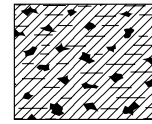Fossiliferous rock

653
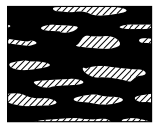Diatomaceous rock

654
Subgraywacke
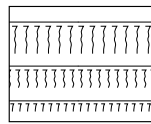
655
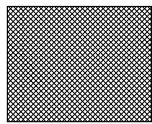Crossbedded subgraywacke

656
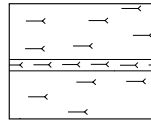Ripple-bedded subgraywacke

657
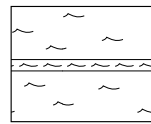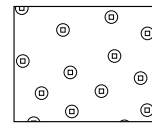Peat

658
Coal

659
Bony coal or impure coal

660
Underclay

661
Flint clay

662
Bentonite

663
Glauconite

664
Limonite
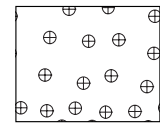
665
Siderite
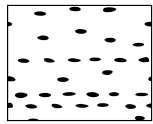
666
Phosphatic-nodular rock
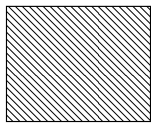
667
Gypsum
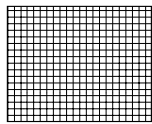
668
Salt
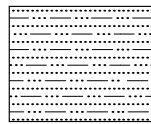
669
Interbedded sandstone and siltstone
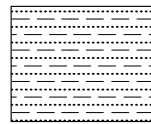
670
Interbedded sandstone and shale
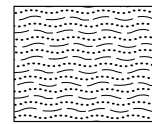
671
Interbedded ripple-bedded sandstone and shale
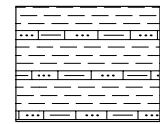
672
Interbedded shale and silty limestone (shale dominant)
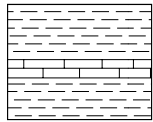
673
Interbedded shale and limestone (shale dominant) (1st option)
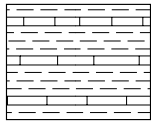
674
Interbedded shale and limestone (shale dominant) (2nd option)
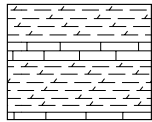
675
Interbedded calc-areous shale and limestone (shale dominant)
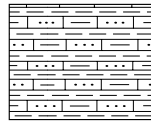
676
Interbedded silty limestone and shale
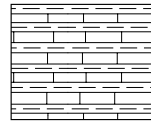
677
Interbedded limestone and shale (1st option)
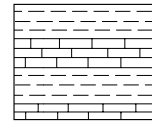
678
Interbedded limestone and shale (2nd option)
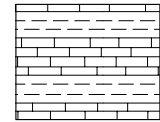
679
Interbedded limestone and shale (limestone dominant)
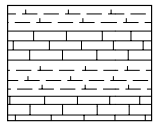
680
Interbedded limestone and calcareous shale
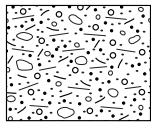
681
Till or diamicton (1st option)
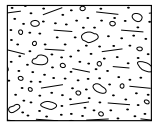
682
Till or diamicton (2nd option)
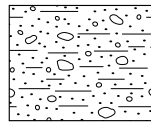
683
Till or diamicton (3rd option)
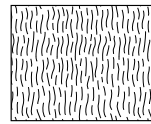
684
Loess (1st option)
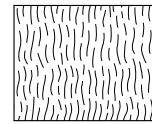
685
Loess (2nd option)
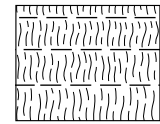
686
Loess (3rd option)

For more information, see general guidelines on pages A-i to A-v.

37—LITHOLOGIC PATTERNS (continued)

[Lithologic patterns are usually reserved for use on stratigraphic columns, sections, or charts]

37.2—Metamorphic-rock, igneous-rock, and vein-matter lithologic patterns
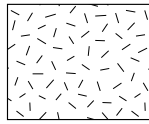
701
Metamorphism
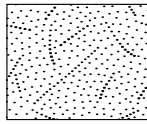
702
Quartzite
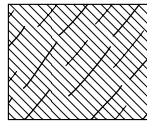
703
Slate
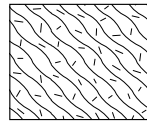
704
Schistose or
gneissoid granite
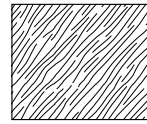
705
Schist
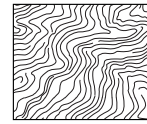
706
Contorted schist
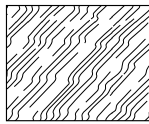
707
Schist and gneiss
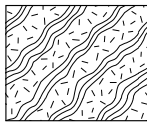
708
Gneiss
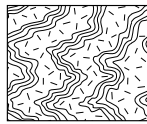
709
Contorted gneiss
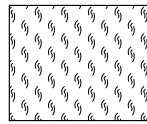
710
Soapstone, talc,
or serpentinite
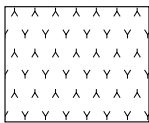
711
Tuffaceous rock
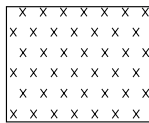
712
Crystal tuff
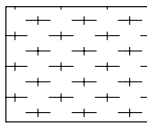
713
Devitrified
tuff
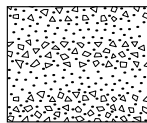
714
Volcanic breccia
and tuff

715
Volcanic breccia
or agglomerate
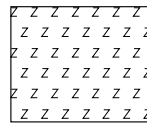
716
Zeolitic rock
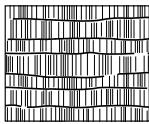
717
Basaltic flows
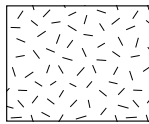
718
Granite (1st option)
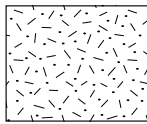
719
Granite (2nd option)
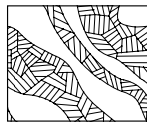
720
Banded
igneous rock
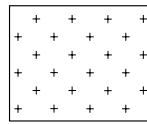
721
Igneous rock
(1st option)
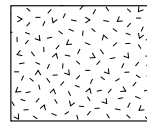
722
Igneous rock
(2nd option)
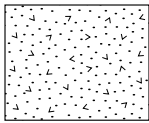
723
Igneous rock
(3rd option)
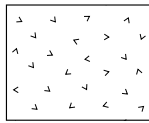
724
Igneous rock
(4th option)
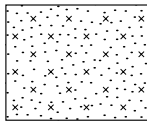
725
Igneous rock
(5th option)
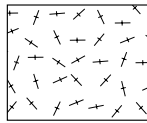
726
Igneous rock
(6th option)
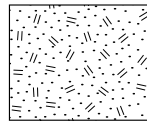
727
Igneous rock
(7th option)
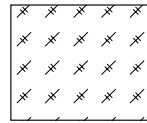
728
Igneous rock
(8th option)
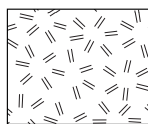
729
Porphyritic rock
(1st option)
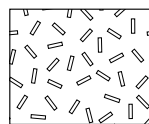
730
Porphyritic rock
(2nd option)

731
Vitrophyre
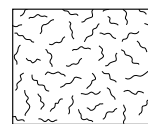
732
Quartz
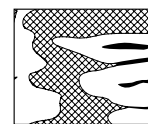
733
Ore

For more information, see general guidelines on pages A-i to A-v.

38—EXPLANATION FOR PATTERN CHART

DISCUSSION*
This diagram provides some basic information on how to use the new Pattern Chart, which is enclosed in the sleeve on the inside back cover of this standard volume. For more specific information on the use of patterns (and color) on geologic maps, see Section 5, entitled "Guidelines for Map Color and Pattern Selection," in the accompanying introductory text.
Most patterns on this new chart were designed (in Adobe Illustrator 8.0.1) to closely replicate patterns in the informal "Technical Cartographic Standards" volume (U.S. Geological Survey, ca. 1975). In some cases, however, lineweights of pattern elements had to be increased to facilitate higher resolution (1800 dpi) digital output; therefore, some patterns may not plot or print correctly if output at lower resolutions.
Each pattern has been assigned a new pattern number (see below each box). In addition, each pattern now has associated with it a generic look-up table number that can be used to access a pattern if it has been incorporated into a patternset.

| DESCRIPTION	
Abbreviations used in pattern numbers:	• K, black; C, cyan; M, magenta; DO, dropout; R, red; B, brown
Overprint patterns have white background	• Pattern is in front. One bounding box (having Fill and Stroke set to 'None') is in back • White background is transparent (underlying map-unit color will be visible)
Dropout patterns have black background	• Pattern is in front. Two bounding boxes are in back: box directly beneath pattern has Fill set to 100% black and Stroke set to 'None'; box to rear has both Fill and Stroke set to 'None' • Black background represents underlying map-unit color. If white pattern is used "as is," it will knock out the underlying map-unit color; if pattern is changed to one of the CMYK values in the underlying map-unit color, it will knock out the other CMYK value(s) in map-unit color

IGNEOUS PATTERNS (Series 300)

Pattern number shown below box

Generic lookup-table number shown in upper left-hand corner of box (can be used to access a particular pattern from a patternset)

301	302	303	304
301-K	301-C	301-M	301-DO
305	306	307	308
302-K	302-C	302-M	302-DO
309	310	311	312
303-K	303-C	303-M	303-DO
313	314	315	316
304-K	304-C	304-M	304-DO
317	318	319	320
305-K	305-C	305-M	305-DO
321	322	323	324
306-K	306-C	306-M	306-DO

For more information, see general guidelines on pages A-i to A-v.