

Table 3. Heavy-mineral subzones of Umiat Test Wells Nos. 1 and 2

Umiat Test Well No. 2		Umiat Test Well No. 1		Projected fault section of Umiat Test Well No. 1		Zone number	Characteristic minerals
Depth (feet)	Minerals present (percent)	Depth (feet)	Minerals present (percent)	Depth (feet)	Minerals present (percent)		
		750-760	M 53; Gl 4; G 22; T 8; Z 5.			U-11	High muscovite and garnet, glaucophane present.
		765-770	G 75; Z 3; T 8; P trace, Gl 4.			U-11	High garnet; tourmaline, glaucophane, and zircon present.
		922	G 53; Z 20; C abundant; P 2.			U-10	Chlorite abundant, garnet and zircon common, picotite trace.
		955-958	C flood				Chlorite flood.
		1,020-1,025	G 24; Z 25; T 29; H 8; P 3.			U-9	About equal percent of garnet, zircon, and tourmaline. Picotite present.
		1,080-1,085	G 29; Z 22; T 20; H 18; P 6.				
		1,258-1,268	G 46; Z 2; T 27; H 11; P 7.				High garnet and tourmaline, low zircon. Picotite present.
		1,305-1,315	G 80; Z 3; T 2; H 6.				High "flood" garnet, tourmaline and zircon present in small amounts.
400	G 19; Z 10; T 30; M, H 8.	1,315-1,325	G 49; Z 4; T 19; H 12; P 5.			U-8	High garnet and tourmaline, low zircon. Picotite present.
		1,335-1,345	G 40; T 45; P 8.				
		1,350-1,355	G 29; Z 9; T 45; P 9.				
		1,355-1,365	G 11; Z 10; T 62; P 11.				Low garnet and zircon, high tourmaline. Picotite present.
		1,365-1,375	G 72; Z 7; T 6; H 4;			U-7	Flood of garnet, low zircon, tourmaline, hornblende. Picotite trace to absent.
		1,375-1,383	G 83; Z 7; T 6; H 2; P 1.				
		1,383-1,393	G 86; Z 4; T 5; H 3; P 1.				
		1,403-1,409	G 17; Z 42; T 18; H 4; P 13.				High zircon, common garnet, tourmaline, and picotite.
		1,409-1,414	G 36; T 44.				
525	G 71; Z 9; T 9; H 2.	1,434-1,444	G 69; Z 7; T 11; H 4.	2,276-2,282	G 76; Z 7; T 1; P 2.		High garnet; low zircon (4:1), tourmaline, and hornblende. Picotite trace or absent.
				2,282-2,285	G 95; Z 2; T 1; P 1.		
				2,297-2,302	G 83; Z 8; T 4; P 2.		
				2,302-2,309	G 93; Z 3; T 1; H 3.	U-6	
				2,309-2,314	G 96.		
				2,314-2,318	G 90; T 1; H 7; P 1.		
				2,318-2,323	G 85; Z 2; H 5.		
				2,323-2,327	G 80; T 4; H 12.		
				2,327-2,332	G 20; Z 27; H 21; P 21.		Equal content of garnet, zircon, hornblende, and picotite.
				2,332-2,337	G 5; T 1; H 95.		Flood of fresh coarse hornblende.
				2,337-2,342	G 38; H 54.	U-5	Over 50% hornblende, high garnet, low tourmaline.
756	G 32; T 5; H 59.			2,342-2,347	G 18; T 9; H 54.		
				2,347-2,349	G 8; Z 8; T 47; H 17.		
		1,645-1,651	Z 34; T 41; P 12				High tourmaline and zircon; and garnet absent or low.
770-772	G 59; Z 4; T 30; H 3.						
790-800	G 70; T 16; H 13.						
800-810	G 67; Z 2; T 17; H 12; P 1.						
824-843	G 75; Z 16; T 6; H 1.	1,733-1,743	G 83; Z 7; T 1; H 2; P 5.			U-4	High garnet. Tourmaline and zircon variable but usually common. Hornblende common in the upper section but absent in lower section. Picotite absent in upper section but present in lower. Zircon (4:1).
		1,743-1,745	G 50; T 41; P 8.				
		1,750-1,755	G 44; Z 24; T 27; P 6.				
		1,755-1,765	G 28; Z 15; T 27; P 23.				
		1,765-1,775	G 42; Z 3; T 54.				
		1,775-1,782	G 2; Z 19; T 76.			U-3	High tourmaline and zircon. Garnet low. Zircon (1:1).
		1,782-1,792	G 7; Z 43; T 41; P 6.				
		1,792-1,800	G 4; Z 39; T 46; P 6.				
				2,542-2,547	G 4; Z 16; T 35; H 41.		
936-956	G 89; Z 2; T 5; H 2.			2,563-2,568	G 95; Z 1; T 1; H 3.		Garnet flood, little zircon, tourmaline, and hornblende.
956-969	G 66; T 17; H 7.					U-2	
986-996	G 80; Z 2; T 6; H 6.						
996-1,010	G 58; Z 2; T 24; H 13.						Garnet high, tourmaline common, zircon low or absent.
1,015-1,034	G 75; T 22; H 12.						
1,034-1,044	G 63; Z 1; T 12; H 4.						
1,623	G 60; Z 22; T 4; H 3; P 3.					U-1	Garnet high; zircon common; hornblende, picotite, and tourmaline low.

Key to mineral symbols;

- C - chlorite
- G - garnet
- Gl - glaucophane
- H - hornblende
- M - muscovite
- P - Picotite
- T - tourmaline (percent given in table is total tourmaline, which includes the several subvarieties.
- Z - Zircon
Zircon (4:1) length to width ratio is 4:1.
Zircon (1:1) length to width ratio is 1:1.

Key to heavy-mineral zones:

- U-1, etc. - Umiat heavy-mineral subzones 1, 2, etc. subzones are based on two or more samples. Single samples not classified as subzones.