

Temperature = 473.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	2.869623E+02	4.882309E+03	
2	1.115315E+03	-3.390872E+03	
3	1.468111E-02	-4.452776E+04	
4	1.384422E+01	9.224946E+03	
5	3.348580E+01	-1.201930E+04	
6	2.461804E+01	-1.194862E+05	
7	5.008789E-01	2.006694E+03	
8	4.422219E+03	-3.797723E+03	
9	4.190917E+01	3.428308E+03	
10	9.710456E+01	-4.844874E+03	
11	9.632558E+00	-4.598176E+04	
12	7.002138E+00	7.770945E+03	
13	1.692745E+02	-1.347330E+04	
14	2.086127E+00	-1.209402E+05	
15	3.316912E-01	-4.134752E+03	
16	3.266773E+02	-9.939169E+03	
17		-1.478404E+04	
18		5.804417E+03	
19		-1.308794E+05	
20		-6.510861E+03	
21		-2.341247E+04	
22		-5.592093E+04	
23		-2.168224E+03	
24		-3.797723E+03	
25		-9.939169E+03	

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -2.23911482754534E+07  
FCC\_A1 -6.49654502177271E+06

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	2.86962E+02	0.0486627
Fe:1<BCC_A2>	1.11532E+03	0.1891339
Mn:1<BCC_A2>	1.46811E-02	0.0000025
Mo:1<BCC_A2>	1.38442E+01	0.0023477
Ni:1<BCC_A2>	3.34858E+01	0.0056785
Si:1<BCC_A2>	2.46180E+01	0.0041747
C:2<BCC_A2>	5.00879E-01	0.0000849
Va:2<BCC_A2>	4.42222E+03	0.7499151
Phase total is	5.89696E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	4.19092E+01	0.0640795

Fe:1<FCC_A1>	9.71046E+01	0.1484738		
Mn:1<FCC_A1>	9.63256E+00	0.0147283		
Mo:1<FCC_A1>	7.00214E+00	0.0107063		
Ni:1<FCC_A1>	1.69274E+02	0.2588223		
Si:1<FCC_A1>	2.08613E+00	0.0031897		
C:2<FCC_A1>	3.31691E-01	0.0005072		
Va:2<FCC_A1>	3.26677E+02	0.4994928		
Phase total is	6.54018E+02	1.0000000		
Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol    Mass/kg
Fe		-1.478404E+04	2.330238E	
-02	1.212420E+03	6.771000E+01		
C		5.804417E+03	4.375029E+00	8.325701E
-01	1.000000E-02			
Si		-1.308794E+05	3.523750E	
-15	2.670417E+01	7.500000E-01		
Cr		-6.510861E+03	1.909882E	
-01	3.288715E+02	1.710000E+01		
Ni		-2.341247E+04	2.597554E	
-03	2.027603E+02	1.190000E+01		
Mn		-5.592093E+04	6.678200E	
-07	9.647239E+00	5.300000E-01		
Mo		-2.168224E+03	5.761869E	
-01	2.084636E+01	2.000000E+00		
Total				
1.802082E+03	1.000000E+02			

Number of Gibbs Energy evaluations in Stage 1 = 108

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 1.1E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	91.99085	60.16057	92.18801
FCC_A1	8.00915	39.83943	7.81199

	Cr	Ni	Mn
BCC_A2	87.25667	16.51497	0.15218
FCC_A1	12.74333	83.48503	99.84782

	Mo
BCC_A2	66.41074
FCC_A1	33.58926

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
1.4747E+03	BCC_A2	0.7562786	0.0003396	0.0166931

3.2734E+02 FCC_A1	0.2966467	0.0010133	0.0063730
	Cr	Ni	Mn
1.4747E+03 BCC_A2	0.1945849	0.0227062	0.0000100
3.2734E+02 FCC_A1	0.1280292	0.5171201	0.0294267

	Mo
1.4747E+03 BCC_A2	0.0093876
3.2734E+02 FCC_A1	0.0213910

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
8.1200E+01 BCC_A2		0.7670849	0.0000741	0.0085149
1.8800E+01 FCC_A1		0.2884515	0.0002119	0.0031164

	Cr	Ni	Mn
8.1200E+01 BCC_A2	0.1837557	0.0242031	0.0000099
1.8800E+01 FCC_A1	0.1159077	0.5284318	0.0281480

	Mo
8.1200E+01 BCC_A2	0.0163574
1.8800E+01 FCC_A1	0.0357325

Gibbs Energy = -2.8887693297E+07 J    System Enthalpy = 1.1433067992E+07 J  
573.000

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 573.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	2.826414E+02	2.894420E+03	
2	1.073460E+03	-4.201490E+03	
3	1.111316E-01	-4.581815E+04	
4	1.286269E+01	3.826404E+03	
5	4.359159E+01	-1.467636E+04	
6	2.510066E+01	-1.187666E+05	
7	4.952023E-01	-8.595386E+03	
8	4.312807E+03	-5.055216E+03	
9	4.623009E+01	-3.662682E+01	
10	1.389596E+02	-7.132537E+03	
11	9.536107E+00	-4.874921E+04	
12	7.983675E+00	8.953574E+02	
13	1.591687E+02	-1.760740E+04	
14	1.603509E+00	-1.216977E+05	
15	3.373679E-01	-1.577477E+04	
16	3.631443E+02	-1.223460E+04	
17			-1.936714E+04
18			-3.540170E+03

19	-1.339323E+05
20	-1.227123E+04
21	-2.984201E+04
22	-6.098381E+04
23	-1.133925E+04
24	-5.055217E+03
25	-1.223460E+04

Gibbs/Helmholtz Energy contributions per phase  
 BCC\_A2 -2.90752382998145E+07  
 FCC\_A1 -8.89649524621977E+06

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	2.82641E+02	0.0491459
Fe:1<BCC_A2>	1.07346E+03	0.1866540
Mn:1<BCC_A2>	1.11132E-01	0.0000193
Mo:1<BCC_A2>	1.28627E+01	0.0022366
Ni:1<BCC_A2>	4.35916E+01	0.0075797
Si:1<BCC_A2>	2.51007E+01	0.0043645
C:2<BCC_A2>	4.95202E-01	0.0000861
Va:2<BCC_A2>	4.31281E+03	0.7499139
Phase total is	5.75107E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	4.62301E+01	0.0635934
Fe:1<FCC_A1>	1.38960E+02	0.1911508
Mn:1<FCC_A1>	9.53611E+00	0.0131177
Mo:1<FCC_A1>	7.98368E+00	0.0109822
Ni:1<FCC_A1>	1.59169E+02	0.2189501
Si:1<FCC_A1>	1.60351E+00	0.0022058
C:2<FCC_A1>	3.37368E-01	0.0004641
Va:2<FCC_A1>	3.63144E+02	0.4995359
Phase total is	7.26963E+02	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-1.936714E+04	1.716080E		
-02	1.212420E+03	6.771000E+01			
C		-3.540170E+03	4.756489E-01	8.325701E	
-01	1.000000E-02				
Si		-1.339323E+05	6.180886E		
-13	2.670417E+01	7.500000E-01			
Cr		-1.227123E+04	7.609984E		
-02	3.288715E+02	1.710000E+01			
Ni		-2.984201E+04	1.904028E		
-03	2.027603E+02	1.190000E+01			
Mn		-6.098381E+04	2.759692E		
-06	9.647239E+00	5.300000E-01			
Mo		-1.133925E+04	9.254250E		

-02 2.084636E+01 2.000000E+00  
Total  
1.802082E+03 1.000000E+02

Number of Gibbs Energy evaluations in Stage 1 = 124

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where  
Errabs = 5.0E-06  
Errrel = 1.7E-08

Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	88.53865	59.47874	93.99529
FCC_A1	11.46135	40.52126	6.00471

	Cr	Ni	Mn
BCC_A2	85.94281	21.49908	1.15195
FCC_A1	14.05719	78.50092	98.84805

	Mo
BCC_A2	61.70231
FCC_A1	38.29769

Amount Phase Mole fraction of component within phase  
compnt moles

	Fe	C	Si
1.4383E+03 BCC_A2	0.7463588	0.0003443	0.0174521
3.6382E+02 FCC_A1	0.3819471	0.0009273	0.0044074

	Cr	Ni	Mn
1.4383E+03 BCC_A2	0.1965158	0.0303085	0.0000773
3.6382E+02 FCC_A1	0.1270689	0.4374941	0.0262111

	Mo
1.4383E+03 BCC_A2	0.0089432
3.6382E+02 FCC_A1	0.0219441

Mass/kg Phase Mass fraction of component within phase

	Fe	C	Si
7.9155E+01 BCC_A2	0.7573669	0.0000751	0.0089061
2.0845E+01 FCC_A1	0.3722980	0.0001944	0.0021605

	Cr	Ni	Mn
7.9155E+01 BCC_A2	0.1856634	0.0323212	0.0000771
2.0845E+01 FCC_A1	0.1153179	0.4481505	0.0251331

	Mo
7.9155E+01 BCC_A2	0.0155902
2.0845E+01 FCC_A1	0.0367456

Gibbs Energy = -3.7971733546E+07 J    System Enthalpy = 1.7172854121E+07 J  
673.000

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 673.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	2.710339E+02	8.660862E+02	
2	1.003198E+03	-5.149522E+03	
3	4.143367E-01	-4.788925E+04	
4	1.186296E+01	-1.687036E+03	
5	4.721426E+01	-1.781479E+04	
6	2.489837E+01	-1.186536E+05	
7	4.151273E-01	-2.057316E+04	
8	4.075449E+03	-6.451057E+03	
9	5.783760E+01	-3.767884E+03	
10	2.092220E+02	-9.783493E+03	
11	9.232902E+00	-5.252322E+04	
12	8.983399E+00	-6.321006E+03	
13	1.555460E+02	-2.244876E+04	
14	1.805803E+00	-1.232875E+05	
15	4.174429E-01	-2.884131E+04	
16	4.422103E+02	-1.471920E+04	
17		-2.450269E+04	
18		-1.412211E+04	
19		-1.380067E+05	
20		-1.848708E+04	
21		-3.716796E+04	
22		-6.724242E+04	
23		-2.104021E+04	
24		-6.451057E+03	
25		-1.471920E+04	

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -3.50659903277092E+07

FCC\_A1 -1.30420424914665E+07

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	2.71034E+02	0.0498730
Fe:1<BCC_A2>	1.00320E+03	0.1845984
Mn:1<BCC_A2>	4.14337E-01	0.0000762
Mo:1<BCC_A2>	1.18630E+01	0.0021829
Ni:1<BCC_A2>	4.72143E+01	0.0086879
Si:1<BCC_A2>	2.48984E+01	0.0045816

C:2<BCC_A2>	4.15127E-01	0.0000764
Va:2<BCC_A2>	4.07545E+03	0.7499236
Phase total is	5.43449E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	5.78376E+01	0.0653344
Fe:1<FCC_A1>	2.09222E+02	0.2363409
Mn:1<FCC_A1>	9.23290E+00	0.0104296
Mo:1<FCC_A1>	8.98340E+00	0.0101478
Ni:1<FCC_A1>	1.55546E+02	0.1757075
Si:1<FCC_A1>	1.80580E+00	0.0020399
C:2<FCC_A1>	4.17443E-01	0.0004716
Va:2<FCC_A1>	4.42210E+02	0.4995284
Phase total is	8.85255E+02	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-2.450269E+04	1.253952E		
-02 1.212420E+03	6.771000E+01				
C		-1.412211E+04	8.015779E-02	8.325701E	
-01 1.000000E-02					
Si		-1.380067E+05	1.945046E		
-11 2.670417E+01	7.500000E-01				
Cr		-1.848708E+04	3.674246E		
-02 3.288715E+02	1.710000E+01				
Ni		-3.716796E+04	1.304055E		
-03 2.027603E+02	1.190000E+01				
Mn		-6.724242E+04	6.041384E		
-06 9.647239E+00	5.300000E-01				
Mo		-2.104021E+04	2.328164E		
-02 2.084636E+01	2.000000E+00				
Total					
1.802082E+03	1.000000E+02				

Number of Gibbs Energy evaluations in Stage 1 = 97

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 1.2E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	82.74343	49.86094	93.23775
FCC_A1	17.25657	50.13906	6.76225

	Cr	Ni	Mn
BCC_A2	82.41331	23.28576	4.29487
FCC_A1	17.58669	76.71424	95.70513

	Mo
BCC_A2	56.90663

FCC\_A1 43.09337

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
1.3590E+03	BCC_A2	0.7381682	0.0003055	0.0183206
4.4305E+02	FCC_A1	0.4722364	0.0009422	0.0040759
		Cr	Ni	Mn
1.3590E+03	BCC_A2	0.1994309	0.0347410	0.0003049
4.4305E+02	FCC_A1	0.1305456	0.3510838	0.0208396
		Mo		
1.3590E+03	BCC_A2	0.0087290		
4.4305E+02	FCC_A1	0.0202765		

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
7.4754E+01	BCC_A2	0.7494617	0.0000667	0.0093544
2.5246E+01	FCC_A1	0.4628305	0.0001986	0.0020089
		Cr	Ni	Mn
7.4754E+01	BCC_A2	0.1885196	0.0370681	0.0003045
2.5246E+01	FCC_A1	0.1191228	0.3616077	0.0200921
		Mo		
7.4754E+01	BCC_A2	0.0152250		
2.5246E+01	FCC_A1	0.0341393		

Gibbs Energy = -4.8108032819E+07 J    System Enthalpy = 2.3504149233E+07 J  
773.000

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 773.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	2.420452E+02	-1.113186E+03	
2	8.598564E+02	-6.190746E+03	
3	8.812278E-01	-5.129763E+04	
4	1.043577E+01	-7.091957E+03	
5	4.143096E+01	-2.146974E+04	
6	2.376626E+01	-1.186346E+05	
7	2.663890E-01	-3.469945E+04	
8	3.534981E+03	-7.992468E+03	
9	8.682625E+01	-7.803596E+03	
10	3.525632E+02	-1.288116E+04	
11	8.766011E+00	-5.798804E+04	
12	1.041059E+01	-1.378237E+04	



13	1.613293E+02	-2.816015E+04
14	2.937912E+00	-1.253250E+05
15	5.661811E-01	-4.399398E+04
16	6.222671E+02	-1.728700E+04
17		-3.016815E+04
18		-2.670698E+04
19		-1.426120E+05
20		-2.509059E+04
21		-4.544715E+04
22		-7.527504E+04
23		-3.106936E+04
24		-7.992468E+03
25		-1.728700E+04

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -3.76832913620615E+07

FCC\_A1 -2.15640735992292E+07

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	2.42045E+02	0.0513497
Fe:1<BCC_A2>	8.59856E+02	0.1824179
Mn:1<BCC_A2>	8.81228E-01	0.0001870
Mo:1<BCC_A2>	1.04358E+01	0.0022139
Ni:1<BCC_A2>	4.14310E+01	0.0087895
Si:1<BCC_A2>	2.37663E+01	0.0050420
C:2<BCC_A2>	2.66389E-01	0.0000565
Va:2<BCC_A2>	3.53498E+03	0.7499435
Phase total is	4.71366E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	8.68262E+01	0.0697026
Fe:1<FCC_A1>	3.52563E+02	0.2830318
Mn:1<FCC_A1>	8.76601E+00	0.0070372
Mo:1<FCC_A1>	1.04106E+01	0.0083574
Ni:1<FCC_A1>	1.61329E+02	0.1295124
Si:1<FCC_A1>	2.93791E+00	0.0023585
C:2<FCC_A1>	5.66181E-01	0.0004545
Va:2<FCC_A1>	6.22267E+02	0.4995455
Phase total is	1.24567E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-3.016815E+04	9.151055E		
-03	1.212420E+03	6.771000E+01			
C		-2.670698E+04	1.568014E-02	8.325701E	
-01	1.000000E-02				
Si		-1.426120E+05	2.308813E		
-10	2.670417E+01	7.500000E-01			
Cr		-2.509059E+04	2.016384E		

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-02 3.288715E+02 1.710000E+01
Ni -4.544715E+04 8.492501E
-04 2.027603E+02 1.190000E+01
Mn -7.527504E+04 8.194059E
-06 9.647239E+00 5.300000E-01
Mo -3.106936E+04 7.953794E
-03 2.084636E+01 2.000000E+00
Total
1.802082E+03 1.000000E+02

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Number of Gibbs Energy evaluations in Stage 1 = 90

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
 (ignoring inaccuracies in data) = Errabs + Errrel \* ni where  
 Errabs = 5.0E-06  
 Errrel = 1.4E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	70.92069	31.99599	88.99830
FCC_A1	29.07931	68.00401	11.00170

	Cr	Ni	Mn
BCC_A2	73.59873	20.43347	9.13451
FCC_A1	26.40127	79.56653	90.86549

	Mo
BCC_A2	50.06041
FCC_A1	49.93959

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
1.1787E+03	BCC_A2	0.7295066	0.0002260	0.0201634
6.2340E+02	FCC_A1	0.5655494	0.0009082	0.0047127
		Cr	Ni	Mn
1.1787E+03	BCC_A2	0.2053524	0.0351502	0.0007476
6.2340E+02	FCC_A1	0.1392787	0.2587896	0.0140616
		Mo		
1.1787E+03	BCC_A2	0.0088538		
6.2340E+02	FCC_A1	0.0166997		

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
6.4758E+01	BCC_A2	0.7415399	0.0000494	0.0103075
3.5242E+01	FCC_A1	0.5586918	0.0001930	0.0023413
		Cr	Ni	Mn

6.4758E+01 BCC_A2	0.1943458	0.0375490	0.0007476
3.5242E+01 FCC_A1	0.1281022	0.2686661	0.0136650

	Mo
6.4758E+01 BCC_A2	0.0154608
3.5242E+01 FCC_A1	0.0283407

Gibbs Energy = -5.9247364961E+07 J    System Enthalpy = 3.0723429632E+07 J  
873.000

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 873.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.860715E+02	-2.892894E+03	
2	5.941572E+02	-7.319538E+03	
3	1.172977E+00	-5.637296E+04	
4	8.231816E+00	-1.191056E+04	
5	2.692640E+01	-2.550433E+04	
6	2.025255E+01	-1.176132E+05	
7	1.433104E-01	-5.058591E+04	
8	2.510294E+03	-9.701296E+03	
9	1.427999E+02	-1.185525E+04	
10	6.182624E+02	-1.628189E+04	
11	8.474261E+00	-6.533532E+04	
12	1.261455E+01	-2.087291E+04	
13	1.758339E+02	-3.446669E+04	
14	6.451623E+00	-1.265756E+05	
15	6.892597E-01	-6.102615E+04	
16	9.637474E+02	-2.014153E+04	
17		-3.642343E+04	
18		-4.088462E+04	
19		-1.467171E+05	
20		-3.199678E+04	
21		-5.460822E+04	
22		-8.547685E+04	
23		-4.101445E+04	
24		-9.701296E+03	
25		-2.014153E+04	

Gibbs/Helmholtz Energy contributions per phase  
BCC\_A2 -3.24804751623944E+07  
FCC\_A1 -3.89068229689114E+07

	Amount	Mole fraction
	mole	
Phase BCC_A2		Notional activity

Cr:1<BCC_A2>	1.86072E+02	0.0555894
Fe:1<BCC_A2>	5.94157E+02	0.1775061
Mn:1<BCC_A2>	1.17298E+00	0.0003504
Mo:1<BCC_A2>	8.23182E+00	0.0024593
Ni:1<BCC_A2>	2.69264E+01	0.0080443
Si:1<BCC_A2>	2.02525E+01	0.0060505
C:2<BCC_A2>	1.43310E-01	0.0000428
Va:2<BCC_A2>	2.51029E+03	0.7499572
Phase total is	3.34725E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	1.42800E+02	0.0740328
Fe:1<FCC_A1>	6.18262E+02	0.3205303
Mn:1<FCC_A1>	8.47426E+00	0.0043934
Mo:1<FCC_A1>	1.26145E+01	0.0065399
Ni:1<FCC_A1>	1.75834E+02	0.0911588
Si:1<FCC_A1>	6.45162E+00	0.0033448
C:2<FCC_A1>	6.89260E-01	0.0003573
Va:2<FCC_A1>	9.63747E+02	0.4996427
Phase total is	1.92887E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-3.642343E+04	6.617807E		
-03	1.212420E+03	6.771000E+01			
C		-4.088462E+04	3.579252E-03	8.325701E	
-01	1.000000E-02				
Si		-1.467171E+05	1.665809E		
-09	2.670417E+01	7.500000E-01			
Cr		-3.199678E+04	1.217781E		
-02	3.288715E+02	1.710000E+01			
Ni		-5.460822E+04	5.403581E		
-04	2.027603E+02	1.190000E+01			
Mn		-8.547685E+04	7.686885E		
-06	9.647239E+00	5.300000E-01			
Mo		-4.101445E+04	3.515801E		
-03	2.084636E+01	2.000000E+00			
Total					
1.802082E+03	1.000000E+02				

Number of Gibbs Energy evaluations in Stage 1 = 93

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 2.0E-09

Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	49.00591	17.21302	75.84039
FCC_A1	50.99409	82.78698	24.15961

	Cr	Ni	Mn
BCC_A2	56.57880	13.27992	12.15869
FCC_A1	43.42120	86.72008	87.84131

	Mo
BCC_A2	39.48802
FCC_A1	60.51198

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
8.3696E+02	BCC_A2	0.7099027	0.0001712	0.0241979
9.6513E+02	FCC_A1	0.6406029	0.0007142	0.0066847

	Cr	Ni	Mn
8.3696E+02 BCC_A2	0.2223194	0.0321718	0.0014015
9.6513E+02 FCC_A1	0.1479599	0.1821875	0.0087805

	Mo
8.3696E+02 BCC_A2	0.0098354
9.6513E+02 FCC_A1	0.0130704

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
4.5862E+01	BCC_A2	0.7235176	0.0000375	0.0124025
5.4138E+01	FCC_A1	0.6377783	0.0001529	0.0033469

	Cr	Ni	Mn
4.5862E+01 BCC_A2	0.2109588	0.0344580	0.0014051
5.4138E+01 FCC_A1	0.1371497	0.1906179	0.0085995

	Mo
4.5862E+01 BCC_A2	0.0172204
5.4138E+01 FCC_A1	0.0223547

Gibbs Energy = -7.1387298131E+07 J    System Enthalpy = 3.8905407797E+07 J  
973.000

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 973.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.368692E+02	-4.562885E+03	
2	3.672792E+02	-8.708175E+03	
3	1.349782E+00	-6.223772E+04	
4	6.542384E+00	-1.623281E+04	
5	1.719057E+01	-2.909684E+04	

6	1.529706E+01	-1.162484E+05
7	1.030856E-01	-6.490684E+04
8	1.633482E+03	-1.155069E+04
9	1.920022E+02	-1.565406E+04
10	8.451405E+02	-1.979935E+04
11	8.297457E+00	-7.332889E+04
12	1.430398E+01	-2.732399E+04
13	1.855697E+02	-4.018801E+04
14	1.140711E+01	-1.273396E+05
15	7.294845E-01	-7.691706E+04
16	1.255991E+03	-2.356089E+04
17		-4.336024E+04
18		-5.335616E+04
19		-1.509004E+05
20		-3.921495E+04
21		-6.374890E+04
22		-9.688979E+04
23		-5.088488E+04
24		-1.155069E+04
25		-2.356089E+04

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -2.51660341337093E+07

FCC\_A1 -5.92967662742392E+07

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	1.36869E+02	0.0628385
Fe:1<BCC_A2>	3.67279E+02	0.1686227
Mn:1<BCC_A2>	1.34978E+00	0.0006197
Mo:1<BCC_A2>	6.54238E+00	0.0030037
Ni:1<BCC_A2>	1.71906E+01	0.0078924
Si:1<BCC_A2>	1.52971E+01	0.0070231
C:2<BCC_A2>	1.03086E-01	0.0000473
Va:2<BCC_A2>	1.63348E+03	0.7499527
Phase total is	2.17811E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	1.92002E+02	0.0763902
Fe:1<FCC_A1>	8.45140E+02	0.3362483
Mn:1<FCC_A1>	8.29746E+00	0.0033012
Mo:1<FCC_A1>	1.43040E+01	0.0056910
Ni:1<FCC_A1>	1.85570E+02	0.0738309
Si:1<FCC_A1>	1.14071E+01	0.0045384
C:2<FCC_A1>	7.29485E-01	0.0002902
Va:2<FCC_A1>	1.25599E+03	0.4997098
Phase total is	2.51344E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
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Fe	-4.336024E+04	4.702218E
-03 1.212420E+03	6.771000E+01	
C	-5.335616E+04	1.366766E-03 8.325701E
-01 1.000000E-02		
Si	-1.509004E+05	7.929540E
-09 2.670417E+01	7.500000E-01	
Cr	-3.921495E+04	7.849343E
-03 3.288715E+02	1.710000E+01	
Ni	-6.374890E+04	3.782536E
-04 2.027603E+02	1.190000E+01	
Mn	-9.688979E+04	6.290559E
-06 9.647239E+00	5.300000E-01	
Mo	-5.088488E+04	1.855066E
-03 2.084636E+01	2.000000E+00	
Total		
1.802082E+03	1.000000E+02	

Number of Gibbs Energy evaluations in Stage 1 = 85

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 3.1E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	30.29307	12.38162	57.28342
FCC_A1	69.70693	87.61838	42.71658

	Cr	Ni	Mn
BCC_A2	41.61786	8.47827	13.99138
FCC_A1	58.38214	91.52173	86.00862

	Mo
BCC_A2	31.38382
FCC_A1	68.61618

Amount compt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
5.4463E+02	BCC_A2	0.6743629	0.0001893	0.0280870
1.2575E+03	FCC_A1	0.6721064	0.0005801	0.0090716
		Cr	Ni	Mn
5.4463E+02	BCC_A2	0.2513062	0.0315637	0.0024783
1.2575E+03	FCC_A1	0.1526917	0.1475762	0.0065986
		Mo		
5.4463E+02	BCC_A2	0.0120125		

1.2575E+03 FCC\_A1 0.0113754

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
2.9770E+01	BCC_A2	0.6890039	0.0000416	0.0144316
7.0230E+01	FCC_A1	0.6720541	0.0001248	0.0045618
		Cr	Ni	Mn
2.9770E+01	BCC_A2	0.2390569	0.0338906	0.0024909
7.0230E+01	FCC_A1	0.1421516	0.1550767	0.0064907
		Mo		
2.9770E+01	BCC_A2	0.0210844		
7.0230E+01	FCC_A1	0.0195403		

Gibbs Energy = -8.4462800408E+07 J    System Enthalpy = 4.6510144704E+07 J  
1073.00

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 1073.0000 K

Fixed pressure = 1.013250E+05 Pa,    1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.131180E+02	-6.259696E+03	
2	2.908038E+02	-1.036876E+04	
3	1.389145E+00	-6.777466E+04	
4	5.975715E+00	-2.045035E+04	
5	1.587867E+01	-3.211654E+04	
6	1.283006E+01	-1.158045E+05	
7	8.623746E-02	-7.760918E+04	
8	1.319900E+03	-1.348564E+04	
9	2.157535E+02	-1.938764E+04	
10	9.216159E+02	-2.349671E+04	
11	8.258093E+00	-8.090260E+04	
12	1.487065E+01	-3.357830E+04	
13	1.868816E+02	-4.524448E+04	
14	1.387411E+01	-1.289324E+05	
15	7.463327E-01	-9.145252E+04	
16	1.360507E+03	-2.732896E+04	
17		-5.082567E+04	
18		-6.412355E+04	
19		-1.562614E+05	
20		-4.671661E+04	
21		-7.257345E+04	
22		-1.082316E+05	
23		-6.090726E+04	
24		-1.348564E+04	
25		-2.732896E+04	



Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -2.37418425371286E+07

FCC\_A1 -7.44990182759805E+07

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	1.13118E+02	0.0642723
Fe:1<BCC_A2>	2.90804E+02	0.1652312
Mn:1<BCC_A2>	1.38915E+00	0.0007893
Mo:1<BCC_A2>	5.97572E+00	0.0033953
Ni:1<BCC_A2>	1.58787E+01	0.0090221
Si:1<BCC_A2>	1.28301E+01	0.0072899
C:2<BCC_A2>	8.62375E-02	0.0000490
Va:2<BCC_A2>	1.31990E+03	0.7499510
Phase total is	1.75998E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	2.15753E+02	0.0792481
Fe:1<FCC_A1>	9.21616E+02	0.3385173
Mn:1<FCC_A1>	8.25809E+00	0.0030333
Mo:1<FCC_A1>	1.48706E+01	0.0054621
Ni:1<FCC_A1>	1.86882E+02	0.0686432
Si:1<FCC_A1>	1.38741E+01	0.0050961
C:2<FCC_A1>	7.46333E-01	0.0002741
Va:2<FCC_A1>	1.36051E+03	0.4997259
Phase total is	2.72251E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.082567E+04	3.355994E		
-03 1.212420E+03	6.771000E+01				
C		-6.412355E+04	7.559352E-04	8.325701E	
-01 1.000000E-02					
Si		-1.562614E+05	2.473103E		
-08 2.670417E+01	7.500000E-01				
Cr		-4.671661E+04	5.319238E		
-03 3.288715E+02	1.710000E+01				
Ni		-7.257345E+04	2.931880E		
-04 2.027603E+02	1.190000E+01				
Mn		-1.082316E+05	5.386659E		
-06 9.647239E+00	5.300000E-01				
Mo		-6.090726E+04	1.084058E		
-03 2.084636E+01	2.000000E+00				
Total					
1.802082E+03	1.000000E+02				

Number of Gibbs Energy evaluations in Stage 1 = 71

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni

(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 3.7E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	23.98541	10.35798	48.04516
FCC_A1	76.01459	89.64202	51.95484

	Cr	Ni	Mn
BCC_A2	34.39581	7.83125	14.39941
FCC_A1	65.60419	92.16875	85.60059

	Mo
BCC_A2	28.66551
FCC_A1	71.33449

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
4.4008E+02	BCC_A2	0.6607952	0.0001960	0.0291538
1.3620E+03	FCC_A1	0.6766636	0.0005480	0.0101866
		Cr	Ni	Mn
4.4008E+02	BCC_A2	0.2570387	0.0360812	0.0031566
1.3620E+03	FCC_A1	0.1584093	0.1372111	0.0060632
		Mo		
4.4008E+02	BCC_A2	0.0135787		
1.3620E+03	FCC_A1	0.0109182		

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
2.4065E+01	BCC_A2	0.6748571	0.0000430	0.0149735
7.5935E+01	FCC_A1	0.6778108	0.0001181	0.0051315
		Cr	Ni	Mn
2.4065E+01	BCC_A2	0.2444069	0.0387249	0.0031713
7.5935E+01	FCC_A1	0.1477360	0.1444406	0.0059746
		Mo		
2.4065E+01	BCC_A2	0.0238233		
7.5935E+01	FCC_A1	0.0187883		

Gibbs Energy = -9.8240860813E+07 J    System Enthalpy = 5.2840183225E+07 J  
1173.00

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 1173.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.030600E+02	-8.148591E+03	
2	2.693462E+02	-1.212605E+04	
3	1.494051E+00	-7.329001E+04	
4	6.001529E+00	-2.483076E+04	
5	1.752712E+01	-3.499746E+04	
6	1.174707E+01	-1.161807E+05	
7	8.225303E-02	-8.985817E+04	
8	1.227446E+03	-1.549595E+04	
9	2.258114E+02	-2.334460E+04	
10	9.430734E+02	-2.732206E+04	
11	8.153188E+00	-8.848601E+04	
12	1.484483E+01	-4.002676E+04	
13	1.852331E+02	-5.019347E+04	
14	1.495710E+01	-1.313768E+05	
15	7.503171E-01	-1.056541E+05	
16	1.391323E+03	-3.129184E+04	
17		-5.861390E+04	
18		-7.436222E+04	
19		-1.626686E+05	
20		-5.463644E+04	
21		-8.148531E+04	
22		-1.197779E+05	
23		-7.131861E+04	
24		-1.549595E+04	
25		-3.129184E+04	

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -2.53704376341061E+07  
FCC\_A1 -8.72326585785414E+07

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	1.03060E+02	0.0629680
Fe:1<BCC_A2>	2.69346E+02	0.1645662
Mn:1<BCC_A2>	1.49405E+00	0.0009128
Mo:1<BCC_A2>	6.00153E+00	0.0036668
Ni:1<BCC_A2>	1.75271E+01	0.0107088
Si:1<BCC_A2>	1.17471E+01	0.0071773
C:2<BCC_A2>	8.22530E-02	0.0000503
Va:2<BCC_A2>	1.22745E+03	0.7499497
Phase total is	1.63670E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	2.25811E+02	0.0811062
Fe:1<FCC_A1>	9.43073E+02	0.3387298
Mn:1<FCC_A1>	8.15319E+00	0.0029284

Mo:1<FCC_A1>	1.48448E+01	0.0053319
Ni:1<FCC_A1>	1.85233E+02	0.0665314
Si:1<FCC_A1>	1.49571E+01	0.0053722
C:2<FCC_A1>	7.50317E-01	0.0002695
Va:2<FCC_A1>	1.39132E+03	0.4997305
Phase total is	2.78415E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-5.861390E+04	2.454377E		
-03	1.212420E+03	6.771000E+01			
C		-7.436222E+04	4.882853E-04	8.325701E	
-01	1.000000E-02				
Si		-1.626686E+05	5.707138E		
-08	2.670417E+01	7.500000E-01			
Cr		-5.463644E+04	3.690255E		
-03	3.288715E+02	1.710000E+01			
Ni		-8.148531E+04	2.352257E		
-04	2.027603E+02	1.190000E+01			
Mn		-1.197779E+05	4.637989E		
-06	9.647239E+00	5.300000E-01			
Mo		-7.131861E+04	6.671214E		
-04	2.084636E+01	2.000000E+00			
Total					
1.802082E+03	1.000000E+02				

Number of Gibbs Energy evaluations in Stage 1 = 69

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 3.6E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	22.21559	9.87941	43.98964
FCC_A1	77.78441	90.12059	56.01036

	Cr	Ni	Mn
BCC_A2	31.33747	8.64426	15.48682
FCC_A1	68.66253	91.35574	84.51318

	Mo
BCC_A2	28.78933
FCC_A1	71.21067

Amount compt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
4.0926E+02	BCC_A2	0.6581327	0.0002010	0.0287033
1.3928E+03	FCC_A1	0.6770947	0.0005387	0.0107387

	Cr	Ni	Mn
4.0926E+02 BCC_A2	0.2518215	0.0428265	0.0036506
1.3928E+03 FCC_A1	0.1621250	0.1329911	0.0058537

	Mo
4.0926E+02 BCC_A2	0.0146644
1.3928E+03 FCC_A1	0.0106581

Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
2.2418E+01	BCC_A2	0.6709767	0.0000441	0.0147166
7.7582E+01	FCC_A1	0.6788694	0.0001162	0.0054147

	Cr	Ni	Mn
2.2418E+01 BCC_A2	0.2390324	0.0458851	0.0036613
7.7582E+01 FCC_A1	0.1513411	0.1401276	0.0057735

	Mo
2.2418E+01 BCC_A2	0.0256837
7.7582E+01 FCC_A1	0.0183576

Gibbs Energy = -1.1260309621E+08 J    System Enthalpy = 5.9087612850E+07 J  
1273.00

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 1273.0000 K

Fixed pressure = 1.013250E+05 Pa,    1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.037072E+02	-1.025326E+04	
2	2.819462E+02	-1.395234E+04	
3	1.734145E+00	-7.887483E+04	
4	6.568676E+00	-2.940964E+04	
5	2.179013E+01	-3.780978E+04	
6	1.163101E+01	-1.171888E+05	
7	9.045735E-02	-1.018949E+05	
8	1.282042E+03	-1.757573E+04	
9	2.251642E+02	-2.756170E+04	
10	9.304735E+02	-3.126077E+04	
11	7.913094E+00	-9.618326E+04	
12	1.427769E+01	-4.671808E+04	
13	1.809701E+02	-5.511821E+04	
14	1.507316E+01	-1.344973E+05	
15	7.421128E-01	-1.197379E+05	
16	1.373130E+03	-3.541876E+04	
17			-6.667954E+04
18			-8.431917E+04
19			-1.699160E+05

20	-6.298046E+04
21	-9.053698E+04
22	-1.316020E+05
23	-8.213684E+04
24	-1.757573E+04
25	-3.541876E+04

Gibbs/Helmholtz Energy contributions per phase

BCC_A2	-3.00560511066094E+07
FCC_A1	-9.74468179513911E+07

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	1.03707E+02	0.0606649
Fe:1<BCC_A2>	2.81946E+02	0.1649281
Mn:1<BCC_A2>	1.73415E+00	0.0010144
Mo:1<BCC_A2>	6.56868E+00	0.0038424
Ni:1<BCC_A2>	2.17901E+01	0.0127464
Si:1<BCC_A2>	1.16310E+01	0.0068037
C:2<BCC_A2>	9.04573E-02	0.0000529
Va:2<BCC_A2>	1.28204E+03	0.7499471
Phase total is	1.70951E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	2.25164E+02	0.0819451
Fe:1<FCC_A1>	9.30473E+02	0.3386319
Mn:1<FCC_A1>	7.91309E+00	0.0028799
Mo:1<FCC_A1>	1.42777E+01	0.0051961
Ni:1<FCC_A1>	1.80970E+02	0.0658614
Si:1<FCC_A1>	1.50732E+01	0.0054857
C:2<FCC_A1>	7.42113E-01	0.0002701
Va:2<FCC_A1>	1.37313E+03	0.4997299
Phase total is	2.74774E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-6.667954E+04	1.836652E		
-03	1.212420E+03	6.771000E+01			
C		-8.431917E+04	3.469310E-04	8.325701E	
-01	1.000000E-02				
Si		-1.699160E+05	1.066746E		
-07	2.670417E+01	7.500000E-01			
Cr		-6.298046E+04	2.604991E		
-03	3.288715E+02	1.710000E+01			
Ni		-9.053698E+04	1.928040E		
-04	2.027603E+02	1.190000E+01			
Mn		-1.316020E+05	3.982433E		
-06	9.647239E+00	5.300000E-01			
Mo		-8.213684E+04	4.263710E		

-04 2.084636E+01 2.000000E+00  
Total  
1.802082E+03 1.000000E+02

Number of Gibbs Energy evaluations in Stage 1 = 73

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where  
Errabs = 5.0E-06  
Errrel = 3.6E-09

Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	23.25483	10.86483	43.55503
FCC_A1	76.74517	89.13517	56.44497

	Cr	Ni	Mn
BCC_A2	31.53428	10.74675	17.97556
FCC_A1	68.46572	89.25325	82.02444

	Mo
BCC_A2	31.50994
FCC_A1	68.49006

Amount Phase Mole fraction of component within phase  
compnt moles

	Fe	C	Si
4.2747E+02 BCC_A2	0.6595728	0.0002116	0.0272091
1.3746E+03 FCC_A1	0.6768981	0.0005399	0.0109654

	Cr	Ni	Mn
4.2747E+02 BCC_A2	0.2426083	0.0509749	0.0040568
1.3746E+03 FCC_A1	0.1638018	0.1316516	0.0057566

	Mo
4.2747E+02 BCC_A2	0.0153665
1.3746E+03 FCC_A1	0.0103867

Mass/kg Phase Mass fraction of component within phase

	Fe	C	Si
2.3470E+01 BCC_A2	0.6708842	0.0000463	0.0139181
7.6530E+01 FCC_A1	0.6790063	0.0001165	0.0055317

	Cr	Ni	Mn
2.3470E+01 BCC_A2	0.2297527	0.0544886	0.0040592
7.6530E+01 FCC_A1	0.1529816	0.1387845	0.0056805

	Mo
2.3470E+01 BCC_A2	0.0268509
7.6530E+01 FCC_A1	0.0178989

Gibbs Energy = -1.2750286906E+08 J    System Enthalpy = 6.5457004601E+07 J  
1373.00

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 1373.0000 K

Fixed pressure = 1.013250E+05 Pa,    1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.153320E+02	-1.258037E+04	
2	3.298176E+02	-1.583176E+04	
3	2.195598E+00	-8.455354E+04	
4	7.796829E+00	-3.422892E+04	
5	3.002108E+01	-4.053037E+04	
6	1.243448E+01	-1.187305E+05	
7	1.145571E-01	-1.137394E+05	
8	1.492678E+03	-1.972389E+04	
9	2.135395E+02	-3.205453E+04	
10	8.826020E+02	-3.530592E+04	
11	7.451641E+00	-1.040277E+05	
12	1.304953E+01	-5.370310E+04	
13	1.727392E+02	-6.000454E+04	
14	1.426969E+01	-1.382047E+05	
15	7.180130E-01	-1.337131E+05	
16	1.302934E+03	-3.969752E+04	
17		-7.500344E+04	
18		-9.401554E+04	
19		-1.779022E+05	
20		-7.175205E+04	
21		-9.970206E+04	
22		-1.437252E+05	
23		-9.340061E+04	
24		-1.972390E+04	
25		-3.969752E+04	

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2                    -3.92726061085939E+07

FCC\_A1                    -1.03638467046313E+08

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	1.15332E+02	0.0579444
Fe:1<BCC_A2>	3.29818E+02	0.1657050
Mn:1<BCC_A2>	2.19560E+00	0.0011031
Mo:1<BCC_A2>	7.79683E+00	0.0039172
Ni:1<BCC_A2>	3.00211E+01	0.0150830
Si:1<BCC_A2>	1.24345E+01	0.0062473



C:2<BCC_A2>	1.14557E-01	0.0000576
Va:2<BCC_A2>	1.49268E+03	0.7499424
Phase total is	1.99039E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	2.13539E+02	0.0819005
Fe:1<FCC_A1>	8.82602E+02	0.3385115
Mn:1<FCC_A1>	7.45164E+00	0.0028580
Mo:1<FCC_A1>	1.30495E+01	0.0050050
Ni:1<FCC_A1>	1.72739E+02	0.0662521
Si:1<FCC_A1>	1.42697E+01	0.0054730
C:2<FCC_A1>	7.18013E-01	0.0002754
Va:2<FCC_A1>	1.30293E+03	0.4997246
Phase total is	2.60730E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-7.500344E+04	1.401615E		
-03	1.212420E+03	6.771000E+01			
C		-9.401554E+04	2.650619E-04	8.325701E	
-01	1.000000E-02				
Si		-1.779022E+05	1.706199E		
-07	2.670417E+01	7.500000E-01			
Cr		-7.175205E+04	1.863467E		
-03	3.288715E+02	1.710000E+01			
Ni		-9.970206E+04	1.610698E		
-04	2.027603E+02	1.190000E+01			
Mn		-1.437252E+05	3.405897E		
-06	9.647239E+00	5.300000E-01			
Mo		-9.340061E+04	2.797315E		
-04	2.084636E+01	2.000000E+00			
Total					
1.802082E+03	1.000000E+02				

Number of Gibbs Energy evaluations in Stage 1 = 72

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
(ignoring inaccuracies in data) = Errabs + Errrel \* ni where

Errabs = 5.0E-06

Errrel = 3.3E-09

Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	27.20326	13.75945	46.56382
FCC_A1	72.79674	86.24055	53.43618

	Cr	Ni	Mn
BCC_A2	35.06901	14.80620	22.75882
FCC_A1	64.93099	85.19380	77.24118

	Mo
BCC_A2	37.40139

	FCC_A1	62.59861		
Amount	Phase	Mole fraction of component within phase		
compnt moles		Fe	C	Si
4.9771E+02	BCC_A2	0.6626674	0.0002302	0.0249833
1.3044E+03	FCC_A1	0.6766503	0.0005505	0.0109399
		Cr	Ni	Mn
4.9771E+02	BCC_A2	0.2317243	0.0603182	0.0044114
1.3044E+03	FCC_A1	0.1637109	0.1324312	0.0057128
		Mo		
4.9771E+02	BCC_A2	0.0156653		
1.3044E+03	FCC_A1	0.0100045		
Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
2.7397E+01	BCC_A2	0.6723039	0.0000502	0.0127468
7.2603E+01	FCC_A1	0.6789098	0.0001188	0.0055201
		Cr	Ni	Mn
2.7397E+01	BCC_A2	0.2188828	0.0643106	0.0044027
7.2603E+01	FCC_A1	0.1529310	0.1396376	0.0056386
		Mo		
2.7397E+01	BCC_A2	0.0273030		
7.2603E+01	FCC_A1	0.0172442		

Gibbs Energy = -1.4291107315E+08 J    System Enthalpy = 7.2038139027E+07 J  
1473.00

\*\*\* MULTIPHASE - Stage 1\* Results \*\*\*

Temperature = 1473.0000 K

Fixed pressure = 1.013250E+05 Pa, 1.000000E+00 atm

	Amount	Gradient	Lagrange multipliers
1	1.402383E+02	-1.514027E+04	
2	4.250012E+02	-1.775064E+04	
3	3.016032E+00	-9.034361E+04	
4	9.872980E+00	-3.937254E+04	
5	4.523352E+01	-4.309948E+04	
6	1.422604E+01	-1.207263E+05	
7	1.654977E-01	-1.253072E+05	
8	1.912599E+03	-2.194174E+04	
9	1.886331E+02	-3.684211E+04	
10	7.874185E+02	-3.945248E+04	
11	6.631207E+00	-1.120454E+05	

12	1.097338E+01	-6.107438E+04
13	1.575267E+02	-6.480131E+04
14	1.247813E+01	-1.424282E+05
15	6.670725E-01	-1.474888E+05
16	1.162994E+03	-4.412338E+04
17		-8.357586E+04
18		-1.033655E+05
19		-1.865516E+05
20		-8.096549E+04
21		-1.089247E+05
22		-1.561688E+05
23		-1.051978E+05
24		-2.194174E+04
25		-4.412338E+04

Gibbs/Helmholtz Energy contributions per phase

BCC\_A2 -5.59819719822882E+07

FCC\_A1 -1.02827230786472E+08

	Amount mole	Mole fraction  Notional activity
Phase BCC_A2		
Cr:1<BCC_A2>	1.40238E+02	0.0549878
Fe:1<BCC_A2>	4.25001E+02	0.1666441
Mn:1<BCC_A2>	3.01603E+00	0.0011826
Mo:1<BCC_A2>	9.87298E+00	0.0038712
Ni:1<BCC_A2>	4.52335E+01	0.0177362
Si:1<BCC_A2>	1.42260E+01	0.0055781
C:2<BCC_A2>	1.65498E-01	0.0000649
Va:2<BCC_A2>	1.91260E+03	0.7499351
Phase total is	2.55035E+03	1.0000000
Phase FCC_A1		
Cr:1<FCC_A1>	1.88633E+02	0.0810516
Fe:1<FCC_A1>	7.87418E+02	0.3383367
Mn:1<FCC_A1>	6.63121E+00	0.0028493
Mo:1<FCC_A1>	1.09734E+01	0.0047150
Ni:1<FCC_A1>	1.57527E+02	0.0676858
Si:1<FCC_A1>	1.24781E+01	0.0053616
C:2<FCC_A1>	6.67072E-01	0.0002866
Va:2<FCC_A1>	1.16299E+03	0.4997134
Phase total is	2.32732E+03	1.0000000

Component	Ref.Phase	Chem.Pot.	Activity	Amount/mol	Mass/kg
Fe		-8.357586E+04	1.087322E		
-03	1.212420E+03	6.771000E+01			
C		-1.033655E+05	2.160771E-04	8.325701E	
-01	1.000000E-02				
Si		-1.865516E+05	2.425424E		
-07	2.670417E+01	7.500000E-01			

Cr	-8.096549E+04	1.345622E
-03	3.288715E+02	1.710000E+01
Ni	-1.089247E+05	1.372384E
-04	2.027603E+02	1.190000E+01
Mn	-1.561688E+05	2.898510E
-06	9.647239E+00	5.300000E-01
Mo	-1.051978E+05	1.860520E
-04	2.084636E+01	2.000000E+00
Total		
	1.802082E+03	1.000000E+02

Number of Gibbs Energy evaluations in Stage 1 = 77

Estimate of Stage 1\* calculational inaccuracy in species mole amount ni  
 (ignoring inaccuracies in data) = Errabs + Errrel \* ni where  
 Errabs = 5.0E-06  
 Errrel = 2.6E-09

#### Percentage distribution of components between phases

	Fe	C	Si
BCC_A2	35.05397	19.87792	53.27274
FCC_A1	64.94603	80.12208	46.72726
	Cr	Ni	Mn
BCC_A2	42.64229	22.30887	31.26316
FCC_A1	57.35771	77.69113	68.73684
	Mo		
BCC_A2	47.36069		
FCC_A1	52.63931		

Amount compnt moles	Phase	Mole fraction of component within phase		
		Fe	C	Si
6.3775E+02	BCC_A2	0.6664035	0.0002595	0.0223065
1.1643E+03	FCC_A1	0.6762857	0.0005729	0.0107170
		Cr	Ni	Mn
6.3775E+02	BCC_A2	0.2198942	0.0709263	0.0047291
1.1643E+03	FCC_A1	0.1620103	0.1352941	0.0056953
		Mo		
6.3775E+02	BCC_A2	0.0154809		
1.1643E+03	FCC_A1	0.0094246		
Mass/kg	Phase	Mass fraction of component within phase		
		Fe	C	Si
3.5196E+01	BCC_A2	0.6743662	0.0000565	0.0113520
6.4804E+01	FCC_A1	0.6785848	0.0001236	0.0054079

	Cr	Ni	Mn
3.5196E+01 BCC_A2	0.2071774	0.0754276	0.0047078
6.4804E+01 FCC_A1	0.1513514	0.1426649	0.0056217

	Mo
3.5196E+01 BCC_A2	0.0269125
6.4804E+01 FCC_A1	0.0162457

Gibbs Energy = -1.5880920277E+08 J    System Enthalpy = 7.8924030541E+07 J