

Table IV-14. a) Mineral compositions (volume %) of Fremdlinge Willy, Zelda, and A37A from Allende(CV3); b) Average chemical compositions (weight %) of Willy, A37A, and Zelda.

a)

Minerals	Willy	Zelda	A37A
Ni-Fe metal (Ni 53-62%)	40	5	44.8
Os nuggets (Os 46-77%)	1	5.1	15.3
Pt-Ir nuggets (Pt 31%; Ir 12%)		2.2	
V-magnetite (FeO·(Fe,V) <sub>2</sub> O <sub>3</sub> )	50	20.5	24.3
Pyrrhotite Fe <sub>1-x</sub> (Ni,Co) <sub>x</sub> S	5	28.2	9.9
Pentlandite (Fe,Ni) <sub>9</sub> S <sub>8</sub>		31	
Molybdenite MoS <sub>2</sub>	<1	5.2	
Scheelite Ca(Mo,W)O <sub>4</sub>	3		4.7
Apatite Ca <sub>5</sub> (PO <sub>4</sub> ) <sub>3</sub> Cl	2		
Whitlockite Ca <sub>9</sub> MgNa(PO <sub>4</sub> ) <sub>7</sub>		2.4	
Mo-lath (MoO <sub>3</sub> 48%; MoS <sub>2</sub> 28%)			0.8

b)

	Willy	Zelda	A37A		Willy	Zelda	A37A
Al	0.31	0.25	0.09	Os	0.92	2.55	2.53
Ca	0.86	0.82	0.43	P	0.35	0.48	
Co	1.33	0.38	1.06	Pt	0.24	1.71	1.14
Cr	0.59	1.46	0.27	Re	0.07	0.25	2
Fe	45.7	42.9	29	Ru	0.94	1.59	2.51
Ir	0.13	1.49	4.61	S	1.38	23.4	1.8
Mg	0.29	0.08	0.028	Si	0.51	0.28	0.043
Mo	0.19	2.91	0.64	Ti	0.01	0.08	0.03
Na	0.04	0.05		V	1.44	3.85	0.74
Ni	30.9	8.56	27	W	1.79	<0.1	0.74

Data source: Willy (Armstrong and El Goresy, 1985), A37A (Bischoff and Palme, 1987), and Zelda (Armstrong et al., 1987).