Assembly programmer's model of a computer

(All registers and memory locations are 4 bytes wide)

Register bank				Stack		Data memory
R0	0x0006	A1	0x1074	caller-LR	0x007C	
R1		A2	0x1070			
R2		A3	0x106C	,		
R3	0xFFFA	A4	0x1068		Ţ	
R4	caller-R4	V1	0x1064		ľ	
R5		V2	0x1060			
R6		V3	0x105C			
R7		V4/WR				
R8		V5				
R9		V6/SB				
R10		V7/SL				
R11		V8/FP				
R12		IP				
R13	0x1068	SP				
R14	caller-LR	LR				
R15	0x0008	PC		: : :		
CSPR						
CSPR						
				<u> </u>		
:						
: 1	0 0 0	0				
•				: : :		
. N	Z C	V		<u></u>		
IR						
•				:	0x000C	[
MAR			0x1000	<u> </u>	0x0008	
		1			0x0004	
MDR					0x0000	0x0006

Processor core

Memory hierarchy

COMMENTS:

Reversed subtracted 0x0006 from zero and updated the flags of N to 1 because the resultant was a negative. Resultant would be negative 6 which in hexadecimal is 0xFFFA