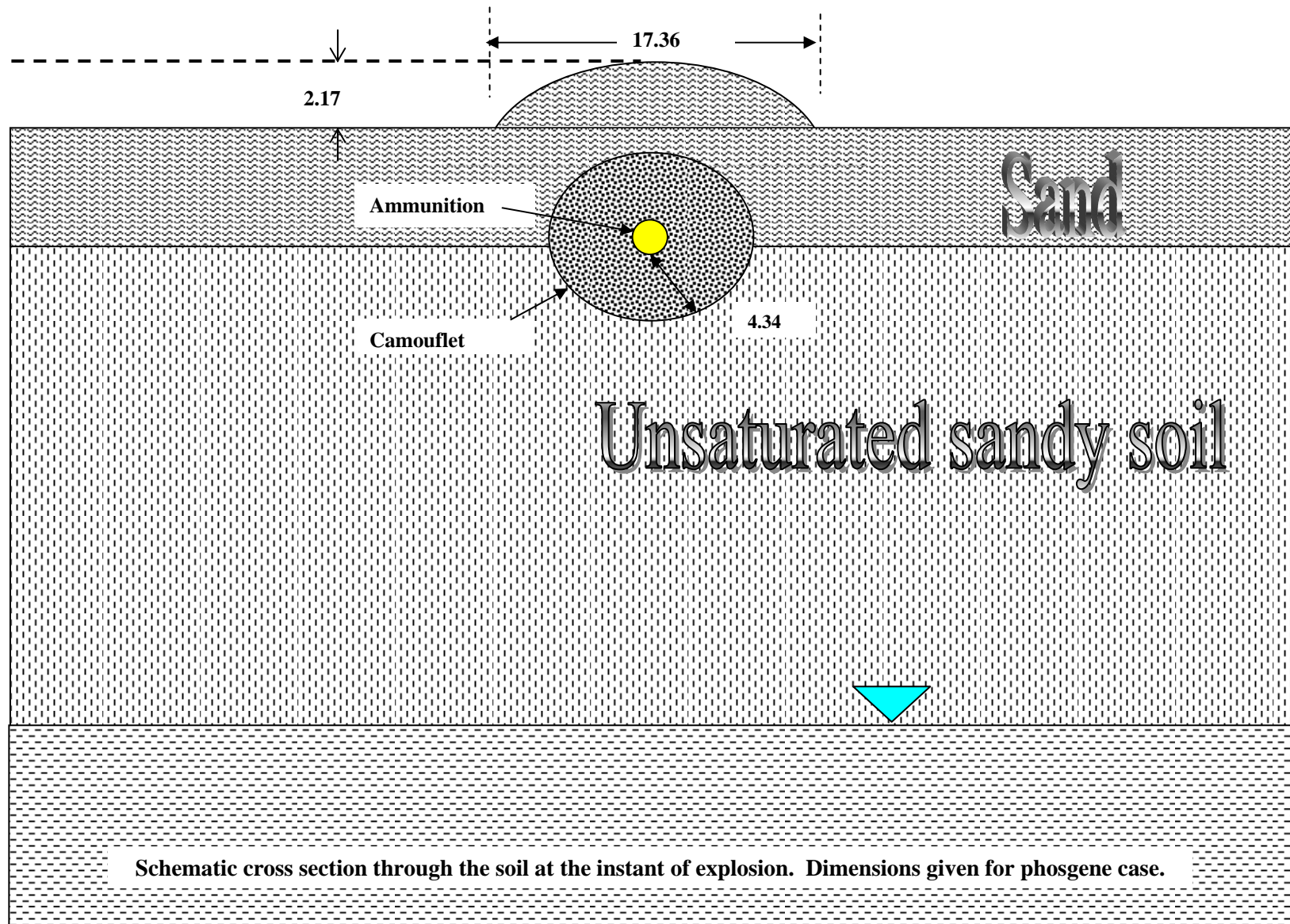


A sunset over a body of water with a dark, hilly foreground. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water. The sky is a mix of orange, red, and purple. The foreground is dark and appears to be a field or a hillside.

Perry (Parviz) Montazer

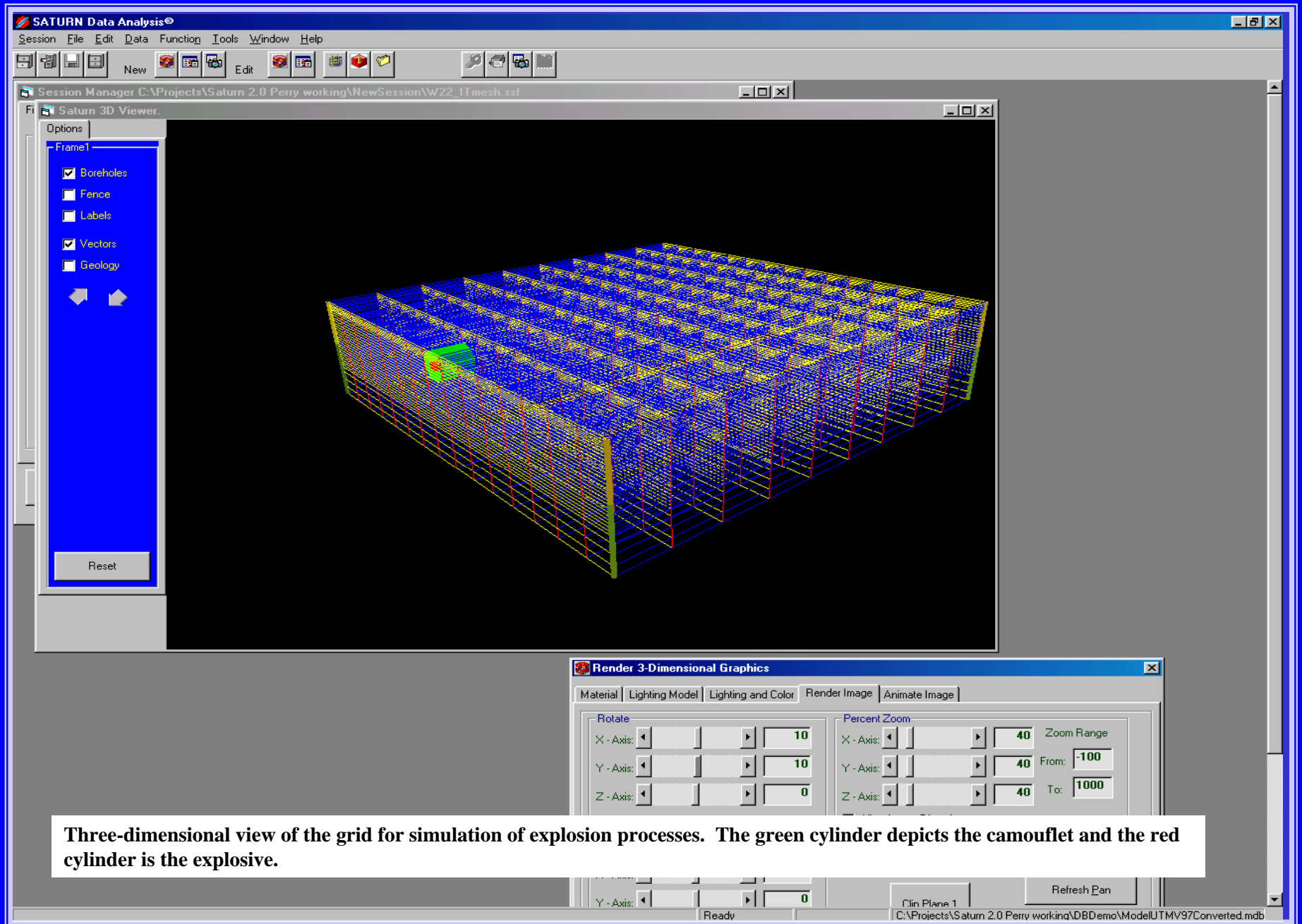
GeoCubed, Inc.

**Simulation of Unexploded Ordnance
Phosgene Transport**

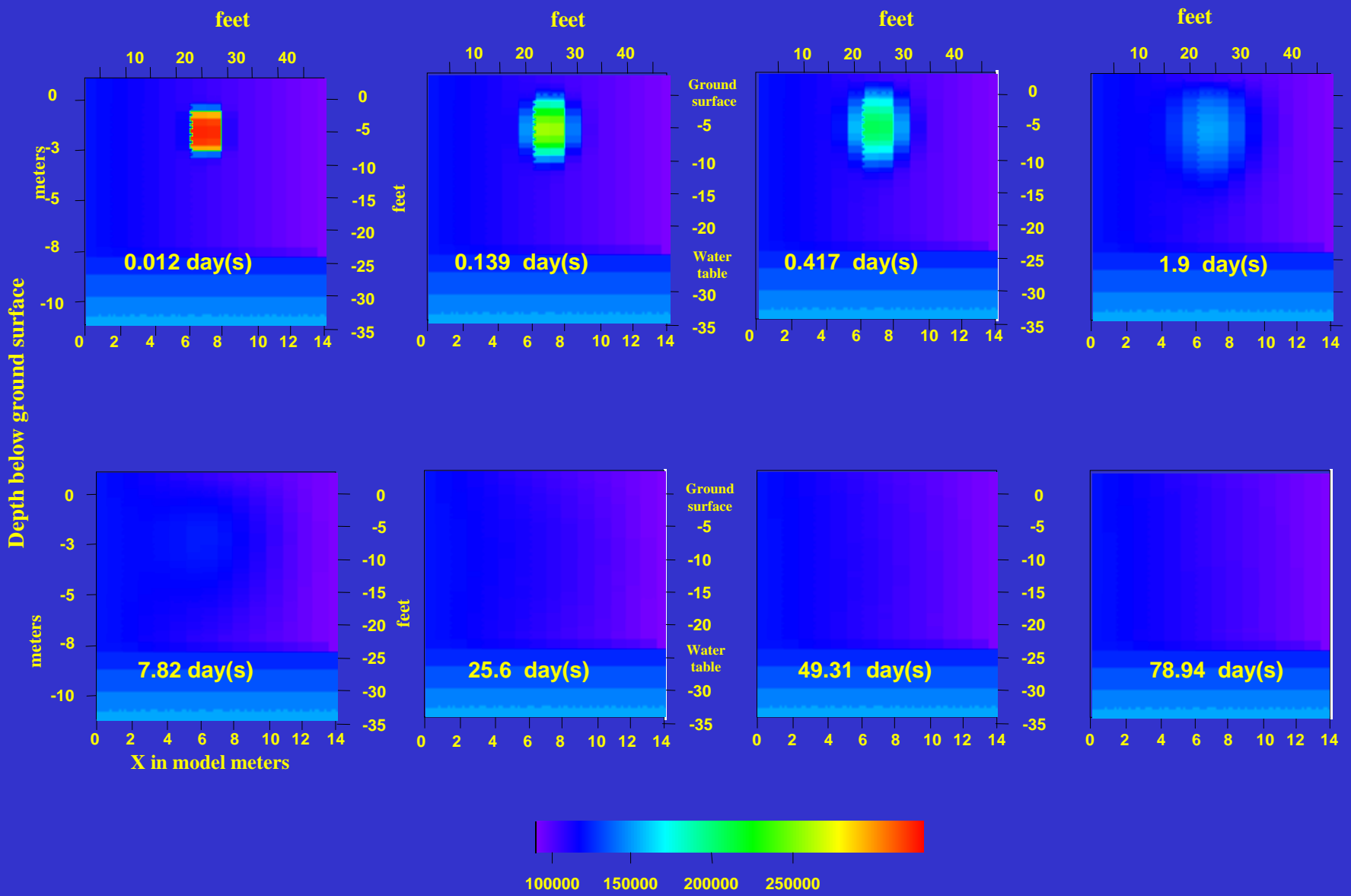


		DISTANCE FROM LEFT BOUNDARY TO CENTER OF THE NODES															
		1.5	4.5	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5	31.5	34.5	37.5	40.5	43.5	46.5
ELEVATION OF NODE CENTERS ABOVE GROUND SURFACE IN FEET	ROW AND COLUMN NUMBERS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3.0	A11	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos	atmos
2.2	A21	atmos	atmos	atmos	atmos	atmos	atmos	atmos	SAND!	SAND!	atmos	atmos	atmos	atmos	atmos	atmos	atmos
1.7	A31	atmos	atmos	atmos	atmos	atmos	atmos	atmos	SAND!	SAND!	SAND!	atmos	atmos	atmos	atmos	atmos	atmos
1.2	A41	atmos	atmos	atmos	atmos	atmos	atmos	atmos	SAND!	SAND!	SAND!	SAND!	atmos	atmos	atmos	atmos	atmos
0.7	A51	atmos	atmos	atmos	atmos	atmos	atmos	atmos	SAND!	SAND!	SAND!	SAND!	atmos	atmos	atmos	atmos	atmos
0.2	A61	atmos	atmos	atmos	atmos	atmos	atmos	atmos	SAND!	SAND!	SAND!	SAND!	atmos	atmos	atmos	atmos	atmos
-0.5	A71	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-1.5	A81	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	CAVITY	CAVITY	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-2.5	A91	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	CAVITY	CAVITY	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-3.5	AA1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	CAVITY	CAVITY	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-4.5	AB1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	CAVITY	CAVITY	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-5.5	AC1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	CAVITY	CAVITY	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-6.5	AD1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	CAVITY	CAVITY	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-7.5	AE1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-8.5	AF1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-9.5	AG1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-10.5	AH1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-11.5	AI1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-12.5	AJ1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-13.5	AK1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-14.5	AL1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-15.5	AM1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-16.5	AN1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-17.5	AO1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-18.5	AP1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-19.5	AQ1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-20.5	AR1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-21.5	AS1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-23.5	AT1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-26.5	AU1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-29.5	AV1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!
-32.5	AW1	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!	SAND!

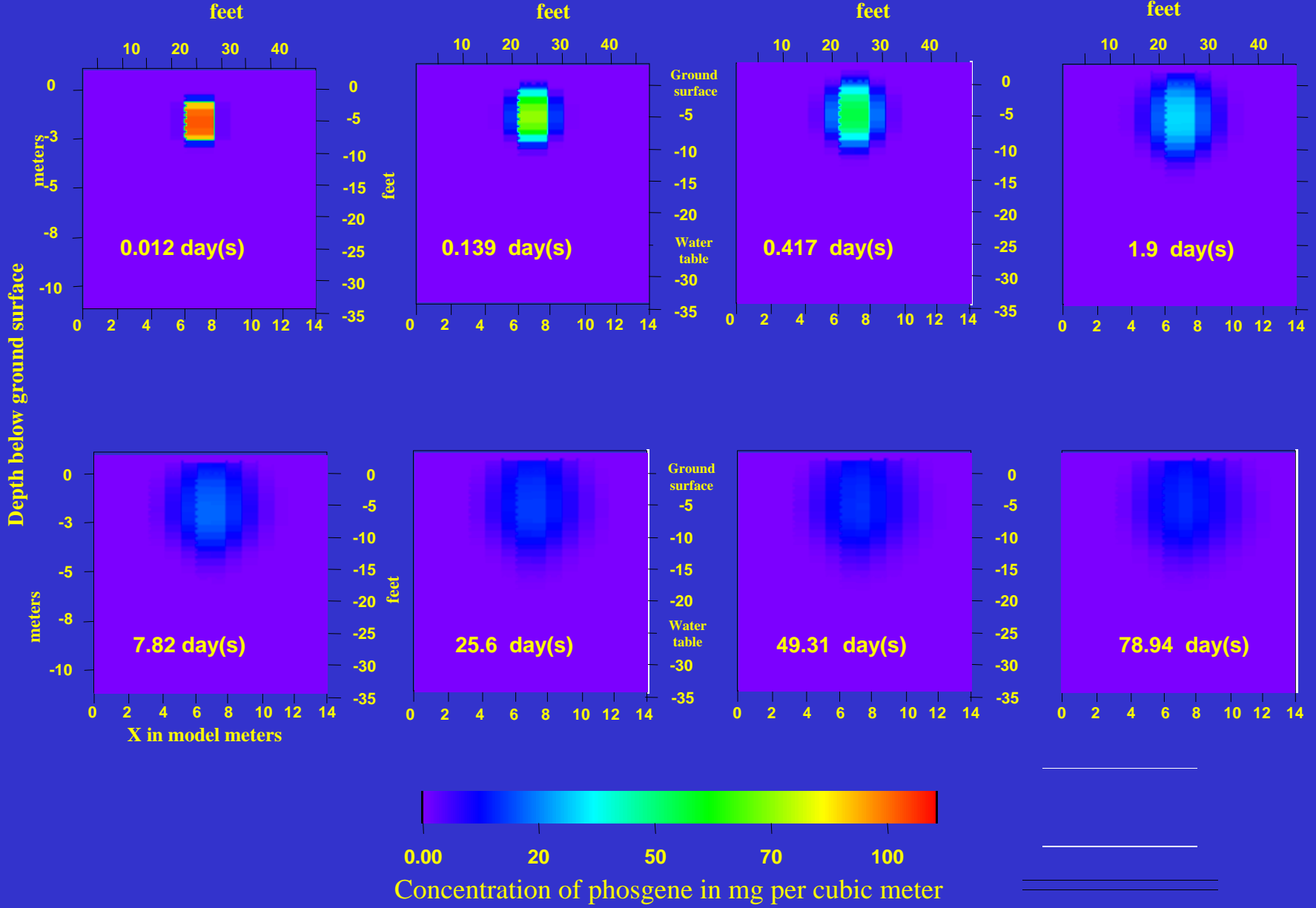
Cross section of the first vertical layer of the post-explosion model showing designation of the nodes.



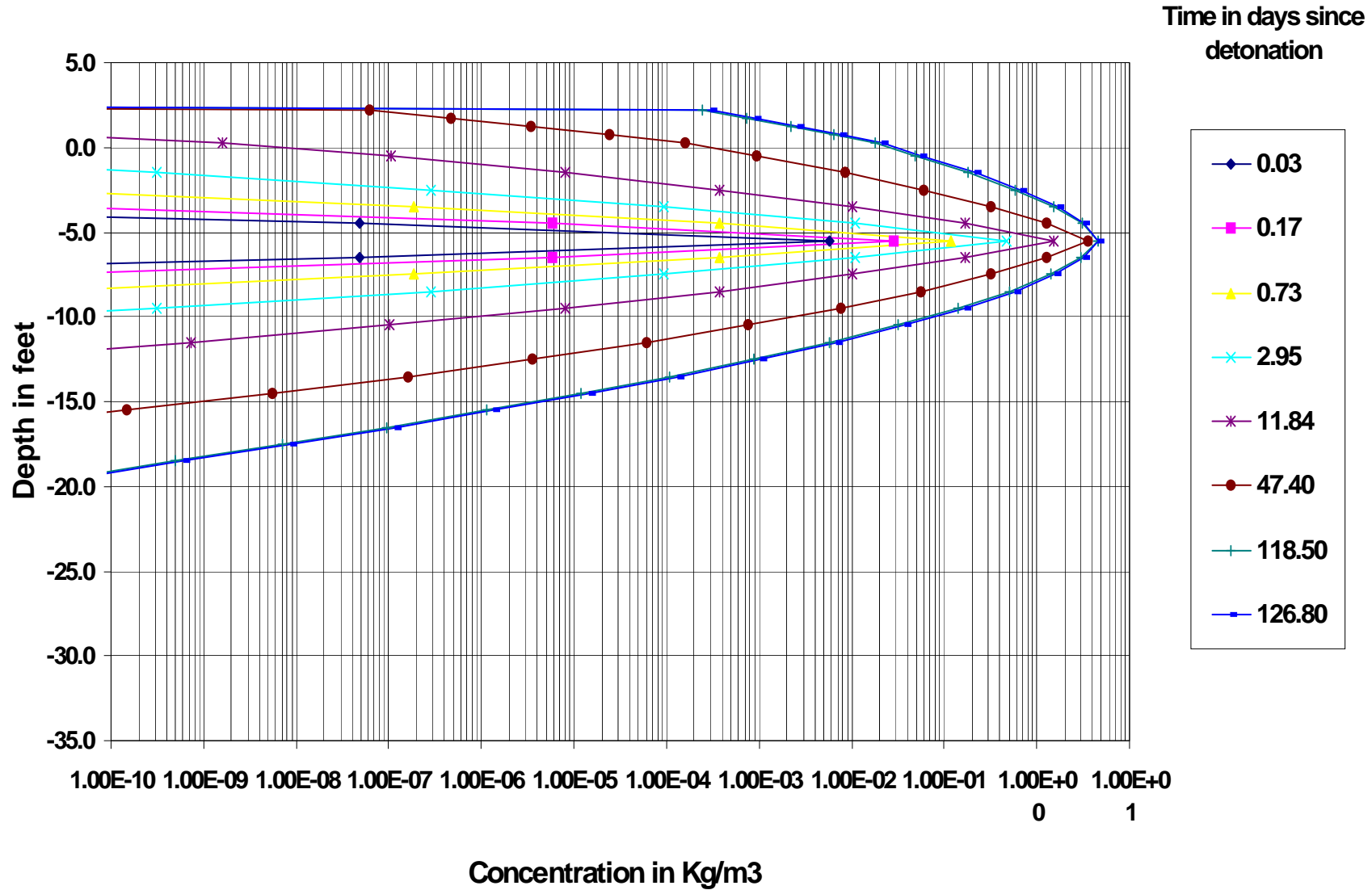
Three-dimensional view of the grid for simulation of explosion processes. The green cylinder depicts the camouflet and the red cylinder is the explosive.

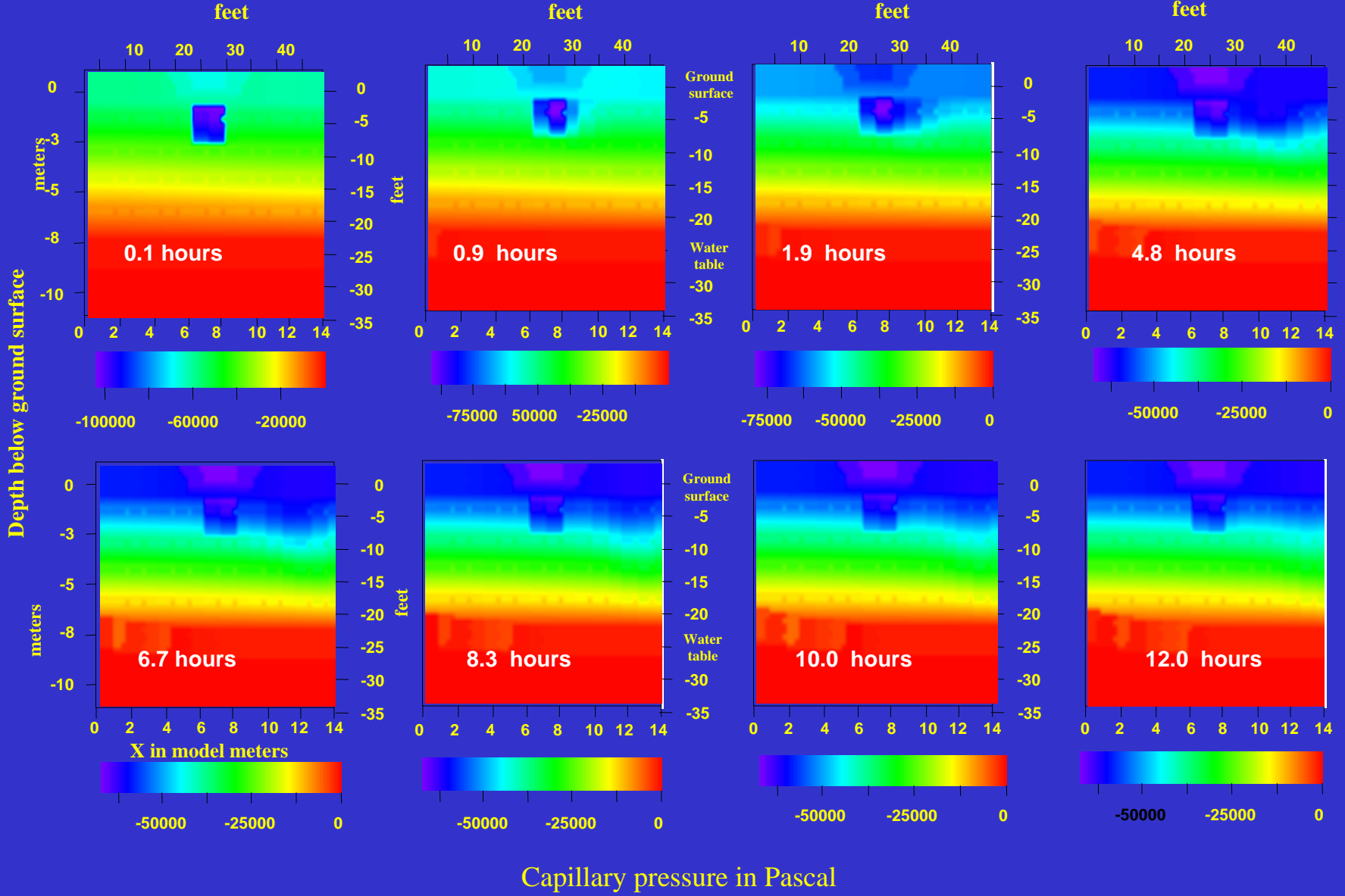


Pressure in Pascal for phosgene explosion

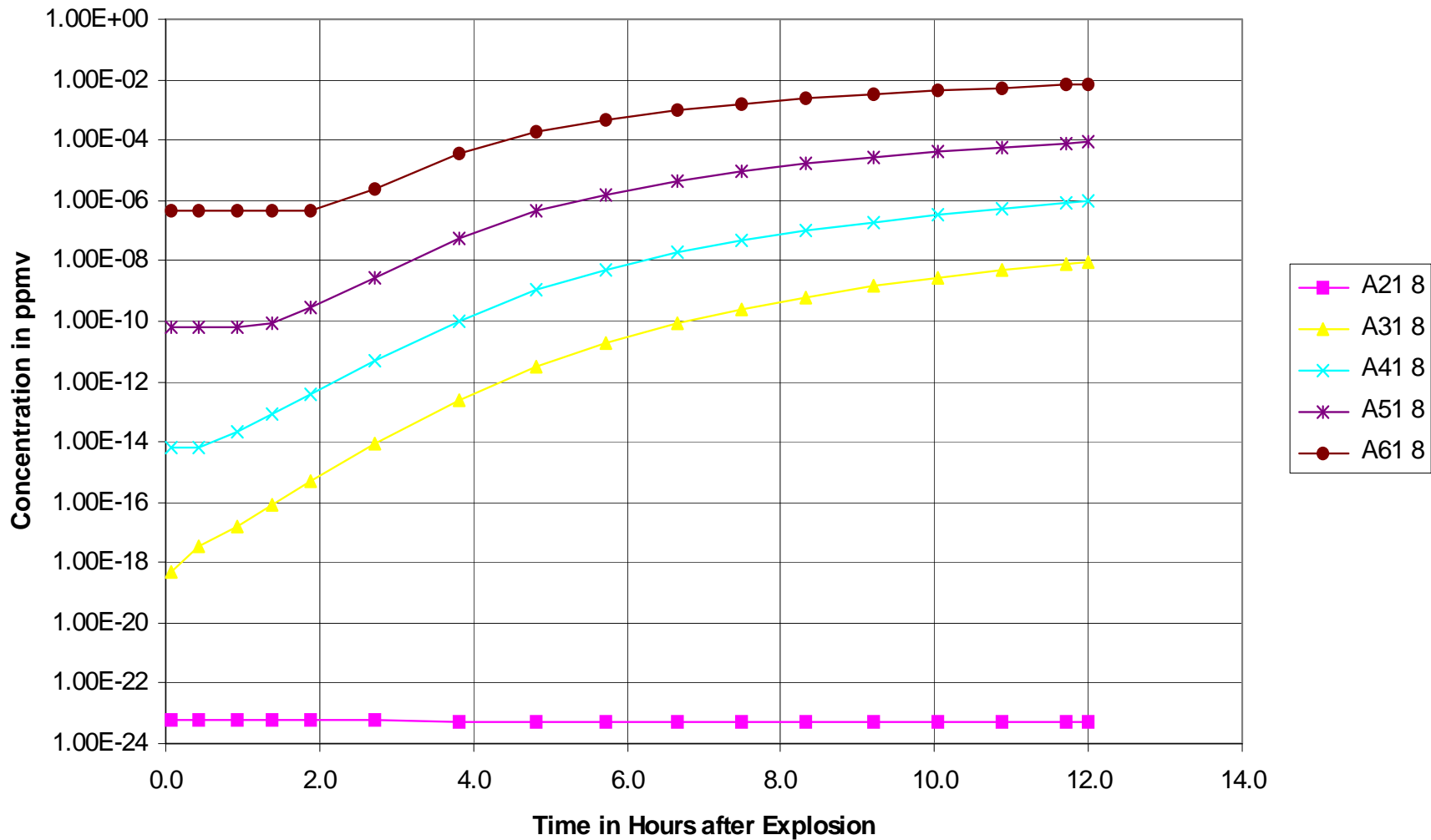


Concentration of Phosgene vapor with depth

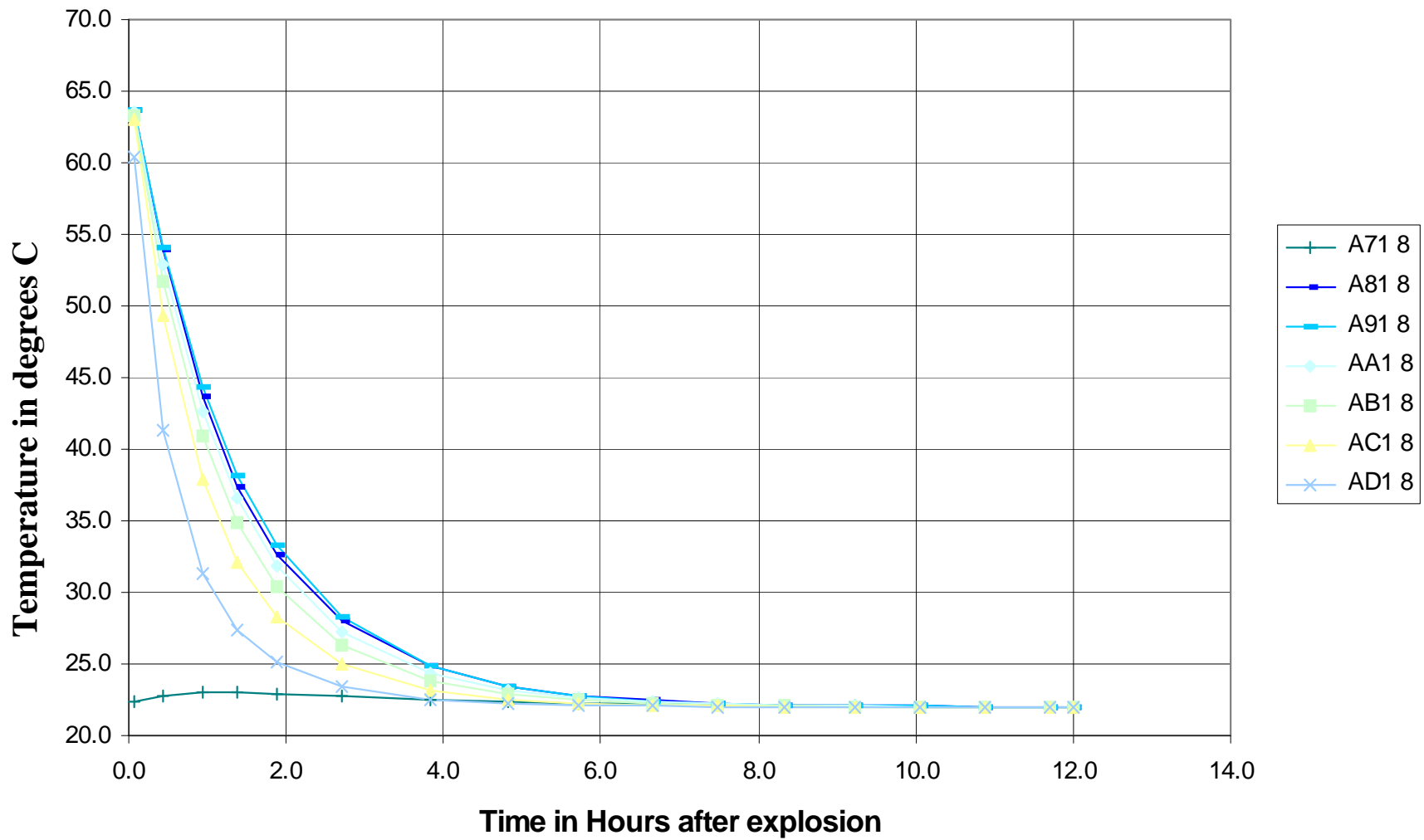




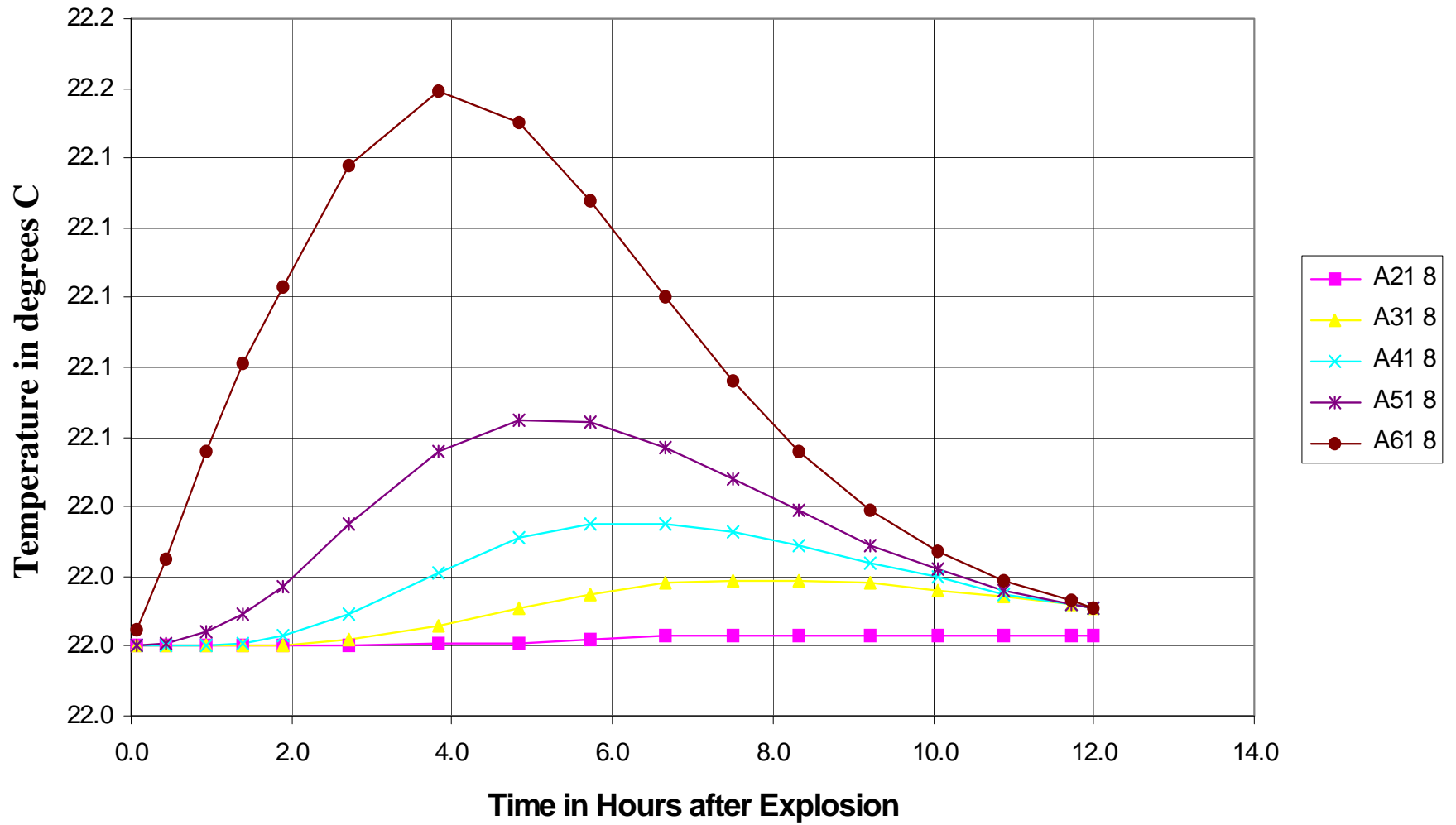
Concentration of Phosgene in Vapor Atmospheric Nodes



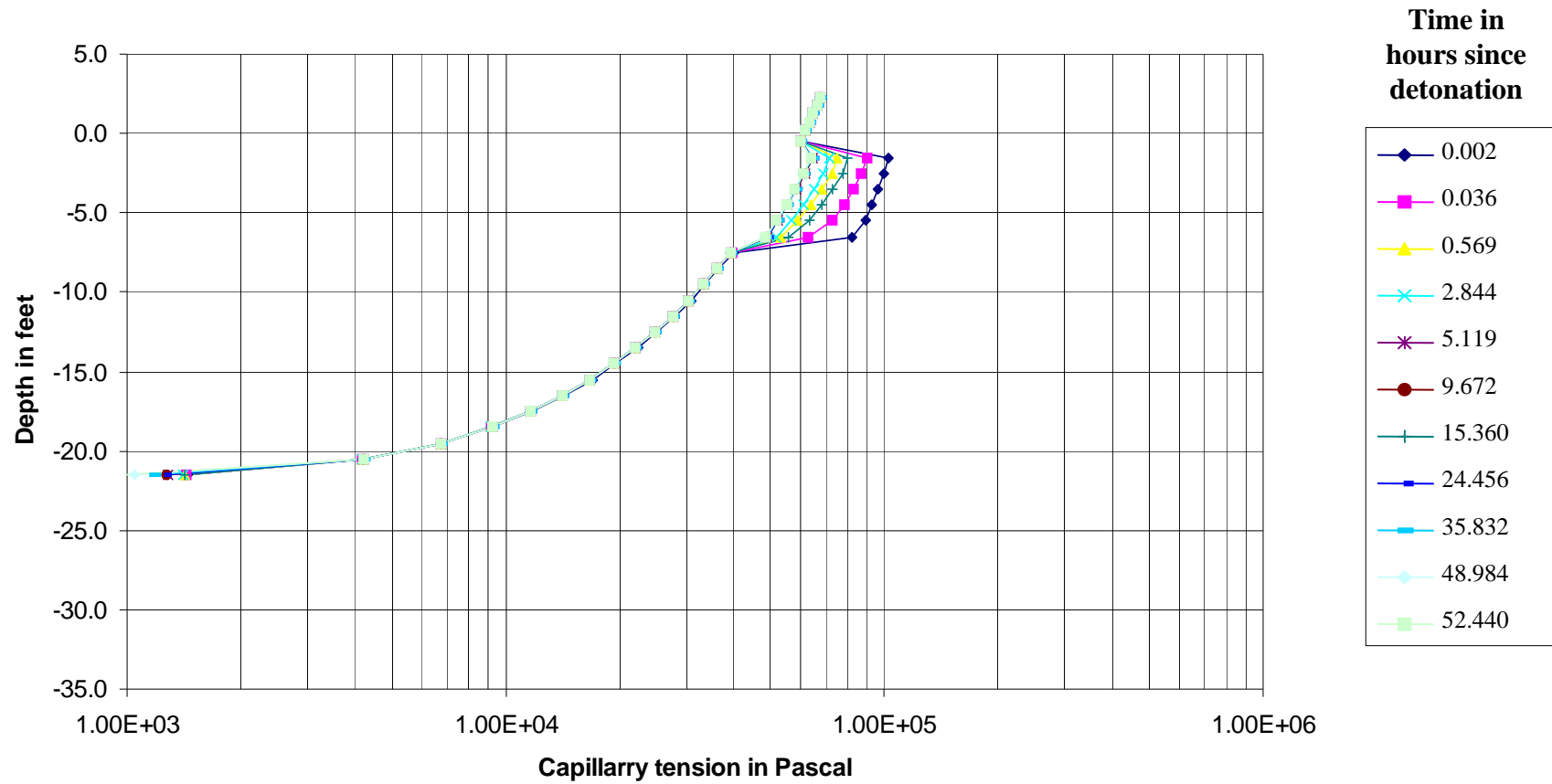
Temperature Variation for Phosgene Case Soil Nodes Near Camoflet



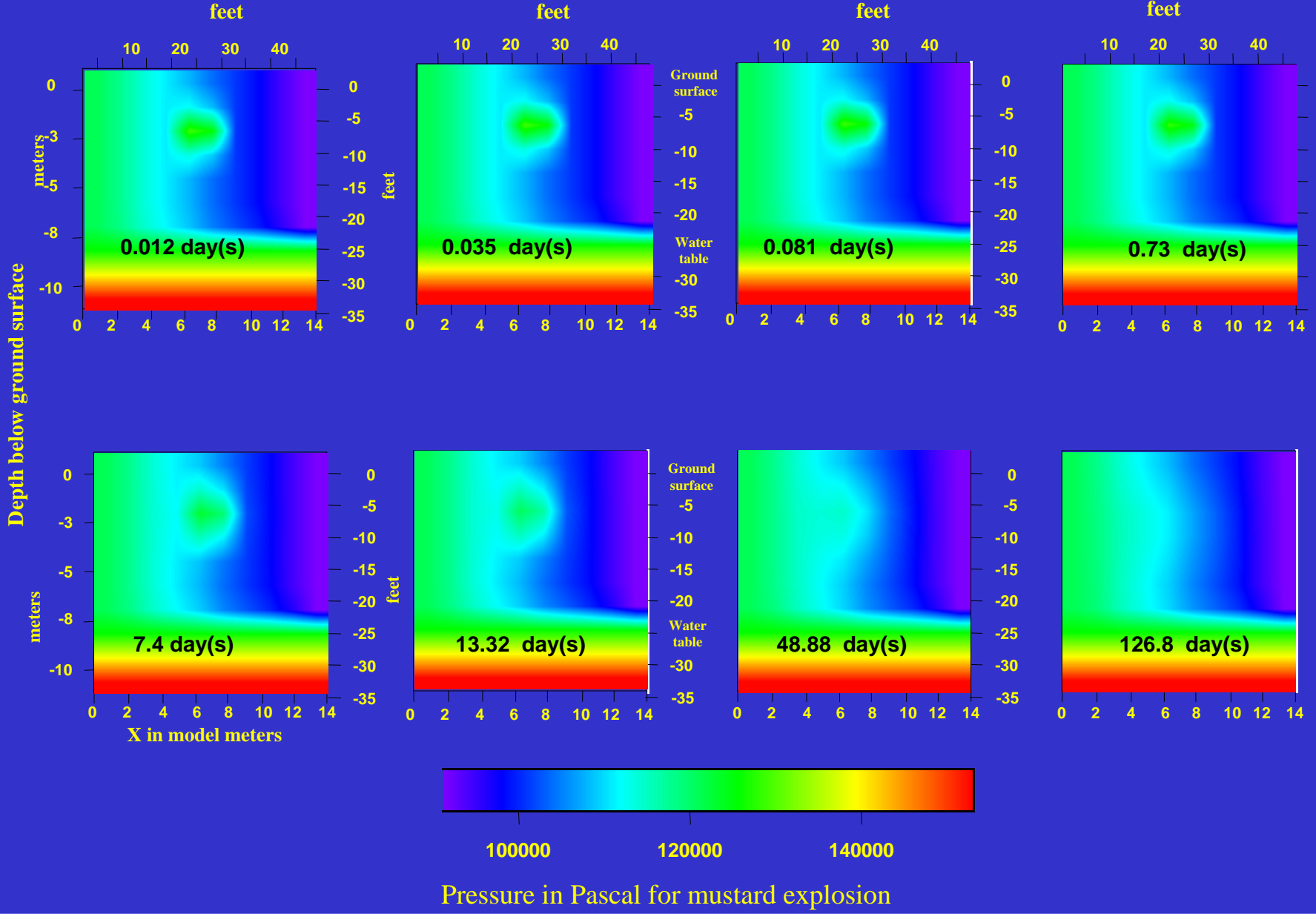
Temperature Variation for Phosgene Case Atmospheric Nodes



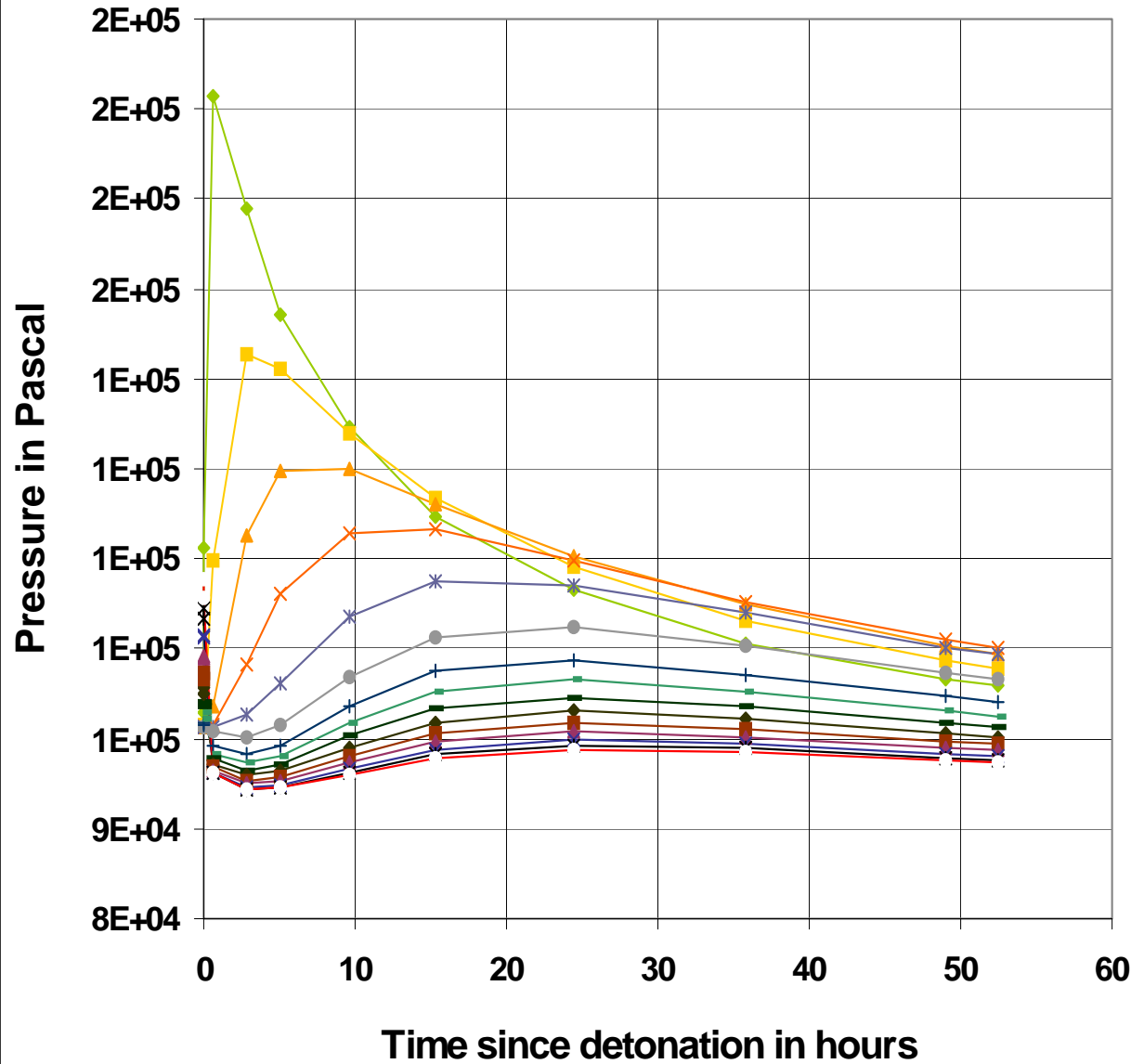
Capillary Pressure with depth for Phosgene Case



Capillary pressure variation with depth at versus time for selected nodes in the center of the model for phosgene case.



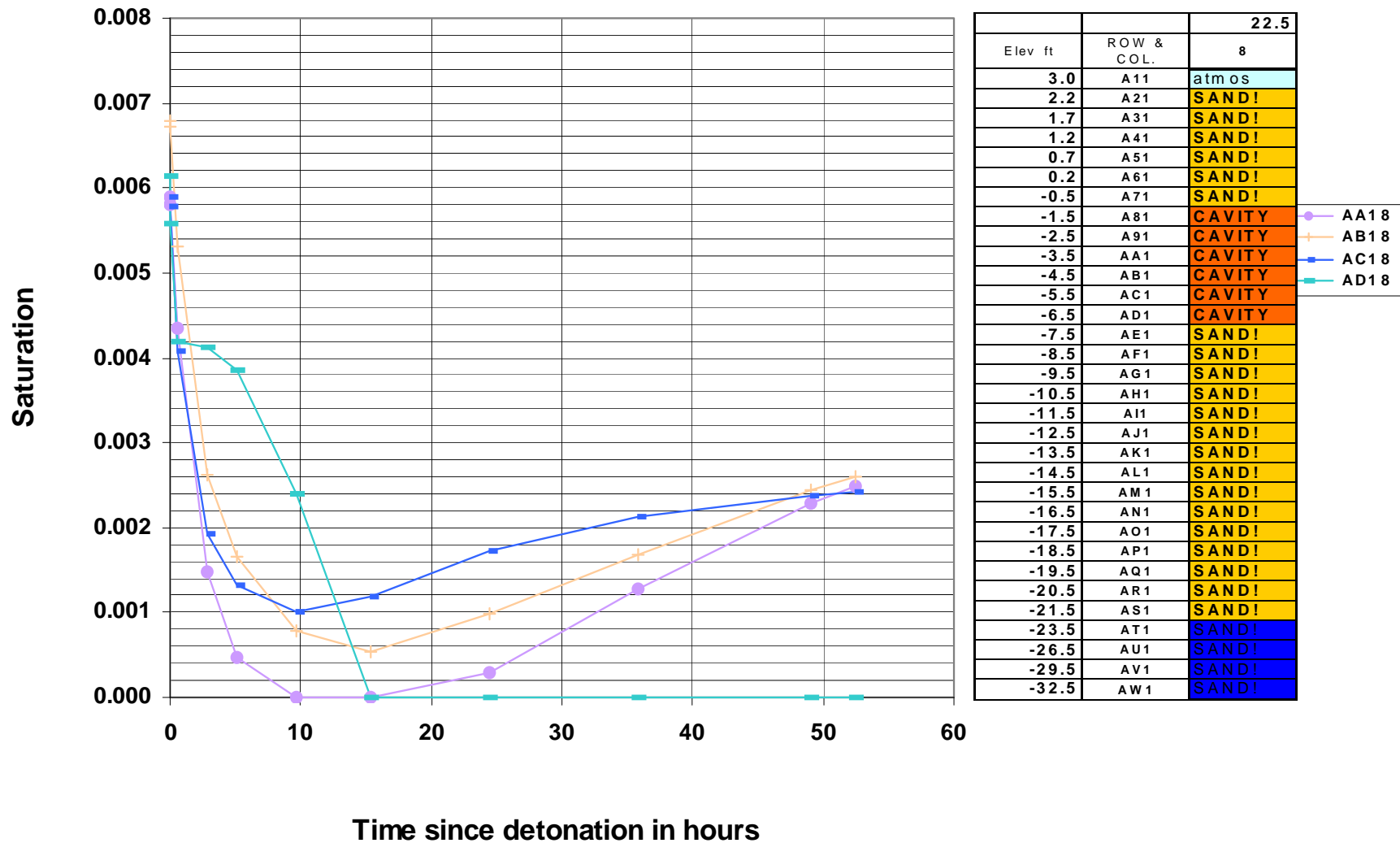
Pressure for Mustard Case



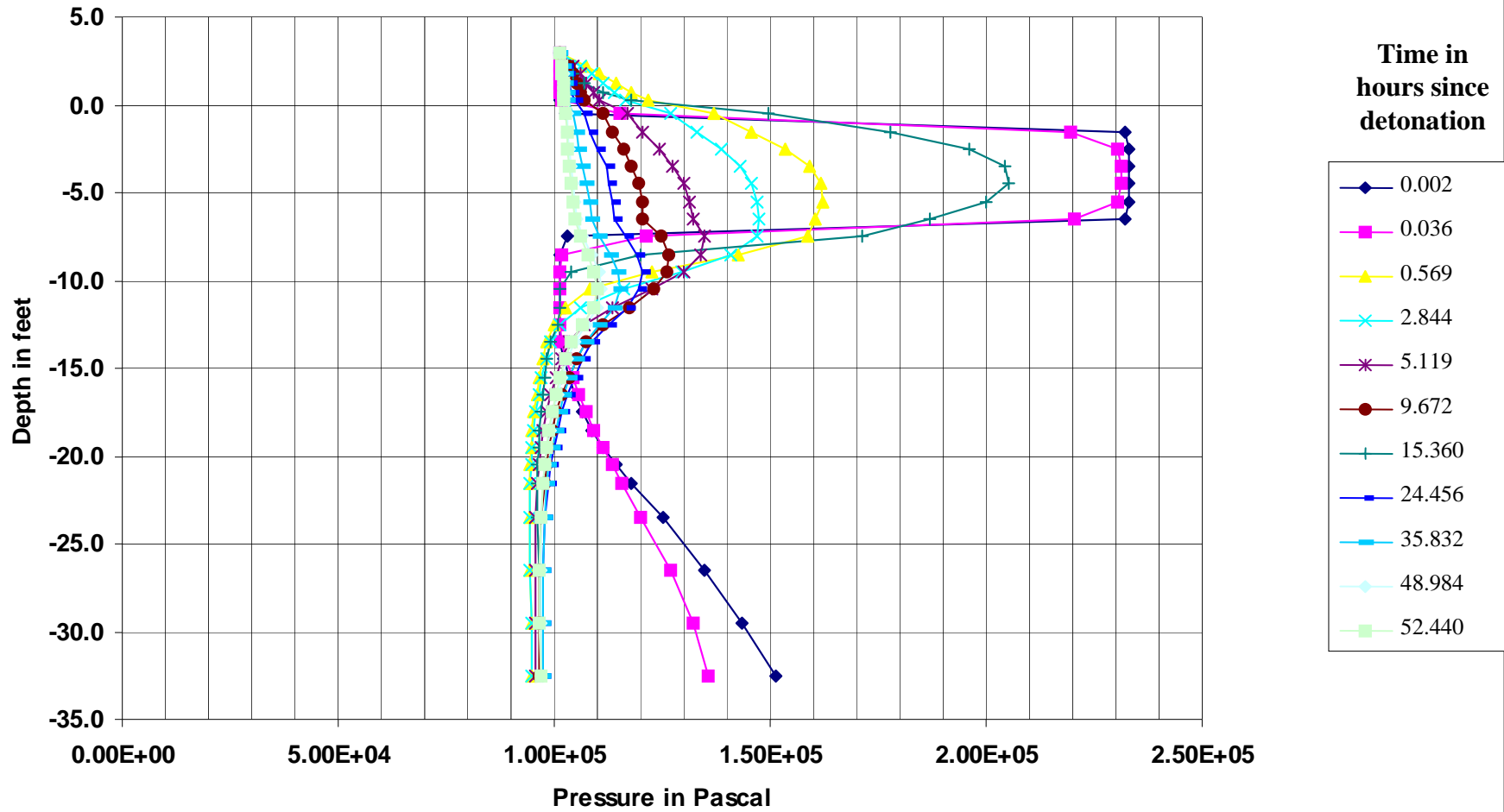
Elev ft	ROW & COL.	22.5 8
3.0	A11	atmos
2.2	A21	SAND!
1.7	A31	SAND!
1.2	A41	SAND!
0.7	A51	SAND!
0.2	A61	SAND!
-0.5	A71	SAND!
-1.5	A81	CAVITY
-2.5	A91	CAVITY
-3.5	AA1	CAVITY
-4.5	AB1	CAVITY
-5.5	AC1	CAVITY
-6.5	AD1	CAVITY
-7.5	AE1	SAND!
-8.5	AF1	SAND!
-9.5	AG1	SAND!
-10.5	AH1	SAND!
-11.5	AI1	SAND!
-12.5	AJ1	SAND!
-13.5	AK1	SAND!
-14.5	AL1	SAND!
-15.5	AM1	SAND!
-16.5	AN1	SAND!
-17.5	AO1	SAND!
-18.5	AP1	SAND!
-19.5	AQ1	SAND!
-20.5	AR1	SAND!
-21.5	AS1	SAND!
-23.5	AT1	SAND!
-26.5	AU1	SAND!
-29.5	AV1	SAND!
-32.5	AW1	SAND!

- ◆ AE1 8
- AF1 8
- ▲ AG1 8
- × AH1 8
- ✱ AI1 8
- AJ1 8
- + AK1 8
- AL1 8
- AM1 8
- ◆ AN1 8
- AO1 8
- ▲ AP1 8
- ✱ AQ1 8
- ✱ AR1 8
- AS1 8

NAPL Saturation for Mustard Case



Pressure with depth for Mustard Case



Variation of pressure with depth for selected nodes for mustard case.

