LITTLE ROUND TOP
AT GETTYSBURG

A Reassessment of July 2, 1863

Joseph Michael Boslet

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This book is dedicated to the soldiers of both sides who did their best under the worst of conditions and to those who shared their stories so we could better understand the personal sacrifices that most of them made without condition or qualification. And, most of all, to my wife who has tramped many battlefields with me—rain or shine—listened to my many rants about Civil War subjects; and been my most dependable sounding board on all matters of importance; and to our two sons, Joshua and Noah, who have made us both very proud.

TABLE OF CONTENTS

Acknowledgments vii

Foreword xi

Introduction xiii

Prologue xvii

Chapter One: Setting the Stage: Moving Into Position 1

Chapter Two: Warren Decides Round Top Needs Defended 18

Chapter Three: Hood Advances on the Round Tops 31

Chapter Four: The Battle Ground at Little Round Top 56

Chapter Five: The "Valley of Death" 67

Chapter Six: Vincent Positions the Brigade on Little Round Top 77

Chapter Seven: Preliminary Contact 100

Chapter Eight: Law Attacks Vincent 116

Chapter Nine: The 140th New York Supports Vincent 134

Chapter Ten: Vincent Rallies the 16th Michigan 143

Chapter Eleven: Paddy O'Rorke Saves the Day 156

Chapter Twelve: Hazlett's Artillery Climbs the Hill 165

Chapter Thirteen: The 20th Maine Holds the Left Flank 175

Chapter Fourteen: Vincent's Brigade Wins the Day 191

Chapter Fifteen: The Final Tally on Little Round Top 208

Epilogue 217

Appendix A: Combat Timeline on Little Round Top, July 2, 1863 224

Appendix B: Brig. Gen. Gouverneur K. Warren's Activities, July 2, 1863 228

Appendix C: Order of Battle Little Round Top, July 2, 1863 231

Appendix D: Numbers and Losses 233

Appendix E: Meteorology of the Battle 236

TABLE OF CONTENTS (continued)

Bibliography 242
Index 265
About the Author 280

LIST OF MAPS

Law's Movement, 4–4:10 P.M. 40
Law's Movement, 4:10–4:30 P.M. 43
Little Round Top, 4:30–4:45 P.M. 79
Little Round Top, 4:50–5:10 P.M. 86
Little Round Top, 5:20–5:30 P.M. 123
Little Round Top, 5:48–5:53 P.M. 158
Little Round Top, 6:20–7:05 P.M. 179
Little Round Top, 7:08–7:18 P.M. 185
Little Round Top, 10 P.M.–Midnight 201

Photos have been placed throughout the text for the convenience of the reader.

Foreword

Little Round Top. The name, to many modern readers, evokes images of determined Union soldiers from Maine, their ammunition running dangerously low, heroically charging down a wooded, rocky slope pell-mell into the midst of startled Confederates who begin surrendering en masse. A Pulitzer Prize-winning book, *The Killer Angels*, and popular Hollywood movie based on that novel, *Gettysburg*, have perpetuated and spread that conception. College professor-turned-colonel Joshua Lawrence Chamberlain, his brother Thomas, and a faithful, wise-cracking Irish sergeant (the latter being fictional, of course) all but saved the battle of Gettysburg single-handedly, at least so goes the story

The role of the other three regiments in the same brigade as the 20th Maine—the 16th Michigan, 44th New York, and the 83rd Pennsylvania—and their commander, Col. Strong Vincent, is underplayed by design. These other men, however, played equally important roles (and perhaps more) in defending Little Round Top in the actual fighting on July 2, 1863. And beyond that well-known prominence, the fighting at other points on July 2 was also critical to ultimately denying the Confederates access to the Taneytown Road and Baltimore Pike. The Army of the Potomac lived to fight another day.

In this book, former US Army soldier Joe Boslet, a combat veteran of the Vietnam War, presents a trained soldier's view of the tactics and their results on Little Round Top. Having extensively studied the fighting and having walked

the ground scores of times from all different avenues of approach, Boslet offers his perspective on how the standard tactics of the day, coupled with terrain and enemy disposition, dictated Colonel Vincent's dispositions of his four regiments and his tactics before he fell with what proved to be a mortal wound. He also discusses the typically overlooked roles of Gouverneur. K. Warren, Norval Welch, James Rice, Stephen Weed, Charles Hazlett, and other Union Officers, as well as the perspective of Confederate Col. William C. Oates. Vincent and Chamberlain had plenty of help in finally securing the eminence.

While seasoned students of Gettysburg might not agree with all of Joe's contentions, some of which are markedly different from previous Little Round Top accounts, his thoughts and conclusions should provoke additional reading of the source material and further discussion. His approach, that of a combat soldier familiar with maneuvering through unfamiliar terrain while under hostile fire, is commendable and offers a unique perspective for consideration.

Colonel Vincent, schooled at Harvard and an experienced officer in the latest prevailing military tactics, surely used that training to guide his decision-making on Little Round Top. His instincts and experience influenced and shaped his critical thinking as he planned and made dispositions to meet the oncoming enemy. Boslet explores those tactics and how Vincent (and other leading Union officers on Little Round Top) employed them as his men approached the heights and then formed into a line of battle. It makes for a fascinating read, one that is worthy of the existing historiography.

Scott L. Mingus Sr.
York, Pennsylvania

Introduction

Although the Round Tops south of Gettysburg are not big hills by Pennsylvania standards, they certainly command the surrounding ground that Robert E. Lee's and George Meade's armies bitterly contested on July 2, 1863. Interestingly, neither of the heights figured originally in Lee's or Meade's plans for the second day of fighting at Gettysburg. And when considering the epic battle in hindsight, the number of soldiers mired in combat here was relatively small, leading us perhaps to overplay the tactical value involved in the potential occupation of the rocky terrain by either side. Nevertheless, the brooding majesty of Little Round Top and Big Round Top is a can't-miss—a magnet that draws battlefield visitors not only to explore history but also to enjoy spectacular views from its summit, a chance perhaps to bask in a sweeping sunset from the Army of the Potomac's artillery platform along Sykes Avenue.[1]

I have always had more than a passing interest in what happened here and have done my best to read every book in which it is featured or covered as part of the three-day battle's larger scope. As I grew more fascinated with what happened there, it became obvious that not all of the history agreed with

1 For interesting background information, see Jay Jorgensen, ed., *Top Ten at Gettysburg* (USA, 2017), 6, 248, 268, 271. These are opinions of well-versed Licensed Battlefield Guides, authors, and battlefield historians.

itself. This was not just because of author bias either; the basic facts of the engagement varied tremendously.

We also had to cope with Michael Shaara's outstanding 1974 novel *The Killer Angels* and Ron Maxwell's 1993 film *Gettysburg*, both of which altered history somewhat for dramatic effect. In a larger context, neither effort was too far off the basic history; it was mostly the emphasis the writers and directors gave to certain personalities that skewed the truth. Positively, the book and film clearly got more people engaged in the Gettysburg battle history as well as the Civil War in a larger context. But that might not be enough.

In working on this book for more than eight years now, I followed the premise of what we know, what has been presented, and what has not been covered—finding indisputably that we do not know the whole story of what really happened on Little Round Top on July 2, 1863. That became apparent after comparing just about all that has been written against the primary source material—soldier narratives, firsthand accounts, personal letters, battle history written by participants immediately after the war, formal inquiries, and the *Official Records of the Union and Confederate Armies*.

We have gone on with certain understandings that have been accepted, with little question, for a number of years. That, too, had been my mindset. I used to feel that I had no reason to question the status quo until I began to compare and contrast the source material and found that there were many gaps, misrepresentations, incomplete references, overlooked material, misstatements, and inaccurate reporting. Based on what I discovered, there are likely other credible representations of this body of material that could help improve our understanding of the events of July 2. Since no new information of significance had been uncovered in some time, I devoted my energy to re-mining existing source material. The result has been illuminating—not a paradigm shift but rather a paradigm bump in the historiography.

* * *

It has not been my intention to challenge what has been done previously because the study of history is an evolutionary process and we all build off earlier works. Much effort and thought has been given to developing these stories, and that needs to be recognized in a positive way. All this work has been directed toward getting us a little closer to what may be the actual events on that Thursday afternoon in July 1863 south of Gettysburg. What I do hope to accomplish is to offer a new perspective based on those findings, as well as a critical assessment of existing sources as related to additional information and

what is more likely in concert with other hard facts. Basically, I do not want to rewrite history, I want to put it right. I welcome any questioning mind in this journey of examination.

This book is combination thesis/treatise and includes some material not presented in previous studies. There also is a tutorial aspect that is intended to provide needed background history to enhance the reader's understanding of the topic, such as weapon effectiveness (primarily rifle-muskets and sniper rifles); slope factors relative to climbing difficulty; basic tactics and their application; weather and climate data; analysis of terrain relative to combat factors; visual acuity; acoustic shadows; leadership attributes; mental factors of individual soldier in combat; the perspective of a soldier relative to combat conditions (e.g., weather, enemy, terrain); Brig. Gen. Gouverneur K. Warren's timeline on Little Round Top (see Appendix B); the essence of "epic" marching; Livermore's "lethality"; and the Union command system and its response at Little Round Top.

In some respects, a few of these were mentioned in past accounts, just not in the necessary detail here. My priorities are not limited only to offering an entertaining story, but also to educate. You, the reader, will tell me if I have succeeded in this effort.

* * *

The story of Little Round Top will be told primarily from a slightly weighted perspective—that of Col. Strong Vincent's 3rd Brigade in the 1st Division of the Army of the Potomac's V Corps. There is reason for that: much of the Southern battle history has been covered well by a number of authors, but the Union army activities have become muddled. Enough of the story has been influenced by incomplete, inaccurate, and misplaced coverage. Just consider the emphasis put on the Little Round Top role and activities of the 20th Maine and its legendary commander, Col. Joshua L. Chamberlain—some of that story is not correct, and I am basing this opinion through consultation of primary sources from both entities. That includes principals such as Colonel Vincent, his second-in-command Col. James C. Rice—both of whom died before writing anything about the battle—and even General Warren, who recalled very little about Gettysburg, especially after he became embroiled in an unpleasant inquiry regarding his dismissal by Maj. Gen. Philip Sheridan at Five Forks near the end of the war.

If it were not for Oliver Willcox Norton, a participant, we would know even less. On the whole, there is the matter of the other three regiments in Vincent's

brigade—the 16th Michigan, 44th New York, and 83rd Pennsylvania—and their contributions, not to mention the essential involvement of the 140th New York Infantry, part of Brig. Gen. Romeyn B. Ayres's 2nd Division in the V Corps. As famously written, it is the victor who tends to write the history, even though he or she does not always get it right. Efforts to protect reputations, a spin on the actual event to make a more positive outcome, or perhaps to discredit certain individuals who may or may not be able to defend themselves are factors that make the telling of history "human"—and, as a result, are the genesis of some of the fallacies that have worked themselves into the "history." My effort here is to get the history more right based on soldier experiences (drawing at times on my own feelings from my combat experience in Vietnam) and to offer the most reasonable explanations of what likely happened on that "hill" on July 2, 1863.

Joe Boslet
July 2025

Chapter One

"Best laid plans of mice and men"

— Robert Burns, poem "To a Mouse," November 1785

Setting the Stage: Moving Into Position

As a muggy but relatively quiet morning turned to afternoon on July 2, it had become apparent that more heavy fighting with General Robert E. Lee's Army of Northern Virginia lay ahead for Maj. Gen. George G. Meade and the Army of the Potomac. Lee's forces had beaten the boys in blue back on all fronts during a series of clashes on July 1, but Meade's Federals had not been chased from the field and had established a reasonably intact line of defense that extended south from Culp's Hill to a position an adjacent pair of modestly sized hills about to become known to history as Little Round Top and Big Round Top. Meade had assumed command of the Army of the Potomac from Maj. Gen. Joseph Hooker only four days earlier, and once fighting broke out at Gettysburg in the early hours of July 1, he began rushing his scattered army to the crossroads town from positions in Maryland and southeastern Pennsylvania. Reports from civilian witnesses, Union observers, and Bureau of Military Information chief Col. George H. Sharpe left little doubt the Confederates were not done here, planning to unleash a second round of attacks on July 2. It remained uncertain, however, whether Meade would have his full army in place in time.

Commanding one of the units Meade had rushed to Gettysburg—the V Corps that Meade commanded until his promotion—was 41-year-old Maj. Gen. George Sykes. A member of West Point's Class of 1842, Sykes had fought with the corps since it formed on May 18, 1862, during Maj. Gen. George McClellan's Peninsula campaign. When Meade replaced Maj. Gen. Joseph

Hooker atop the Army of the Potomac on June 28, 1863, he had no qualms handing the reins of the V Corps to Sykes.

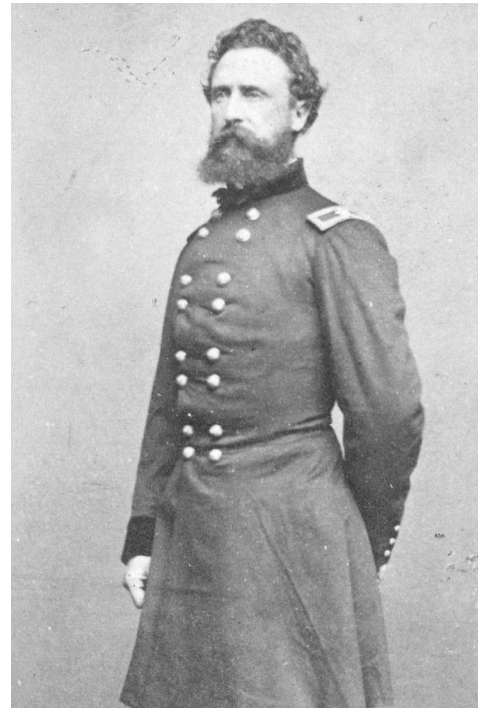
The V Corps was known as the Union Army's most professional unit, with nearly all its general officers US Military Academy graduates. Of the corps' 35 regiments, 10 were US Army Regulars and nine were Pennsylvania Reserves—including the 42nd, the famed "Bucktails." In addition, two of the corps' five artillery batteries (26 total guns) held that designation: Battery D, 5th US Light (under Lt. Charles E. Hazlett) and Battery I, 5th US Light (under Lt. Malbone F. Watson). In total, Sykes had 10,917 effectives on hand at Gettysburg.[1]

Just after dark on July 1, the V Corps began marching toward Gettysburg from Hanover, Pennsylvania. With three brigades, the 1st Division, commanded by Brig. Gen. James Barnes, led the way on what was supposed to be a 15-mile march. Sykes had been instructed to complete the march overnight, but about midnight his men bedded down along the Hanover Road at Bonaughtown (present-day Bonneauville), still about five miles from Gettysburg. Reports of heavy Confederate activity in the area compelled Sykes not to risk advancing farther in the dark.

Rising about 4:00 a.m. on July 2, Sykes's men pushed ahead for another two hours or so and arrived on the east side of Wolf's Hill (just south of the Hanover Road) at approximately 7:00 a.m. Like their counterparts in Lee's famed army, the Yankees showed they too could cover extensive ground when required by a mission. To this point, the V Corps had in fact marched about 60 miles since June 29, including the final 26 or so from 7:00 a.m. on July 1. It had been a grueling effort considering a number of men were reportedly both shoeless and hatless, and exhausted stragglers trailed the long column throughout. By dawn on this second day of fighting, Sykes' Federals were in position to provide the support Meade would clearly need.[2]

1 J. David Petruzzi and Steven Stanley, *The Gettysburg Campaign in Numbers and Losses* (El Dorado Hills, CA, 2012), 108. Note: The V Corps' strength at Gettysburg varies according to source, but I defer to the Petruzzi-Stanley book here. Rather than splitting hairs between use of terms "effective" and "present for duty—equipped," the numbers presented in this book represent soldiers ready to fight.

2 *OR* 27/3:483 (Sykes Report); Brian A. Bennett, *The Beau Ideal of a Soldier and a Gentleman: The Life of Col. Patrick Henry O'Rorke From Ireland to Gettysburg* (Lynchburg, VA, 2014), 112; Pfanz, *Gettysburg—The Second Day* (Chapel Hill, NC, 1987), 52; Thomas A. Desjardin, *Stand Firm Ye Boys From Maine: The 20th Maine and the Gettysburg Campaign* (Gettysburg, 1995), 31; William H. Powell, *The Fifth Army Corps (Army of the Potomac): A Record of Operations During the Civil War in the United States of America, 1861–1865* (New York, 1896), 513; Michael Schellhammer, *The 83rd Pennsylvania Volunteers in the Civil War* (Jefferson, NC, 2003), 169; John J. Hennessy, ed., *Fighting With the Eighteenth Massachusetts: The Civil War Memoir of Thomas H. Mann* (Baton Rouge, LA, 2000), 175; Allen C. Guelzo, *Gettysburg: The Last Invasion*, 226.



Major General George Sykes, Commanding Fifth Army Corps. *LOC*

As a commander, Meade made no secret he wanted West Pointers around him. He had, in fact, received the blessing of General-in-Chief Henry W. Halleck to place people in command whom he trusted. West Point–trained officers knew the drill and what was expected of them, and most had faced similar challenges throughout their careers and in warfare. Seven years Meade's junior, Sykes grew up in Dover, Delaware, not far from Meade's boyhood home of Philadelphia. His earnest experience before the Civil War was typical of most career officers, complete with stints in the Second Seminole War, the Mexican War, and then fighting against Indians at outposts in the American Southwest. He commanded 5th Corps' 2nd Division through the campaigns of 1862 and at Chancellorsville in April–May 1863 before assuming command of the corps from Meade.

Sykes, though, did have a reputation for being a little too deliberate. He acquired the sobriquet "Tardy George" at West Point and continued to get heckled as having "the slows" during his Regular Army career. Nevertheless, he was a consummate professional, and his troops were known to be well-trained and eager to fight, That meant he usually could be counted on not to make the mistakes common to civilian commanders.

As a fellow officer would write:

> It would have been hard to find a better officer in the Army than Sykes . . . he was so thoroughly and simply a soldier, that he knew little of politics and cared less. [He was] one of the coolest men in danger or confusion that we had in the whole Army. He enforced discipline like a machine and has apparently no more sentiment than a gun-stock.

Although Sykes tended to come across to his subordinates as stiff and crusty—generally unemotional—plenty of others saw him as "mild, steady man, and very polite" and "a man who always proved to be a brave and efficient officer." Indeed, he would make positive contributions in the critical decisions Meade and the army would have to make on Day 2 at Gettysburg.[3]

* * *

If getting everyone to Gettysburg this day was not demanding enough, getting them there in fighting condition was an entirely different measure. In addition to rest, most of the soldiers desperately needed food, water, and even personal maintenance. "The strain," one soldier commented, "had proved almost too much for our powers of endurance—long, hot, dusty and depressing—when hundreds were falling exhausted by the roadside, and every face looked like a piece of leather, bestreaked with sweat, and besprinkled with dust." Lamented Pvt. Manley Stacey of the 111th New York Infantry: "I was so completely worn out & exhausted that I groaned at every step. The road was lined with men for five miles. We lost 2 boys that I know of out of the regiment that died yesterday [likely heat stress]."

Private Robert Carter of the 22nd Massachusetts Infantry remarked after drawing brogans that didn't fit from a supply depot in Frederick, Maryland—one size too small—that by the time he reached Gettysburg , his toes had palpably curled. The blisters, he wrote, had been rubbed so raw by sweat that sand worked in once they broke, meaning he could barely walk, as every movement was like stepping on hot coals. Another soldier noted that while marching in the dark, "We would march a while then stop, and stand until we had to sit down and rest. But scarcely would we get down until the order 'forward' would be given." Observed one Massachusetts trooper: "We go limping around with blistered feet and chafed limbs, and lame shoulders."

During the march, Elisha Hunt Rhodes of the 2nd Rhode Island Infantry confessed in what would become his famed diary: "Little is said by anyone, for we are all too weary to talk, only now and then an officer sharply orders men to close up."

Even for the generally better-supplied Union army, inadequate footwear was an overwhelming concern. According to one author, possibly a-quarter of Meade's army was shoeless. The animals suffered, too, and were worn down from hard marching, needing forage and shoes. An army, Meade fully realized,

3 Tagg, *The Generals of Gettysburg*, 81-83; Warner, *Generals in Blue*, 492-93; Pfanz, *Gettysburg—The Second Day*, 207.

moved on its feet and on the backs of its animals, and though he was well aware of the logistical issues he faced, the commander knew it was critical to get his fighting troops into combat-ready alignment.[4]

* * *

It is surprising than an individual overlooked in many Civil War histories is Meade's son and namesake, George Gordon Meade Jr. Although the younger Meade maintained a rather low profile working in his father's shadow, he was diligent and accomplished. Born in Philadelphia on November 2, 1843, George Jr. could not replicate his father's amplitude at the US Military Academy. He incurred his fair share of demerits at West Points, in fact, and left after two years in the early stages of the Civil War.

The younger Meade enlisted first as a private in the 8th Pennsylvania Militia during the 1862 Antietam campaign but would see no combat. After his discharge from that unit, he was commissioned a cavalry officer in the 6th Pennsylvania Cavalry (Rush's Lancers) and fought during the Fredericksburg campaign and during George Stoneman's cavalry raid in April–May 1863. In June 1863, he was promoted to captain and assigned as an aide-de-camp on his father's staff (the beginning of a continuous service term until his father's death seven years after the war in November 1872). His fellow cadets at West Point considered his rather delicate though handsome, some describing him simply as reed-thin with a wispy mustache. He would do his father proud, however, and also was a critical benefactor to Civil War historiography by compiling General Meade's memoirs, *Life and Letters*.[5]

George Jr. would have a role in his father's first command imbroglio on July 2: a showdown with Maj. Gen. Daniel Sickles of the III Corps, a political appointee and Meade's only non-West Point corps commander. When he arrived at Gettysburg early that day, Sickles was ordered to position his command, nearly 10,750 men, on a line extending from the II Corps' left flank on Cemetery Ridge to a position recently vacated by Brig. Gen. John

4 Ken Bandy, Florence Freeland, and Margie Riddle Bearss, *The Gettysburg Papers* (Dayton, OH, 1986), 714, 716; David L. Shultz and Scott L. Mingus, *The Second Day at Gettysburg: The Attack and Defense of Cemetery Ridge, July 2, 1863* (El Dorado Hills, CA, 2015), 136; John Michael Priest, *"Stand to It and Give Them Hell": Gettysburg as the Soldiers Experienced It From Cemetery Ridge to Little Round Top, July 2, 1863* (El Dorado Hills, CA, 2014), 28; Trudeau, *Gettysburg*, 270; Robert Hunt Rhodes, ed., *All for the Union: The Civil War Diary and Letters of Elisha Hunt Rhodes* (New York, 1985), 115; Brown, *Meade at Gettysburg*, 173-74, 196-97.

5 George Gordon Meade III, ed., *The Life and Letters of George Gordon Meade, Major General United States Army*, 2 vols. (New York, 1913), vol. 1, vi-vii.

W. Geary's 2nd Division in the XII Corps (specifically the 5th Ohio and 147th Pennsylvania in Col. Charles Candy's 1st Brigade) on the northwest slopes of Little Round Top. Geary had left this position about 4:30 a.m., and Maj. Gen. David Birney, commander of the III Corps' 1st Division, noted that he relieved Geary about 7:00 a.m. and formed a line with his left flank resting on that prominence (which he labeled "Sugar Loaf Hill"). Sickles made his headquarters "in a small patch of woods on the west side" of Taneytown Road about a half-mile south of Meade's headquarters in a farmhouse owned by Lydia Leister, a recently widowed mother of six.[6]

A little after 9:00 a.m., Captain Meade delivered a message to Sickles from the Army of the Potomac commander inquiring about the disposition of his corps. Resting in his tent, Sickles pushed against the inquiry, telling his aide to let Meade know he had yet to make any decisions—not quite true, as Sickles was already weighing a move. When George Jr. informed his father of Sickles's response, the general was visibly upset, instructing his son to return and instruct Sickles to report to him immediately.[7]

Even then, Sickles did not arrive at Meade's headquarters until nearly 11:00 a.m. He had also begun the machinations of redeploying the III Corps from the position it had been assigned that day, principally one with its left anchored at Little Round Top. Unhappy with the alignment and fearing he was vulnerable on his left, Sickles had initially sent forward a large skirmish line toward the Emmitsburg Road, supported by Brig. Gen. Charles Graham's 1st Brigade. Sickles touched on his displeasure during their 11:00 a.m. meeting and a frustrated Meade informed Sickles that the enemy pressure was on the III Corps' right, not the left. He directed his subordinate to reposition his command as originally ordered. Sickles balked, declaring that he needed help to do so and suggesting that Brig. Gen. Gouverneur K. Warren perhaps accompany

6 Pfanz, *Gettysburg—The Second Day*, 59-60; Trudeau, *Gettysburg*, 294; OR 27/1:836; Mary deForest Geary, *A Giant in Those Days* (Brunswick, GA, 1980), 157; Shultz and Mingus, *The Second Day at Gettysburg*, 133-34; Priest, *"Stand to It and Give Them Hell,"* 15; James Woods, *Gettysburg, July 2: The Ebb and Flow of Battle* (Gillette, NJ, 2012), 28 (map), 29-30. James A. Hessler, *Sickles at Gettysburg* (El Dorado Hills, CA 2009), 110, 112; Coddington, *The Gettysburg Campaign*, 343.

7 Brown, *Meade*, 204-05; Hessler, *Sickles at Gettysburg*, 108-10; Coddington, *The Gettysburg Campaign*, 343. Note: According to James Hessler's excellent study of Sickles, the III Corps' commander knew precisely where he was supposed to be. Apparently, the regimental historian of the 141st Pennsylvania noted that Geary moved at 5:00 a.m. but that Sickles did not receive the order to replace him until 6:00 a.m., insisting he had no idea where Geary was. Witnesses such as Pvt. Robert Carter of the 22nd Massachusetts noted, however, that the position was "pointed out to him." Carter might not have been a direct eyewitness, but there were discussions throughout the morning between Sickles's and Meade's staffs about the III Corps' placement.

him in order to inspect the lines. Meade informed Sickles that Warren was already preoccupied and said he would instead send Brig. Gen. Henry Hunt, his chief of artillery.

About noon, alarmed by reports of Confederate troops across the Emmitsburg Road, Sickles deployed the rest of his corps forward—his left now anchored at Devil's Den. Hunt would report to Meade that the III Corps was not where it was supposed to be and that more attention to this development was required. Sickles, it turned out, would get all the attention he desired in the next few hours—from friends and enemies alike.[8]

* * *

As the afternoon neared and both armies positioned themselves for further action, weather became a factor. Each had navigated tremendous distances to reach the Gettysburg environs and increasing temperatures and humidity as June turned to July promised to severely impact the pending physical challenges of combat. At the Round Tops, the heat had become intolerable for many. The Rev. Dr. Michael Jacobs of Pennsylvania College (today's Gettysburg College) recorded temperatures throughout the day at the institution just north of the town square and later reported that the temperature at 7:00 a.m. on July 2 was 74 degrees (with cloudy skies). Soldiers, however, would provide additional detail in letters home and personal diaries that the morning had "dawned close and foggy," "rainy," "cloudy and close," and that the "air was thick." Several also described early morning showers about three miles southeast of Gettysburg (just east of the Round Tops) with ground fog in spots due to high humidity. There had been a dead calm in the air at sunrise, but by mid-morning a gentle southern breeze (measured about 2 mph) had dissipated the fog.

According to Jacobs, the temperature at 2:00 p.m. was 81 degrees, though it would not be unreasonable to expect temperatures on the open ground at the southern end of the battlefield to hover between the high 80s and low 90s (see Appendix E for a more detailed discussion of the relevant meteorology). An artillerist with Battery B, 1st New Jersey Light Artillery (III Corps) noted that it was 92 degrees in the shade at his unit's position along the Wheatfield Road, just east of the Peach Orchard, that afternoon. Some of the men, he noted, commented after getting a drink of water that "this is hotter than hell here."

8 Glenn W. LaFantasie, *Twilight at Little Round Top, July 2, 1863—The Tide Turns at Gettysburg* (Hoboken, NJ, 2005), 59; Coddington, *The Gettysburg Campaign*, 343-44; Pfanz, *Gettysburg—The Second Day*, 93, 485 (n. 40); Tagg, *The Generals of Gettysburg*, 188-189; Edward G. Longacre, *The Man Behind the Guns: A Military Biography of General Henry J. Hunt, Chief of Artillery, Army of the Potomac* (Cambridge, MA, 2003), 161, 163.

Conditions for the remainder of the day reportedly were mostly sunny and clear—and hot. Jacobs did not comment on the humidity, but a number of soldiers described the weather as "sultry" and one commented that the open fields were "baked" by the bright sunshine. Their uniforms provided no relief. Union soldiers wore generally dark blue cloth (a wool–cotton mixture like flannel) and Confederates were clad mostly in butternut or cadet gray jean cloth (cotton-like denim) uniforms that would have contributed to relative personal temperature levels. Also, darker colors and heavier fabric tend to absorb heat—making it feel hotter. Lighter colors, which tend to reflect heat, and less weighty fabric are known to have the opposite effect.[9]

Many soldiers revealed in letters and post-battle accounts that they were prepared not to let the obvious heat hold them back, and they stressed conviction that the weather itself would not have any differential effect on the proceedings. Surprisingly understated in many histories of the battle is the issue of water—how the lack of it affected individual soldiers in combat. Personally, I am unable to downplay the significance of water. My experience in Vietnam attests to that fact when on field operations, the priorities were obvious: ammunition, *water*, and food in that order. Outside larger cities in Vietnam, water sources were likely similar to what the average Civil War soldier experienced—wells, streams, lakes, ponds, and catchment systems (good only during monsoon season). That meant the quality of that water was not good, full of a rotting smorgasbord, little critters, and vile pathogens. You did not drink the water without some kind of chemical treatment (chlorine tablets) or heavy boiling.

9 National Weather Service, "Definitions of Twilight" [https://weather.gov/fsd/twilight. Retrieved 5/28/20]; Pfanz, *Gettysburg—The Second Day*, 58; Brown, *Meade*, 190; Priest, *"Stand to It and Give Them Hell,"* 32; Reverend Dr. Michael Jacobs, *Meteorology of the Battle* [http://www.gdg.org/Research/Other Documents/Newspaper Clippings. Retrieved 5/28/20]; David Shultz and Scott Mingus, "The Sunrise Hours at Gettysburg, July 2, 1863," *Gettysburg Magazine* (January 2017), Issue 56, 27; Billy Arthur and Ted Ballard, *Gettysburg Staff Ride: Briefing Book*, US Army Center of Military History, 44-45; Shultz and Mingus, *The Second Day at Gettysburg*, 145; Thomas L. Elmore, "Torrid Heat and Blinding Rain: A Meteorological and Astronomical Chronology of the Gettysburg Campaign," *Gettysburg Magazine* (July 1995), Issue 13, 12-13. Elmore noted that in the direct sun, temperatures could be up to 15 degrees higher than the 81 degrees recorded by Prof. Jacobs; Rod Gragg, *Covered With Glory—The 26th North Carolina Infantry at the Battle of Gettysburg* (New York, 2000), 144, 148. Note: Temperatures are recorded in the shade to counter the effect of radiant heating. Likely, Jacobs's temperatures recorded in the sun would have been measurably higher; Michael Hanifen, *History of Battery B, First New Jersey Artillery* (Ottawa, IL, 1905), 73. Hanifen was a member of the battery and served in the right section at Gettysburg. This was Capt. A. Judson Clark's battery assigned to the III Corps' Artillery brigade. See Longacre, The Man Behind the Guns, 167, noting that several other artillerists, including Brig. Gen. Robert O. Tyler, commanding the Artillery Reserve, fainted from sunstroke during the afternoon. Francis A. Lord and Arthur Wise, *Uniforms of the Civil War* (New York, London, 1970), 18-21, 102, 113; Bell Irvin Wiley and Hirst D. Milhollen, *They Who Fought Here* (New York, 1959), 70-71.

Civil War soldiers, of course, did not have even those luxuries—a prime reason so many became sick (e.g., cramping, lower intestinal distress, nausea, dizziness, not to mention heat stresses from lack of adequate hydration). Armies tended to operate near water for the simple reason they were so dependent on it: drinking water for soldiers and animals; water for swabbing cannons; cooking; bathing, sanitation; and other general uses. Clearly, the means to transport large quantities of water to the battlefield on a continuous basis was not available as it was in Vietnam, where we had water trucks and portable rubber storage bladders. It typically influenced where an army would position itself more than even terrain or enemy position, although those factors would be considered foremost in decision-making. Without an adequate supply of water, animals would eventually break down, soldier performance would suffer, cannons could not be fired, and logistical support functions would slow down or cease altogether.

As happened throughout the Civil War, the fighting at Gettysburg would be shaped by water resources—the Union army on the Rock Creek basin and the Confederates on the Willoughby Run–Marsh Creek basin. Soldier narratives clearly supported this reality.[10]

* * *

Although fighting at some level seemed certain at Gettysburg on July 2, Meade and Lee spent the morning weighing their options. Operating without a reliable cavalry presence—with Maj. Gen. J. E. B. Stuart troopers still en route—Lee had incomplete information on the respective positions of Meade's army. He knew that not all seven of the Federal infantry corps had arrived on the battlefield, however, and ultimately decided that his best option would be to go on the offensive while the Army of the Potomac was understrength. He

10 DoD GEN-25/DA Pam 360-521, *Handbook for U.S. Forces in Vietnam* (Washington, D.C., 1966), 164-67; Louis Le Grand, M. D., *The Military Handbook and Soldier's Manual of Information* (New York, 1861), 81-98; Penn State Extension, *How Much Drinking Water Does Your Horse Need?* 2020 [https://extension.psu.edu/how-much-drinking-water-does-your-horse-need. Retrieved 8/16/22]. Note: Amounts can vary but on average about 5–10 gallons a day; 15 gallons if heavy activity such as pulling artillery or during cavalry operations. With an estimated 30,000 horses (minimum number, not counting mules) for the Army of the Potomac, which calculates (conservative figure of 10 gallons per horse) to 300,000 gallons of water a day just for the horses. Lee and the Army of Northern Virginia had the same issue, and it would prove critical to their functioning. Also see Gregory A. Coco, *A Strange and Blighted Land, Gettysburg: The Aftermath of a Battle* (El Dorado Hills, CA, 2017), 314. Note: The frame of reference here is tactical application. Troy D. Harman's *All Roads Led to Gettysburg: A New Look at the Civil War's Pivotal Campaign*, (Lanham, MD, 2022) is a more comprehensive examination on a strategic and operational perspective relative to road nets, railroads, waterways, and terrain features as influencing decision-making.

called for a three-pronged, simultaneous assault on the Federal lines. While Lt. Gen. James Longstreet's First Corps attacked the left of Meade's fish-hook defenses, Maj. Gen. Richard Anderson's Division in A. P. Hill's Third Corps would do likewise on the Union center along Cemetery Ridge. To keep the Federal forces in place on Culp's Hill and Cemetery Hill, Lee directed Lt. Gen. Richard Ewell's Second Corps to "demonstrate" on the right, which hopefully would prevent Meade from diverting reinforcements as needed to his center and left. It was a daunting scheme and might have worked if it had been conducted in a timely manner, but for several reasons Longstreet was unable to launch his attack until well into the afternoon.

Meade distributed a circular to his staff officers at 11:00 a.m. that read:

> Headquarters Army of the Potomac—July 2, 1863—11 a.m.
>
> The staff officers on duty at headquarters will inform themselves of the positions of various corps, their artillery, infantry, and trains. Sketch them, with a view to the roads, and report them immediately, as follows:
>
> Third Corps, Colonel [Edmund] Schriver; Second Corps, Lieutenant-Colonel [Nelson H.] Davis; Twelfth Corps, Lieutenant [Henry W.] Perkins, First Corps, Lieutenant [Paul A.] Oliver; Fifth Corps, Captain [Charles E.] Cadwalader.
>
> It is a desire to know the roads on or near which the troops are, and where their trains lie, in view of movements in any direction, and to be familiar with the headquarters of the commanders.
>
> By command of Major-General Meade:
>
> S. Williams, Assistant Adjutant-General.[11]

At 3:00 p.m., Meade held a meeting with his corps commanders, intending to: (1) exchange information; (2) make sure all commanders knew the army's present situation; and (3) for all to know Meade's intentions, even though prospects might well change depending on situational factors. To determine the position of his various forces at this stage, Meade turned to a copy of a sketch that Capt. William H. Paine, the army's cartographer, had created earlier in the day, as well as a copy of the Adams County base map (the Hopkins/Converse 1858 edition). That map identified businesses, farms, residences, road net, and major streams (also called a real property map, as it located fixed structures and

11 *OR* 27/3:487.

other improvements not movable). Meade supplemented it with information from his corps commanders and staff to plot locations for all his units.[12]

A glaring issue with these maps, however, was that they included no topography or terrain profiles. Such topographic maps would not be readily available until after the war, so what Meade could see here was essentially flat ground. Helping locate units for Meade was General Hunt, his artillery chief, who had toured the lines circuitously to monitor the army's positions and to select ways to best utilize the army's artillery support. After scouting positions in the vicinity of Culp's Hill, Hunt headed south along Cemetery Ridge and the Round Tops. About 9:30 a.m., in fact, he visited the signal station on Little Round Top and had an extended conversation (perhaps 30 minutes) with Capt. James S. Hall, who commanded the signal detachment there. To gain access to the station, he coincidentally used an old logging road off the northeastern quarter that intersected with the Wheatfield Road (not its name at the time). From this discussion and other observations, Hunt reported in person to Meade before the commander issued his 11:00 a.m. circular and before he called for the 3:00 p.m. meeting with his corps commanders.[13]

A member of West Point's Class of 1839, Hunt was an army brat through and through. Both his father and paternal grandfather were career officers in the Regular Army, and his brother Lewis C. Hunt (four years his junior and West

12 Meade III, ed., *Life and Letters*, vol. 2, 107-108, 115. Note: Meade, during the cannonade on July 3, was forced to move his headquarters several times, eventually settling on the Baltimore Pike, about a mile south of Maj. Gen. Henry Slocum's at Powers Hill; Sears, *Gettysburg*, 262; Shultz and Mingus, *The Second Day at Gettysburg*, 252; Pfanz, *Gettysburg—The Second Day*, 139; Brown, *Meade*, 208; Map of Adams Co. Pennsylvania From Actual Survey, Philadelphia, 1858 edition [https://www.loc.gov/item/2012592149/. Retrieved 7/28/22]. This map was published by M. S. & E. Converse Publishers of Philadelphia in 1858. G. M. Hopkins Jr., C. E., did the actual survey and R. P. Smith was the mapmaker. The map was heavily used by most senior commanders on both sides—a copy of it is among Confederate General Richard S. Ewell's wartime papers [https://bostonraremaps.com/inventory/of-the-utmost-importance-at-gettysburg. Retrieved 7/28/22]. Note: The Confederate army also had copies of Jedediah Hotchkiss's map of the Cumberland Valley, a survey completed January–April 1863 for Stonewall Jackson (Hotchkiss was the topographical engineer for Jackson's Second Corps, Army of Northern Virginia) – See *Atlas to Accompany the Official Records of the Union and Confederate Armies*, pub. under the direction of the Hons. Redfield Proctor, Stephen B. Elkins, and Daniel S. Lamont, Government Printing Office, Washington. D.C., 1891–1895, Plate CXVI (116), 2, reprint Thomas Yoseloff, New York and London, 1958.

13 Maps during the Civil War had tendency to follow the French school of military art for elevations/contours. Even Jed Hotchkiss used the same techniques: hachures and shading versus contour lines. Tagg, *The Generals of Gettysburg*, 188. Shultz and Mingus, *The Second Day at Gettysburg*, 206, 211; Longacre, *The Man Behind the Guns*, 163; Woods, *Gettysburg, July 2*, 70-74. Note: Estimates of Hunt's Little Round Top timeline are derived according to the initial movement of the 2nd U.S. Sharpshooters south through the Plum Run gorge and the arrival of Col. P. Regis de Trobriand's 3rd Brigade in Birney's 1st Division, moving north along Plum Run—all occurring 9:30–9:45 a.m. and likely witnessed by General Hunt.

Brigadier General Henry J. Hunt, Chief of Artillery, Army of the Potomac. LOC

Point Class of 1847 graduate) served in the Union Army, mostly in the Carolinas. Henry Hunt fought in the Mexican War, earning brevets for gallantry. His peers described him as a man with a "common touch"—he could be formal and somewhat stilted in performing his duties, but off-duty he was sufficiently casual and easygoing enough to garner a host of comrades. As one close friend asserted: "There was probably no officer in the United States army who was more popular with both officers and men, than Hunt. Modest, unassuming, warm-hearted, and just to all, he was indeed the true type of a soldier and gentleman."

In the antebellum years, Hunt had spent considerable time in revising the system of light artillery tactics that the War Department adopted in 1860 and which both sides used during the Civil War. Often engaged in faro (a card game in which players bet against the dealer's draw), he enjoyed a glass of whiskey and an occasional cigar when off-duty. Although Brig. Gen. Robert O. Tyler commanded the instrumental Artillery Reserve at Gettysburg, Hunt was the one Meade depended on. Meade relied on him to advise on all the artillery dispositions and to help with evaluating the infantry's use of advantageous terrain.[14]

* * *

It is telling that Sickles was unable to make the meeting at the appointed time despite two orders to attend. Sickles insisted that he was involved in placing his troops on line and, with the enemy along his front, he did not want

14 Tagg, *The Generals at Gettysburg*, 187-189; Warner, *Generals in Blue*, 242-43; Longacre, *The Man Behind the Guns*, 29, 36, 46.

to leave considering there might be imminent contact. Finally, though, Sickles relented and hurried to the meeting.[15]

At the meeting, which lasted at most 15 minutes, Warren raised further alarm that the III Corps was not in proper position on the left flank and that the Round Tops were unoccupied. Meade ordered the V Corps, which had been initially placed to provide support to the right side of the Union line in the Culp's Hill area, to move immediately to the army's left flank and informed Sykes that he would meet with him and provide more detailed instructions.[16]

Hunt, meanwhile, had checked the lines and artillery placements in the vicinity of Houck's Ridge in the Plum Run Valley about 2:45 pm. He reviewed Capt. James E. Smith's placement of the 4th New York Light Artillery on the south nose of the ridge, two sections the battery's gunners had essentially manhandled into position. Hunt revealed that he was satisfied with their placement considering the perceived axis of the expected enemy attack, but he conceded he would probably lose those guns if the enemy pressure were stronger than hoped. As he left to retrieve his horse, tied to a tree on the east side of Plum Run Valley, Confederate guns found the range of Smith's 10 pounder Parrott rifles. Recalled Hunt:

> On reaching the foot of the cliff [the eastern side of the formation known as Devil's Den], I found myself in a plight at once ludicrous, painful, and dangerous. A herd of horned cattle had been driven into the valley between Devil's Den and Round Top, from which they could not escape. A shell had exploded in the body of one of them, tearing it to pieces; others were torn and wounded. All were *stampeded*, bellowing and rushing in their terror first to one side, and then to the other, to escape the shells that were bursting over and amongst them. Cross I must, and in doing so I had my most trying experience of the battle of Gettysburg. Luckily the poor beasts were as much frightened as I was, but their rage was subdued by terror, and they were good enough to let me pass through scot-free, but badly demoralized. However, my horse was safe, I mounted, and in the busy excitement that followed almost forgot my scare.

End of Unedited Excerpt

15 Hessler, *Sickles at Gettysburg*, 146; Brown, *Meade*, 217, 220; Pfanz, *Gettysburg—The Second Day*, 140.

16 Hessler, *Sickles at Gettysburg*, 145; Brown, *Meade*, 217; Coddington, *The Gettysburg Campaign*, 345; Guelzo, *Gettysburg*, 258; Pfanz, *Gettysburg—The Second Day*, 140.