

**FIRE SUPPORT
COMBAT TRAINERS
*THE WOLVES***



FIELD ARTILLERY IN-BRIEF

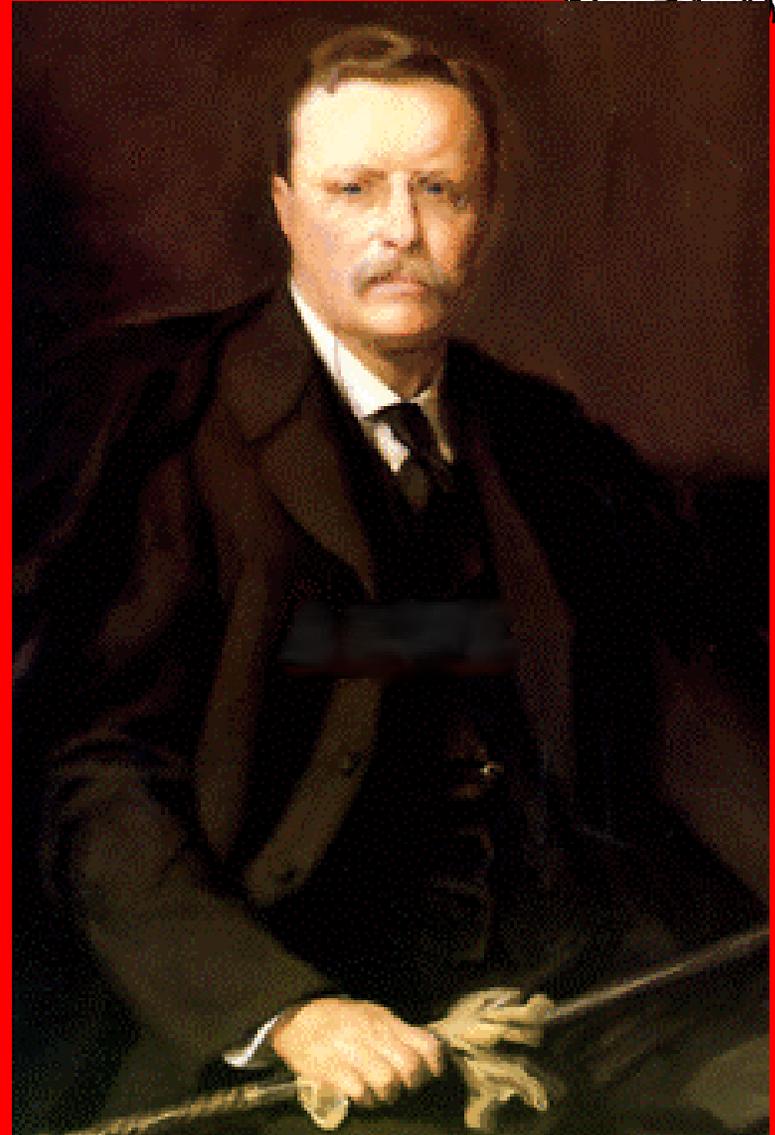


The Man In The Arena



"It is not the critic who counts, nor the man who points out where the strong man stumbled, or where a doer of deeds could have done them better. The credit belongs to the man in the arena whose face is marred by dust and sweat and blood, who strives valiantly, who errs, and who comes up short again and again, who knows the great enthusiasms, the great devotions, and spends himself in a worthy cause. The man who at best knows the triumph of high achievement and who at worst, if he fails, fails while daring greatly, so that his place will never be with those cold timid souls who never knew victory or defeat."

---Teddy Roosevelt







AGENDA



- **MISSION**
- **NTC KEY TERRAIN & WEATHER**
- **WOLF TEAM**
- **AARs**
- **RULES OF ENGAGEMENT**
- **ENVIRONMENT PROTECTION / OFF LIMITS AREA**
- **LIVE FIRE**
- **BTRY LANES**
- **FIRING SAFETY**
- **SOLDIER SAFETY**
- **SUMMARY**



NTC MISSION



PROVIDE REALISTIC COMBINED ARMS TRAINING FOCUSED ON DEVELOPING LEADERS AND UNITS FOR A POWER PROJECTION ARMY ON THE 21ST CENTURY BATTLEFIELD.

PROVIDE TRAINING FEEDBACK TO SOLDIERS, LEADERS, AND STAFFS AT EVERY ECHELON, PLATOON TO BRIGADE, AS WELL AS THE FLOW OF INFORMATION TO UNITS, AGENCIES, AND TRAINING INSTITUTIONS TO IMPROVE THE FORCE.





“STANDARDS”



- **Standard does not exist = Standards Failure**
- **Standard exists but not known = Training Failure**
- **Standard known but not followed = Individual Failure**
- **Standard known but not enforced = Leadership Failure**

KNOW THE STANDARD

TRAIN TO STANDARD

FOLLOW THE STANDARD

ENFORCE THE STANDARD !



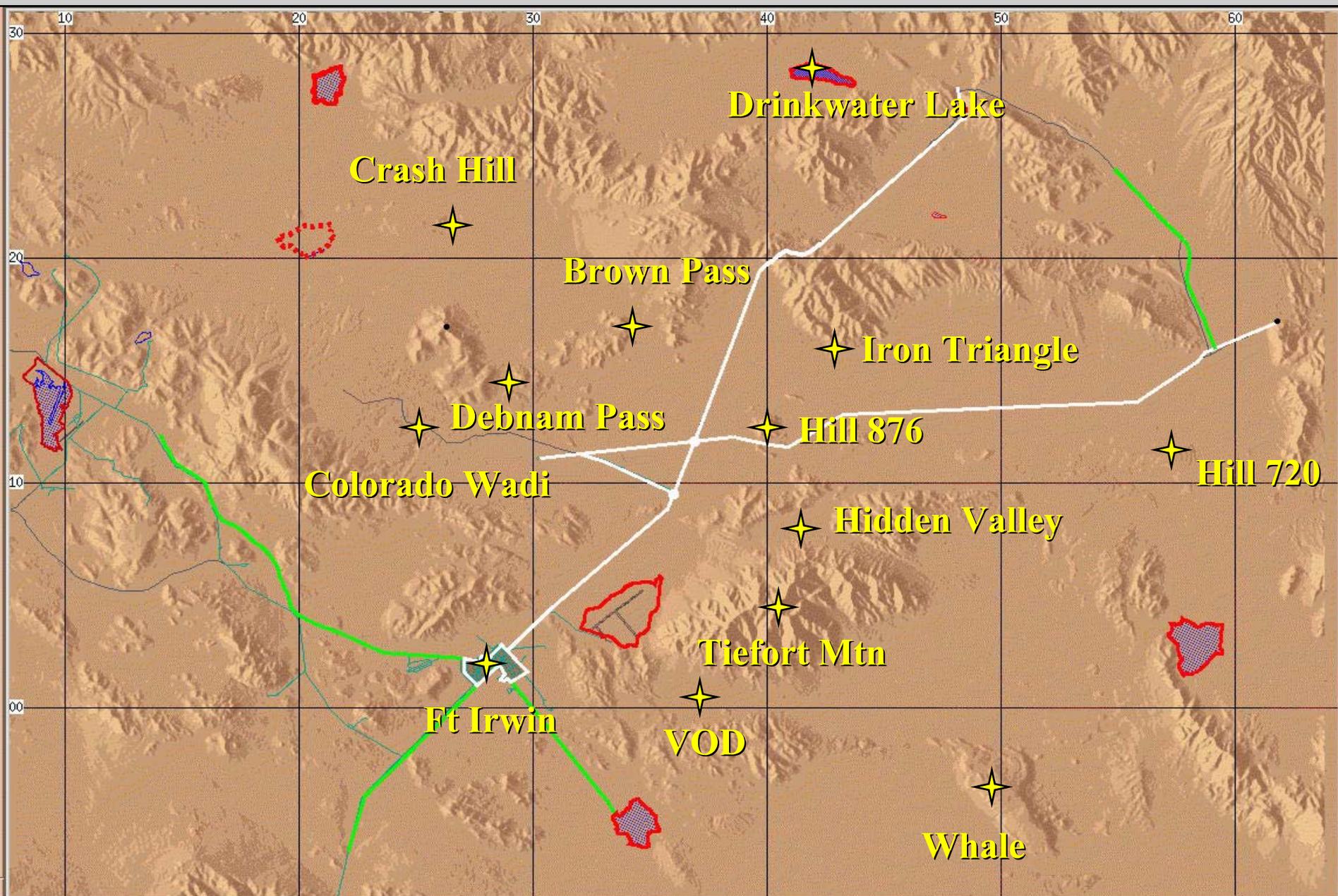
WHY HAVE STANDARDS?



**“WARFIGHTING IS
NOT AN AMATEUR
SPORT”**

BG J. D. THURMAN

NATIONAL TRAINING CENTER CALIFORNIA

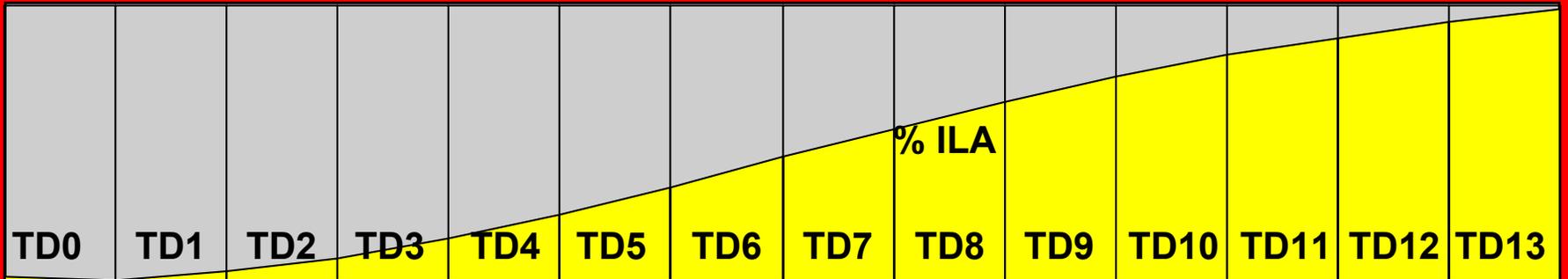




CLIMATE & TOPOGRAPHY (AUG)

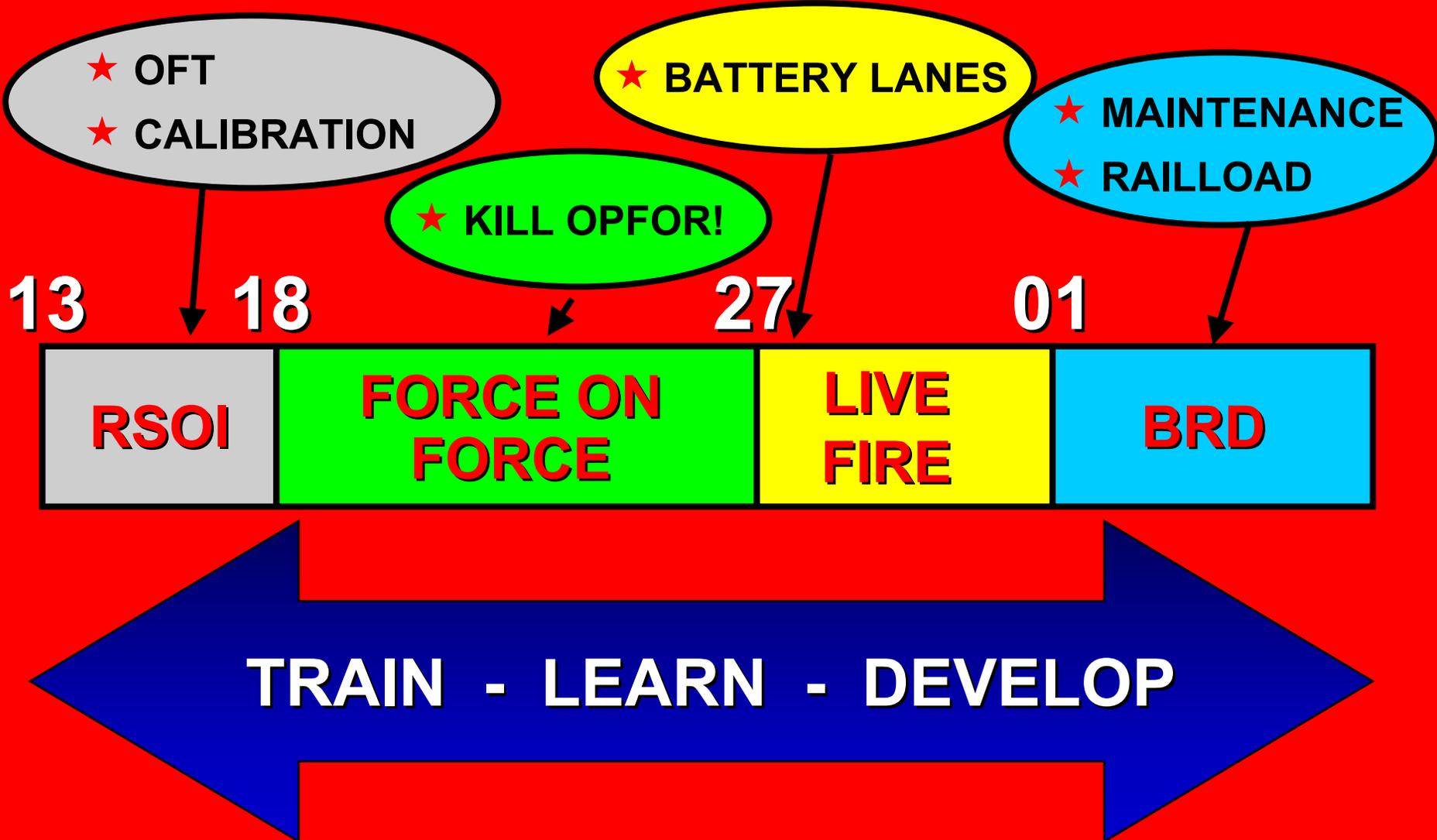


- **TEMPERATURE**
 - **AVG DAILY MAXIMUM:** **AUG** 102* F
 - **AVG DAILY MINIMUM:** 72* F
 - **HIGHEST RECORDED:** 117* F
 - **LOWEST RECORDED:** 55* F
- **AVG WIND SPEED:** 10 KTS
- **HIGHEST WIND SPEED RECORDED:** 55 KTS
- **AVG # DAYS W/ PRECIPITATION:** 0 DAY
- **HIGH DESERT**
 - **MEAN ELEVATION:** 1/2 MILE
 - **HIGH POINT:** OVER 1 MILE
 - **LOW POINT:** 130 FEET





TRAINING TIMELINE





WOLF TEAM FOCUS



AS OBSERVERS: OBSERVE AND ANALYZE PERFORMANCE THROUGHOUT PLANNING, PREPARATION, AND EXECUTION PHASES OF ALL MISSIONS.

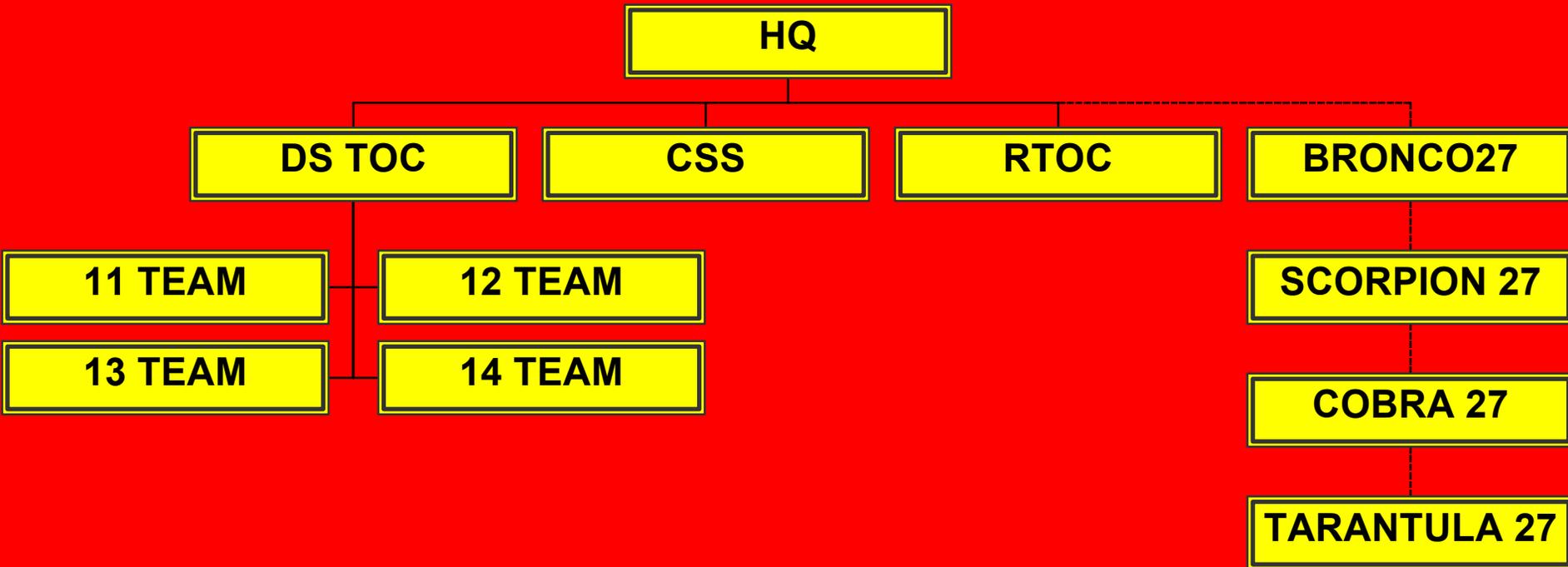
AS CONTROLLERS: APPLY BATTLEFIELD EFFECTS, ASSESS CASUALTIES, AND ENFORCE THE NTC ROE.

AS TRAINERS/COACHES: HELP UNIT IMPROVE TACTICS, TECHNIQUES, AND PROCEDURES DURING THE ROTATION. ANALYZE APPLICATION OF DOCTRINE AND ASSIST UNIT TRAINING THROUGH FORMAL AND INFORMAL AARs.

BOTTOM LINE--WE ARE PART OF YOUR TEAM. WE WANT YOU TO SUCCEED IN LEAVING HERE A BETTER TRAINED UNIT.



WOLF TEAM





AFTER-ACTION REVIEWS



“THE AAR ... IS ONE OF THE MOST IMPORTANT TRAINING INNOVATIONS EVER. THE AAR IS ESSENTIALLY OUR WAY OF BEING HONEST ABOUT OUR PERFORMANCE -- IT IS AN IMPORTANT INGREDIENT OF OUR PROFESSIONAL INTEGRITY.”

**GENERAL SULLIVAN
FORMER CSA**



WHAT ARE AARs?



- **TAKES PRECEDENCE OVER ALL OTHER ACTIVITIES**
- **ADDRESS WHAT HAPPENED, WHY IT HAPPENED AND HOW WE CAN FIX IT**
- **CONDUCTED AT PLATOON THROUGH BRIGADE LEVEL AFTER EACH MISSION**
- **BE PREPARED TO DISCUSS YOUR BATTLE ISSUES**
- **CONFIRM DATES AND TIMES WITH YOUR COUNTERPART AFTER EACH BATTLE**
- **WILL NOT BEGIN UNTIL 100% PRESENT**
- **NO EXCUSES NECESSARY (SIGN UP FOR THE FIX)**



AARs



AAR TYPE	NUMBER
FORMAL FA BN AARs	2
FA BN CDR LED AAR	1
HMMWV TOP FA BN AARs	1
FORMAL BCT FS AARs	1
FORMAL FA BN NCO AARs	2
FORMAL FA BN CSS AARs	2
FORMAL/[HT] (R) BN AARs	2
FDC AAR [HT]	2
FS NCO AAR [HT]	1

- LOCAL AARs AFTER EACH BATTLE FOR BATTERIES, TOCs, RADAR
- TAPES OF AARs INCLUDED IN UNIT TAKE HOME PACKET



FORSCOM LEADERSHIP DEVELOPMENT PROGRAM



- **“SHALER CARD”**
- **OFFERED BY NTC OCs TO LEADERS**
- **ONE ON ONE BETWEEN OC AND INDIVIDUAL LEADER**



WHO CONDUCTS IT?



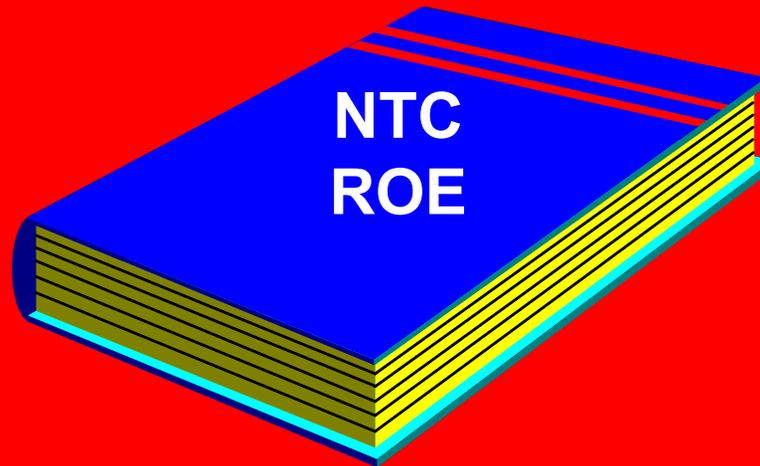
- FSCOORD - W07
- BN XO - W02
- BN CSM - W40
- BN S2 - W09
- BN S3 - W03
- BN S6 - W30
- BN FDO - W32
- OPS SGT - W05/39
- RSO - W20
- BMO/BMT - W26
- RADAR TECH - W36/36A
- R BN CDR - W33
- R BN S2 - W35
- R BN S3 - W33
- R BN FDO - W34
- R BN OPS SGT - W33A
- R HHB CDR - W34
- HHB CDR - W08
- FIRING BTRY CDRs -
 - W11, W12, W13, W14
- SVC CDR - W10
- PLT LDRs - UNIT CDRs
- PSGs/GSGs - ALL C, D, Es
- BTRY FDOs - UNIT CDRs
- BTRY FDNCOs - ALL A, Bs



RULES OF ENGAGEMENT



- RULES THE NTC BATTLEFIELD
- UNDERSTOOD AND FOLLOWED BY ALL
- EFFECTIVE VERSION - 1 JULY 2000





ROE



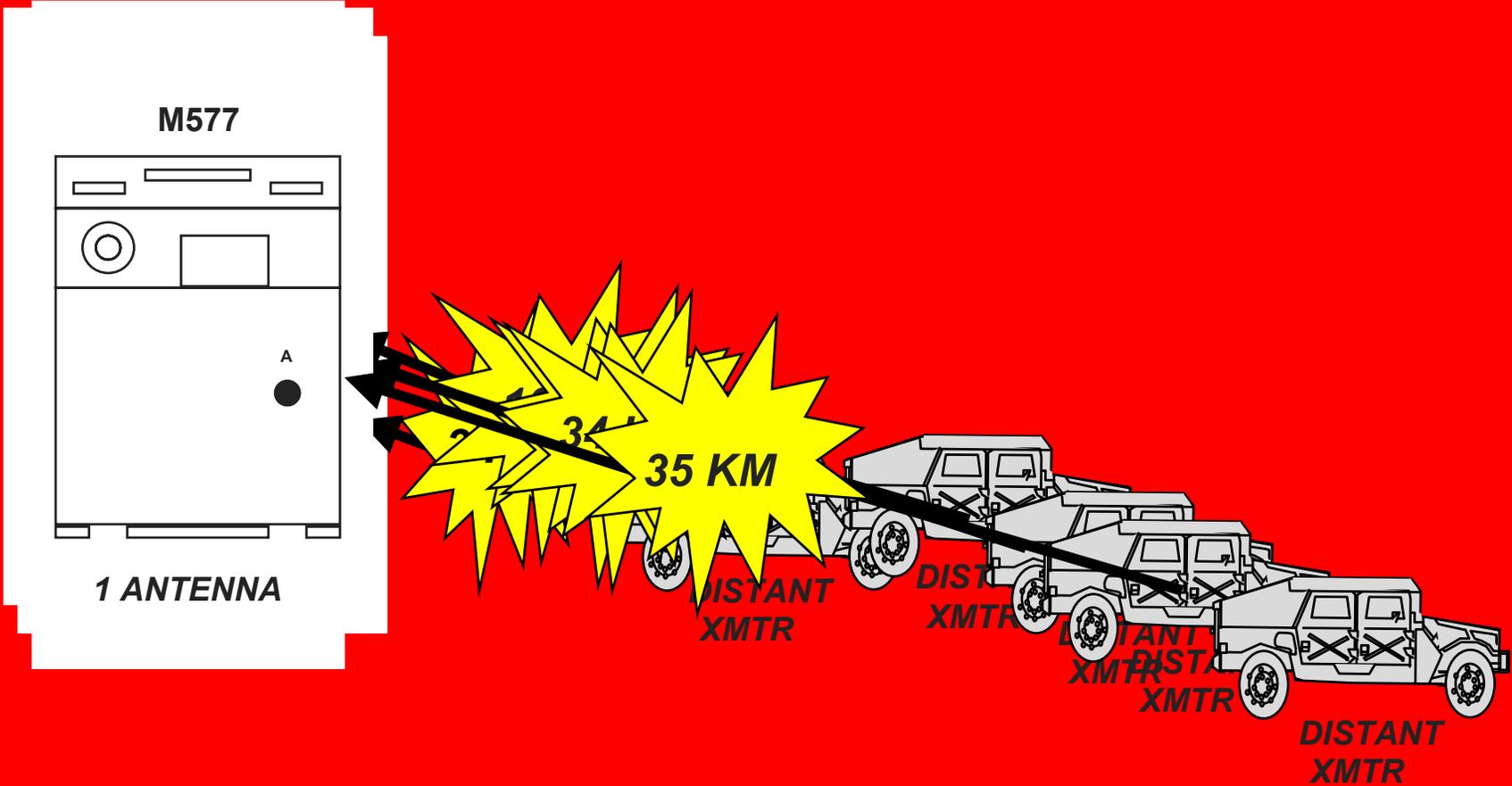
- **NO MILES, NO PLAY!**
- **DO NOT COLLECT OR HARM ANY ANIMALS (SNAKES, TORTOISES, COYOTES, ETC)**
- **REPORT ALL POL SPILLS OVER 5 GALLONS**
- **REMEMBER ALL OF NTC IS AN IMPACT AREA**



WHY CAN'T WE TALK



● = RCVR ANTENNA ○ = IDLE ANTENNA ◉ = INTF ANTENNA





THE FOUR Ss



SUNLIGHT:

- ESTABLISH REALISTIC TIME LINES.
- MAXIMIZE DAYLIGHT TO CONDUCT PREPARATIONS AND IMPROVE SURVIVABILITY.

● **SIMPLICITY:**

- LIMITED PLANNING TIME FOCUSED BY THE COMBAT DECISION MAKING PROCESS / TLP.
- ENSURE PLAN IS UNDERSTOOD, EXECUTABLE, AND ESTABLISHES PRIORITY OF WORK.

● **SUBORDINATES:**

- TIMELY FLOW OF INFORMATION/CONDUCT AND REPORT PCC / PCI RESULTS.
- ADHERE TO SOPs, JUNIOR LEADERS USE INITIATIVE AND CONDUCT BRIEFBACKS TO ENSURE CLEAR.

● **SUPERVISE / CHECK:**

- BC TIMELINE FOR PCC, PCI, MAINT, REHEARSALS, etc.
- LTs/NCOs ENFORCE STANDARDS WITH PCIs AND REHEARSALS!



TRAINING

“SHOW STOPPERS”



- **LOSS OF PERSONNEL ACCOUNTABILITY**
- **LOSS OF SENSITIVE ITEM**
- **POOR TECHNICAL / TACTICAL FIRE DIRECTION**
- **SUBSTANDARD CREW DRILL**
- **CLEARANCE OF FIRES**
- **LACK OF DUAL / INDEPENDENT SAFETY CHECKS**
- **NO MET CAPABILITY CAUSES ADJUST FIRE MISSIONS**
- **NO MISSION CARD TO OBSERVER / CONTROLLERS**



LIVE FIRE TRAINING OBJECTIVES



- **INTEGRATE / SYNCHRONIZE COMBAT POWER AVAILABLE TO TASK FORCE / BRIGADE COMMANDER INTO COMBINED ARMS ENGAGEMENTS**
- **CONDUCT OPERATIONS UNDER NEAR COMBAT CONDITIONS**
- **PLAN, COORDINATE, AND CONTROL CAS AND JAAT OPERATIONS**
- **INTEGRATE COMBINED ARMS ASSETS INTO THE COMMANDER'S SCHEME FOR FOR BOTH OFFENSIVE AND DEFENSIVE OPERATIONS**
- **REHEARSE DOWN TO CREW LEVEL PRIOR TO EXECUTION**



LIVE FIRE REQUIREMENTS



- **BDE FSE AND DS BATTALION TOC MUST MAINTAIN FM VOICE AND DIGITAL COMMUNICATIONS WITH THE NTC LIVE FIRE FSE AT ALL TIMES**
- **100% FSCMs AND CURRENT MANEUVER GRAPHICS ON HAND AND POSTED**
- **100% OF ALL PERSONNEL AND EQUIPMENT ACCOUNTED FOR (WHO CAN'T WE FIND?)**
- **BRIGADE HAS RECEIVED RED INDIRECT FROM DIVISION AND PASSED ON TO THE BATTALION**
- **NO MET = ADJUST FIRE**



BATTERY LANES

KEY TASKS



- FIRE RAP
- RIGHT BY PIECE
- MASS THE BN
- SHIFT FIRES
- FIRE M825 SMOKE
- FIRE SEAD/MARK
- MANAGE FSCMs
- EXECUTE MOVING MISSION (OUTSIDE PA)





BATTERY LANES

TIMELINE



AUG 27	CTM + 5	ISSUE ORDER TO BCs / FDOs
AUG 27	1800	FIRE SUPPORT REHEARSAL (FM)
AUG 27	1900	FA TECHNICAL REHEARSAL (FM)
AUG 27	2100	SEAD FOR AVN DEEP ATTACK
AUG 28	0600	RIGHT BY PIECE
AUG 28	0700	LD
AUG 28	CTM + 2	FDC AAR



FIRING INCIDENTS



	<u>FY 01</u>	<u>FY 00</u>	<u>FY 99</u>
TOTAL INCIDENTS (AS OF MAY 01):	38*	30*	35*
FDC ERRORS:	14	13	16
A. INCORRECT KNOWN DATA	0	0	0
B. INCORRECT TGT DATA-BCS	4	3	0
C. IMPROPER FIRE CMDs/CREW DRILL	5	9	12
D. INCORRECT BCS DATA	2	0	1
E. INTERVENING CREST	0	0	0
F. FIRED SHORT OF MSL	0	0	0
G. NTC CLEAR PROCEDURES	3	1	3
HOWITZER SECTION ERRORS	24	17	19
A. DEFLECTION ERRORS	0	1	2
B. QE ERROR	9	3	3
C. CHARGE ERROR	4	3	1
D. LAY ERROR	3	2	1
E. HOWITZER LOCATION	1	1	0
F. IMPROPER RAM / FUZE SET	2	1	5
G. IMPROPER CREW DRILL	5	4	4
H. UNDETERMINED	0	2	3

* MORE THAN 1 ERROR PER INCIDENT



SAFETY INCIDENTS FILMS



- **IMPROPER TECHNICAL SOLUTION FOR M825 MISSION**

- **IMPROPER HOWITZER CREW DRILL**



FIRING SAFETY



- **WHAT IS YOUR POLICY ON:**
 - **CHANGING CHARGE IN THE MIDDLE OF A MISSION**
 - **RECYCLING TARGET NUMBERS AND TARGET LISTS**
 - **LEADER PCC/PCI?**
- **WHAT DO YOU DO/CHECK WHEN:**
 - **AN INDIVIDUAL HOWITZER FIRES ITS FIRST ROUND LONG ON GUN TARGET LINE**
 - **THE FDC RECIEVES AN MVV OF -78.0m/s**



RECENT FIRING INCIDENTS



GUN ERRORS

- **DEFLECTION**
 - SC USED IMPROPER DAP
- **QUADRANT**
 - SECTIONS FIRED AT LOADING ELEVATION. SC FAILED TO VERIFY CORRECT QE
- **CREW DRILL**
 - SECTION INPUT IMPROPER DATUM AND SPHEROID CODE INTO AFCS
 - SECTION FAILED TO PROPERLY SET FUZE. SC FAILED TO VERIFY PROPER FUZE SETTING
 - SECTION FIRED A 90 MIL ELEVATION ERROR (FAILED TO CONDUCT AFCS VERIFICATION)
 - SECTION FIRED INCORRECT CHARGE. SC FAILED TO VERIFY CORRECT CHARGE



RECENT FIRING INCIDENTS



FDC ERRORS

- BTRY FDC DATA BASE (IE, DATA BASE NOT PURGED)
- BTRY FDC INPUT IMPROPER MVVS
- BTRY FDC FIRED THE WRONG SHEAF
- BN FDC SENT TRANSPOSED GRID TO BTRY FDC
- SENT IMPROPER SHELL DURING ADJUSTMENT PHASE;
FAILED TO PROPERLY CORRECT FIRE ORDER
- FIRED MISSION WITHOUT PROPERLY CLEARING TARGET
IAW NTC ROE (IMPROPER PROCEDURES)
- BTRY FDC INPUT INCORRECT AZIMUTH OF FIRE INTO BCS
- INCORRECT TARGET ALTITUDE



FIRING INCIDENTS



- **W07 CALLS CHECK FIRING FREEZE**
- **UNIT INVESTIGATION**
- **UNIT RECERTIFICATION**
- **O/C ASSIST**
- **W07 APPROVAL TO CONTINUE RED INDIRECT**



FIRING SAFETY



- **DIGITAL COMMUNICATIONS ENHANCE SAFETY**
- **VOICE FIRE COMMANDS DEGRADE SAFETY**
- **CREW DRILLS (FDC & GUN) TO STANDARD WITH SECONDARY CHECKS**

THE BOTTOM LINE: DUAL, INDEPENDENT SAFETY CHECKS TO STANDARD WILL CATCH ALL POTENTIAL FIRING ERRORS BEFORE PULLING THE LANYARD!



SOLDIER SAFETY



- **NTC IS A DANGEROUS PLACE**
- **ARMY DOCTRINE IS CONSISTENT WITH PERSONNEL SAFETY**
- **SAFETY IS AS IMPORTANT IN COMBAT AS IT IS IN TRAINING**
- **DRIVING**
 - **DESERT, DUSTY, AND BLACKOUT CONDITIONS**
 - **ROLL-OVER DRILLS AND SEAT BELTS SAVE LIVES**
 - **CONTROL SPEED AND FOLLOW SPEED LIMITS**
 - **SECURING OF SECONDARY LOADS**
 - **HATCHES**
- **LOST IN DESERT (LID) -- BN SOP MUST ADDRESS**
- **PYROTECHNIC HANDLING SAFETY (HOFFMAN CHARGES)**
- **WATER AND FOOD DISCIPLINE (COLD AND HOT WEATHER)**
- **NEVER SACRIFICE SAFETY FOR COMBAT REALISM!**



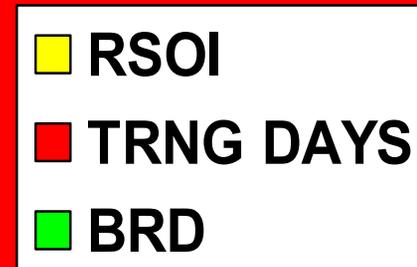
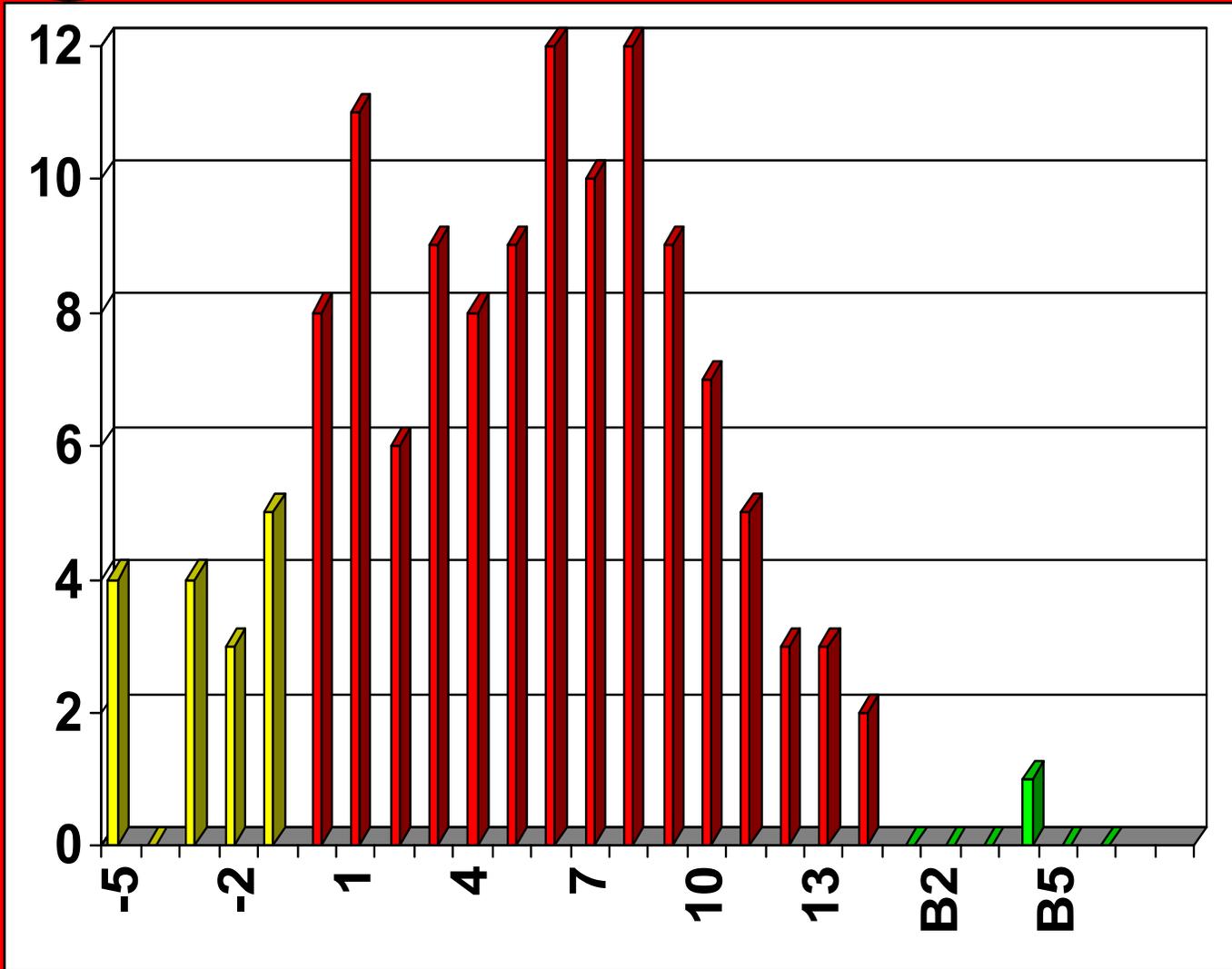
RECENT SAFETY INCIDENTS



- **RISK MANAGEMENT WORKS**
- **LEADERS MUST ENFORCE STANDARDS**



MISHAP TRENDS BY DAY





ROLLOVER (vic BUGPIT)

SPEED!





SITUATIONAL AWARENESS

***IMPROPER TIE-DOWN OF
SECONDARY LOAD***





Turn in Standards





SUMMARY



- **NTC MISSION / TERRAIN / CLIMATE / TIMELINE**
- **WOLF TEAM**
 - **AARS**
 - **TRAINING**
 - **LIVE FIRE**
 - **SAFETY**



ROTATION 01-10



**WHAT IS SUCCESS AT
THE NATIONAL TRAINING
CENTER?**

