

Supplemental Table S1. Pyrite P - V - T data. Values in parentheses are uncertainties.

Sample-Pattern	Pressure (GPa)	Volume (cm ³ /mol)	Temperature (K)
B9-333	16.40(24)	22.299(04)	1917(132)
B9-337	15.28(25)	22.456(10)	1763(124)
B9-343	15.66(24)	22.185(10)	1565(123)
B9-346	14.75(24)	22.399(11)	1422(120)
B9-349	15.48(26)	22.159(10)	1347(127)
B9-370	25.87(21)	21.488(65)	1966(119)
B9-374	24.45(21)	21.832(75)	2063(114)
B9-379	24.22(21)	21.759(12)	1915(115)
B9-425	45.07(22)	20.161(10)	2127(115)
B9-429	44.40(28)	20.125(10)	1935(112)
B9-432	41.95(24)	20.359(09)	1614(114)
B10-292	24.04(23)	21.622(19)	1145(105)
B10-583	25.08(30)	21.943(09)	2098(118)
B10-587	24.65(25)	21.745(15)	1695(108)
B10-590	24.41(25)	21.669(18)	1523(109)
B10-592	24.24(23)	21.653(21)	1337(107)
B10-617	36.26(28)	20.818(24)	2188(122)
B10-623	34.51(25)	20.947(19)	1784(112)
B10-627	34.51(30)	20.882(31)	1599(109)
B10-629	34.41(27)	20.847(33)	1445(107)
B10-632	34.28(30)	20.818(27)	1224(104)
B10-680	41.32(53)	20.480(17)	2152(140)
B10-685	41.05(34)	20.436(24)	1807(119)
B10-689	40.67(41)	20.383(18)	1540(107)
B10-694	42.23(31)	20.141(22)	1233(106)
B10-724	53.34(24)	19.823(09)	2446(119)
B10-725	53.15(45)	19.821(02)	2264(116)
B10-728	53.03(67)	19.767(57)	2033(113)
B10-732	52.76(40)	19.671(05)	1698(113)
B10-736	52.70(58)	19.622(11)	1440(110)
B16-363	39.65(33)	20.521(24)	2030(123)
B16-369	39.80(59)	20.468(44)	1760(110)
B16-376	39.85(72)	20.413(44)	1543(107)
B16-380	39.93(74)	20.341(12)	1341(105)
B16-388	39.49(22)	20.247(07)	1033(104)
B16-418	64.80(32)	19.043(09)	2207(118)
B16-430	64.96(35)	18.971(05)	1710(109)
B16-435	64.81(35)	18.936(05)	1439(106)

B16-443	64.80(33)	18.888(04)	1012(102)
B16-472	68.00(29)	18.859(13)	2073(113)
B16-485	67.99(29)	18.782(07)	1425(110)
B16-490	68.06(27)	18.758(08)	1249(104)
B16-530	78.75(40)	18.443(05)	2226(117)
B16-535	78.52(42)	18.390(04)	1689(110)
B16-539	78.48(29)	18.346(04)	1317(106)
B16-542	78.56(29)	18.321(04)	1099(104)
L17-481	3.10(12)	23.448(01)	300
L17-482	5.26(11)	23.155(03)	300
L17-483	7.98(10)	22.791(05)	300
L17-485	11.84(09)	22.307(05)	300
L17-486	14.59(08)	22.081(05)	300
L17-487	17.77(07)	21.747(12)	300
L17-489	20.73(07)	21.411(09)	300
L17-490	25.29(06)	21.064(12)	300
L17-491	30.61(06)	20.643(18)	300
L17-492	37.90(06)	20.193(14)	300
L17-493	39.93(10)	20.119(14)	300
L17-494	42.91(06)	19.973(31)	300
