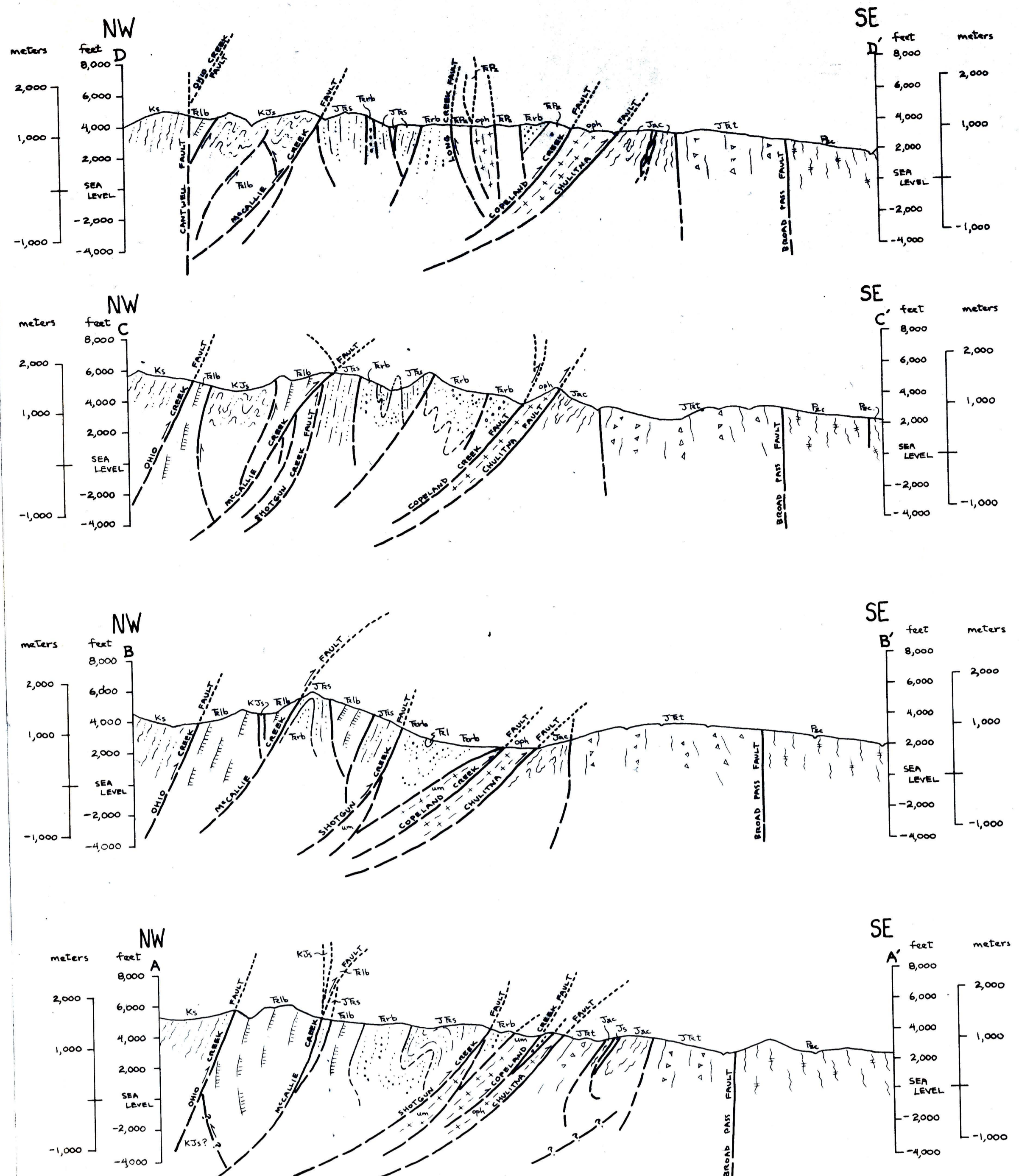


INTERPRETIVE BEDROCK GEOLOGIC MAP OF THE UPPER CHULITNA DISTRICT,

HEALY A-6 QUADRANGLE, ALASKA RANGE, ALASKA

By
N. J. Silberling, D. L. Jones, Béla Csejty, and W. H. Nelson
1978

U.S. Geological Survey
OPER FILE REPORT
This map is preliminary and has not been edited or reviewed for conformity with Geological Survey standards or nomenclature.



- DESCRIPTION OF MAP UNITS**
- DI DIKE ROCKS (TERTIARY?)**
 - ELDRIDGE TERRANE**
 - Ks MARINE SEDIMENTARY ROCKS (CRETACEOUS?)**—Flyschlike dark-gray to black argillite, sandstone, and minor conglomerate. Mostly sheared and broken.
 - CHULITNA TERRANE**
 - Kjs SANDSTONE, ARGILLITE, AND CHERT UNIT (LOWER CRETACEOUS AND UPPER JURASSIC)**—Dark-gray argillite, gray to black chert, and sandstone, either thick bedded with *Inoceramus* fragments or thin bedded and notably micaceous. Rare limestone beds of conchoidal *Suebia* shells.
 - Jbs SANDSTONE AND ARGILLITE UNIT (LOWER JURASSIC TO UPPER TRIASSIC)**—Gray-brown argillite with minor calcareous sandstone and impure limestone. Grading downward into brown-weathering thick-bedded limy sandstone. Abundant marine shelly fossils in some sandstone beds.
 - 3ab RED-BED UNIT (UPPER TRIASSIC)**—Red sandstone, mudstone, and conglomerate with minor interbedded brown sandstone and dense gray nodular limestone. Gradationally underlies brown-weathering sandstone and argillite unit.
 - 21 Interstratified units of bedded gray limestone**—Located in exposures between Shotgun Creek fault and Long Creek or Copeland Creek faults. Flows of dense basalt—located in exposures southeast of Shotgun Creek fault.
 - 21a Limestone and basalt unit (UPPER TRIASSIC)**—Pillow basalt, pillow breccia, and basaltic tuff in units as much as a few hundreds of meters thick interstratified with generally thinner and more argillaceous units of gray shallow-marine limestone. Depositionally underlies red-bed unit northwest of Shotgun Creek fault; may be partially correlative with red-bed unit on southeast side of this fault. Stippled pattern represents interstratified red beds, conglomerate, and associated rhyolitic flows and breccias.
 - 21b UNDIFFERENTIATED LOWER TRIASSIC AND UPPER PALEOZOIC ROCKS**—Cherty tuff (Carboniferous), volcanic breccia, bedded chert (Upper Devonian in part), argillite, marine limestone (Lower Triassic and Permian), and flyschlike sandstone and argillite in structurally intermixed units to more than 100 m thick. Lower Triassic limestone unconformably underlies Upper Triassic red-bed unit.
 - OHIOITIC AND ULTRAMAFIC ROCKS**
oph Tectonic mixture of serpentinite, pillow basalt, basaltic breccia, red radiolarian chert (Upper Devonian), and minor gabbro.
um Serpentinite and silica-carbonate rock.
- WEST FORK TERRANE**
- Jac ARGILLITE, CHERT, AND SANDSTONE UNIT (UPPER JURASSIC)**—Argillite, cherty argillite, and thin-bedded sandstone. Gray to black rhythmically bedded chert predominates locally. Graded sandstone and siltstone interbedded with argillite form important thicknesses on Long Creek. In places highly sheared and phyllitic. Very minor fine-grained conglomerate.
 - Js SANDY LIMESTONE AND CALCAREOUS SANDSTONE UNIT (LOWER JURASSIC)**—Evenly bedded brown-weathering calciferous phosphatic marine sandy limestone and calcareous sandstone in fault-bounded silvers.
 - Jrt MASSIVE TUFF UNIT (LOWER JURASSIC AND TRIASSIC)**—Obscurely stratified dark grayish-green crystal tuff and cherty tuff. Minor fossiliferous marine sandstone and conglomerate.
- BROAD PASS TERRANE**
- Pbc CHERT AND ARGILLITE**—Rhythmically bedded chert, cherty tuff, and black argillite (Upper Devonian or younger upper Paleozoic) dark-gray phyllite; and minor volcanic graywacke.
 - DSL Gray, fossiliferous, marine limestone** (Upper Silurian to Middle Devonian)—Found in tectonic or redeposited slide blocks, in part associated with serpentinite.
- STRIKE AND DIP OF STRATA**
- Pacing of strata not known
 - Demonstrably upright or overturned
 - Crumpled
- STRIKE AND DIP OF CORRELATION**
- Normal
 - Axial trace of folds
 - Upright and overturned major synclines
 - Overturned major anticlines
 - Overturned minor folds
- FOSSIL LOCALITIES**—Table has description of localities 1-47.
- REFERENCES CITED**
- Hawley, C. C., and Clark, A. L., 1974, Geology and mineral deposits of the Upper Chulitna district, Alaska. U.S. Geological Survey Professional Paper 758-B, p. B1-B47.

please return to
MINERALS LIBRARY
A.D.G.C.S.

USGS Loc. number	Depth (meters)	Description
Limestone and basalt unit		
1. 77-2-11		Subvolcanic and ultrabasic rocks; Triassic, probably Permian.
2. 76-2-124		Subvolcanic corals and argillite lenses; Upper Triassic.
3. 76-2-205		Subvolcanic corals and argillite lenses; Upper Triassic.
Sandstone, argillite, and chert unit		
4. 77-2-12		Basaltic breccia; Lower Cretaceous, Valanginian.
5. 77-2-13		Subvolcanic chert and other Valanginian radiolarians.
6. 76-2-123		Argillite, sandstone, and other radiolarians; Upper Jurassic, upper Valanginian to Lower Valanginian (R. W. Dalrymple, written commun., 1974).
7. 76-2-45		Cherty tuff; Permian to Devonian. Stratigraphically at least is chert containing upper Valanginian radiolarians (R. W. Dalrymple, written commun., 1974). Another: 21 lower; basaltic breccia; Valanginian. All called "unconformably underlies".
8. USGS Mesozoic loc. 31266		Lower Jurassic, lower Sinuermanian ammonites including <i>Ammonoites</i> (R. W. Dalrymple, written commun., 1974).
9. 76-2-241		Subvolcanic and ultrabasic rocks; Upper Valanginian; Upper Triassic.
10. 76-2-247		Subvolcanic and ultrabasic rocks; Upper Valanginian; Upper Triassic.
11. 77-2-111		Subvolcanic and ultrabasic rocks; Upper Valanginian; Upper Triassic.
12. 76-2-203		Subvolcanic and ultrabasic rocks; Upper Valanginian; Upper Triassic.
Red-bed unit		
14. USGS Mesozoic loc. 31265		Permian to Devonian; Upper Triassic, lower Middle Devonian.
15. USGS Mesozoic loc. 31264		Jurassic to Middle Devonian.
16. 76-2-128		Jurassic to J. magnus; Upper Triassic, lower Middle Devonian.
17. 76-2-128		Jurassic to J. magnus; Upper Triassic, lower Middle Devonian.
18. 76-2-304		Subvolcanic and ultrabasic rocks; Upper Triassic, lower Middle Devonian.
Undifferentiated Lower Triassic and upper Paleozoic unit		
19. 77-2-101		Lower Triassic, lower Middle Devonian; <i>Ammonoites</i> (R. W. Dalrymple, written commun., 1974).
20. USGS Mesozoic loc. 31267		Lower Triassic, lower Middle Devonian; <i>Ammonoites</i> (R. W. Dalrymple, written commun., 1974).
21. 76-2-1		Upper Paleozoic, probably Carboniferous, radiolarians.
22. USGS loc. 36672-PC		Lower Triassic, Valanginian to lower Sinuermanian; <i>Ammonoites</i> (A. G. Harris, written commun., 1977) and well-preserved radiolarians from radiolarian chert.
23. 77-2-15		Mesozoic, probably Triassic, radiolarians.
24. USGS loc. 23403-9C		Productic brachiopods and other components of a probably Paleozoic, probably Permian age (D. S. Hutson, Jr., in Hawley, and Clark, 1974).
Opilite unit		
26. 76-2-9		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
27. 76-2-143		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
28. 77-2-19		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
29. 77-2-20		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
30. 77-2-21		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
31. 76-2-144		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
32. 76-2-145		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
33. 75-2-38		Upper Devonian; Permian radiolarians from red radiolarian chert (identified by Brian Halpern, 1977).
WEST FORK TERRANE		
Argillite, chert, and sandstone unit		
34. 76-2-55		Upper Jurassic radiolarians.
35. 76-2-22		Upper Jurassic radiolarians.
36. 76-2-41		Upper Jurassic radiolarians.
Sandy limestone and calcareous sandstone unit		
37. USGS Mesozoic loc. 31260		Lower Jurassic, lower Sinuermanian ammonites including <i>Ammonoites</i> cf. <i>A. densirostris</i> (R. W. Dalrymple, written commun., 1974).
38. USGS Mesozoic loc. 31269		Lower Jurassic, lower Sinuermanian ammonites including <i>Ammonoites</i> cf. <i>A. densirostris</i> (R. W. Dalrymple, written commun., 1974).
39. USGS Mesozoic loc. 31264		Lower Jurassic, lower Sinuermanian ammonites including <i>Ammonoites</i> (R. W. Dalrymple, written commun., 1974).
40. USGS Mesozoic loc. 31265		Lower Jurassic, lower Sinuermanian ammonites including <i>Ammonoites</i> cf. <i>A. densirostris</i> (R. W. Dalrymple, written commun., 1974).
41. USGS Mesozoic loc. 31262		Lower Jurassic, lower Sinuermanian ammonites including <i>Ammonoites</i> cf. <i>A. densirostris</i> (R. W. Dalrymple, written commun., 1974).
Massive tuff unit		
42. USGS Mesozoic loc. 31261		Lower Jurassic, upper Sinuermanian ammonites including <i>Arctostroceras jeletzkyi</i> (R. W. Dalrymple, written commun., 1974).
BROAD PASS TERRANE		
Chert and argillite unit		
43. 77-2-7		Upper Paleozoic, Upper Devonian or younger radiolarians.
44. 77-2-18		Upper Paleozoic, Upper Devonian or younger radiolarians.
45. USGS loc. 9743-8D		Silurian-Devonian, probably Middle Devonian, corals (W. A. Oliver, Jr., written commun., 1977).
46. USGS loc. 9744-8D		Silurian or Devonian corals (W. A. Oliver, Jr., written commun., 1977).
47. USGS loc. 9824-8D		Upper Silurian (uppermost Frasnian) or Lower Devonian (Gedinnian) conodonts (A. G. Harris, written commun., 1978) from isolated exposure of limestone associated with serpentinite.