

Santa Fe Extra 67 East approaches Christie siding 13 miles east of Richmond, Calif., on Sunday, March 3, 1968. Alcos 67 and 58 were making easy work of a seven-car "Farewell to the PAs" excursion to Stockton featuring five photo stops and a spirited 75 mph sprint over the California Delta.

SANTA FE'S SILENT SENTINELS

STORY AND PHOTOS BY
TED BENSON



OPPOSITE LEFT: A cantilever-mounted Style S semaphore frames Santa Fe Alco S-2 2339 on the eastbound Richmond-Oakley Turn at Port Chicago, Calif., on Saturday, January 10, 1970.

OPPOSITE RIGHT: It's a quiet, misty morning at Christie, Calif., on Saturday, January 11, 1969. It's always quiet on the Santa Fe, with long hours of scant action and lots of time listening to the car radio where Judy Collins has recently caught my ear. "Someday Soon," the wistful song about a girl smitten with a rodeo rider, could easily be the story of another young woman and her beau who "loves his damned old railroad train as much as he loves me." Someday soon she'll be coming with me, but not today. Right now the only thing headed my way is the westbound *San Francisco Chief* with five F7s and nine cars running 14 minutes late on a three-day journey from Chicago. Warbonnet glistening in the rain, Santa Fe 310 saunters up to Christie's east switch at 9:35AM, holding the main for a meet with eastbound tonnage.

BELOW: One year after the Alco excursion, F7s are in charge of another fan trip as Extra 42C East rolls past Signal 11801 between Pinole and Herpoco en route to Riverbank, Calif., on Sunday, March 23, 1969. Wild mustard and fragrant eucalyptus trees frame the bucolic scene.

Doing so was a decision I'd come to regret, for Santa Fe was an uncommon carrier of deep-rooted tradition. Passengers rode behind sleek, streamlined cab units in red, silver, and yellow paint unchanged since 1937. Gold leaf decorated every depot. Caboose displayed proper kerosene markers. And then there were the semaphores.

Santa Fe began installing automatic block signals on the Valley Division in 1917. By 1925, Union Switch & Signal Style S semaphores protected 223 of the 304 miles between Bakersfield and Ferry Point in Richmond. Forty years later, a significant number of original signals remained on the final 30 miles west of Pittsburg. While trains into Richmond may have been few in the late sixties, semaphores in scenic surroundings made each one worth the wait.

Santa Fe

The First Time

I KNEW THEY WERE OLD the first time I saw them. Signals synonymous with a century of steam, the Southern Pacific semaphores in Oakland, Calif., were ancient technology by 1958. Back home in Modesto, state-of-the-art searchlights had protected SP operations for as long as I could remember — as if it mattered. Trains were my primary focus in those pre-teen years. Automatic block signals, no matter how old, were just part of the scene.

Raised in a community founded by Central Pacific, my railroad world revolved around the Espee. Santa Fe steel lay five miles from our home, but it might

as well have been 500 given the omnipresent Octopus. I was a 20-year-old junior at San Jose State College in 1968 before AT&SF really registered in my expanding railfan consciousness.

Photography on the west end of Santa Fe's Valley Division demanded dedication. Rail traffic east of Richmond was sparse prior to the advent of short, fast freights in the early 1970s. Five trains in 12 hours was a busy day for Franklin Canyon. Two miles away in Martinez, SP could match that number in 90 minutes. Given the lack of action, it was easy to shortchange AT&SF.



OPPOSITE TOP: With a consist swollen by equipment returning from PTC testing on state-owned track south of Albuquerque, Amtrak Train 4 parts the blades at Bernal on Thursday, October 8, 2020. Amtrak units 205, 159, 170, and 22 lead test cars 5351 and 10250 ahead of seven Superliners and a baggage car.

OPPOSITE BOTTOM: An hour after dawn on Tuesday, October 6, 2020, the crystal blue sky above San Miguel County, N.M., frames a waning gibbous moon setting near the census-defined place of Bernal. Standing at an elevation of 6,194 feet, Signal 7911 raises a clear indication for California-bound trains on the Glorieta Subdivision 791 miles west of Kansas City, Mo. History etched into their wood, steel, and glass, the Union Switch & Signal Company Style T-2 semaphores west of Las Vegas, N.M., have been reaching for the stars some 99 years. Two more years will pass before the harvest moon sets over their replacements.

LEFT: Multiple layers of alligatoring aluminum point on the instrument case of the west siding signal at Levy, N.M., testify to the passage of time on September 26, 2022. The durable Style T-2 semaphores are entering their 99th year of service in 2024.

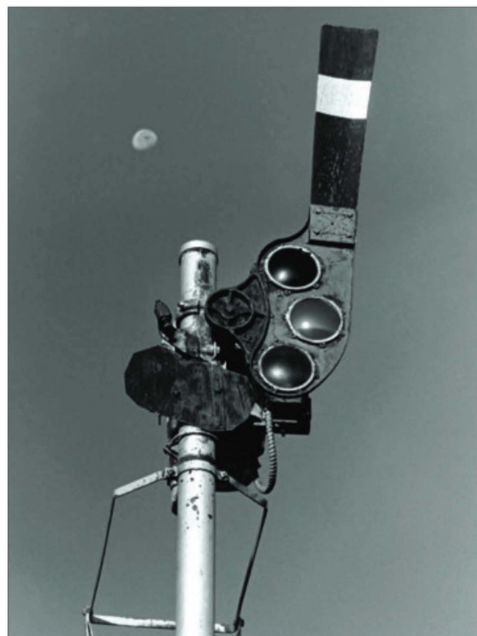
BELOW LEFT: The sign for the east siding switch at Ojita frames westbound absolute Signal 7771 against a cumulus-studded New Mexico sky on September 28, 2022.

Constant

HALF A CENTURY of railroad photography has taught me one simple truth — the only constant is change. It's the fascination with an industry in flux that keeps us coming trackside. The attraction can be defined in four words — "rolling stock" and "fixed plant." "Rolling stock" reflects the ever-evolving technology of trains in motion. "Fixed plant" is railroading's bedrock, rights-of-way forever in place. Bridges, structures, and signals form a foundation that never changes — until it does.

I never intended to become a "signal geek." The thought of signals as primary subject matter didn't cross my mind until good friend Dick Dorn and I spent four spectacular days chasing SP 4449 on Oregon's Siskiyou Line in December 1988. The combination of steam, sun, and semaphores was beyond compare.

Dorn's steadfast devotion to the stalwart Style Bs removed any doubt I had about photographers whose work favored signals over the trains they framed. Given the negative influence of Positive Train Control, it was no surprise to find myself focusing on legacy signal installations after 2008. The searchlights I'd once taken for granted had witnessed the final years of steam before guiding three



generations of diesel power. Touchstones to companies long folded into the pages of history, the iconic H2s became beacons into the past — worthy subjects with or without passing trains.

Semaphores? They were downright prehistoric. By 2018, most of the nation's remaining blades had disappeared — with one notable exception. Ten years after the PTC hammer dropped on a century of railroad tradition, more than three dozen Santa Fe semaphores still served in a far corner of New Mexico. It was time to saddle up for Raton.

High Green

A SERIES OF FORTUNATE EVENTS dating to the early 1900s ensured the survival of Santa Fe's final semaphores into the 21st century. A quarter century after the railway opened to Albuquerque, N.M., in 1880, most of AT&SF's transcontinental freight moved south to the new Belen Cutoff via Clovis. After 1908, Santa Fe passenger traffic would dominate the mountain crossings at Glorieta and Raton.

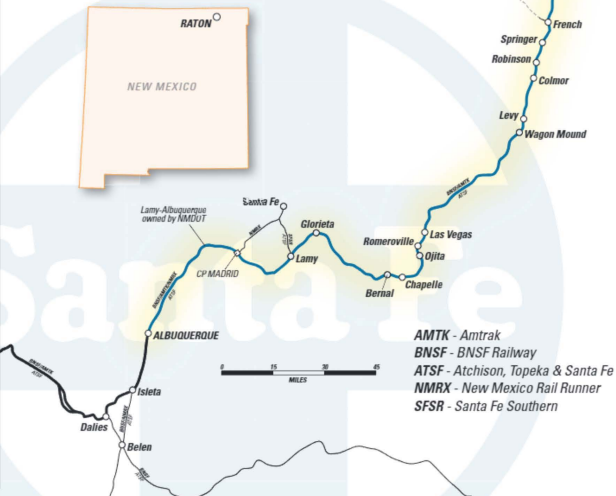
Faster, more frequent schedules brought automatic block signals to the New Mexico Division in 1921, beginning with 33 miles of semaphores west of Las Vegas. The US&S Style T-2s were a significant improvement over the base-of-mast chain-driven Style S semaphores employed on Santa Fe's Coast Lines.

The next 80 years saw tonnage operations west of Raton steadily winding down, accelerating on the heels of the Burlington Northern Santa Fe merger in 1995, finishing in 2007 following a partial line sale to the state of New Mexico for commuter rail service. Freight's demise was the saving grace for Santa Fe's silent sentinels. Signal replacements that had been chipping away at the remaining T-2s came to a virtual halt as BNSF downplayed capital improvements on the Amtrak route. With the *Southwest Chiefs* scheduled to meet outside ABS



SANTA FE'S SILENT SENTINELS

Illustration by Otto M. Vondrak. Not all lines and stations shown. Not an official map. ©2024 White River Productions



OPPOSITE TOP: Rolling toward the landmark bulk of 7,031-foot Starvation Peak on Tuesday, October 13, 2020, Amtrak Train 3 encounters high green at the east end of Chapelle. Some 22 signals at nine installations between mileposts 774 and 791 comprised the last stand of semaphores on the Glorieta Subdivision.

OPPOSITE BOTTOM: Framed by the semaphores at the west end of Chapelle siding, Amtrak Train 4 glides across Bernal Creek following a 1.55 percent descent from Blanchard on October 10, 2020. Heavy trackside vegetation lends a branch line feel not completely out of character for a railroad hosting just two trains a day.

LEFT: On our first trip to Raton in 2018, Dave Styffe and I spent several pleasant minutes chatting with a Glorieta Subdivision signal maintainer awaiting Train 4 at Chapelle. "These old signals are the most dependable we have," the young man informed us. "Finding parts for them is the problem."

territory, Positive Train Control was a moot point.

Summer 2018 found 47 semaphores in service between Albuquerque and La Junta, Colo. Five were single overlap signals in isolated locations on state-owned track west of Lamy, N.M. The other 42 were clustered in two segments east and west of Las Vegas. Working out of Raton, it was possible to spend a full day photographing Amtrak trains 3 and 4 as

far as Lamy with two semaphore shots in each direction. Two trains daily didn't seem like much at first, but given track speeds up to 79 mph and some long miles between photo locations, they were more than enough.

Talking to a signal maintainer on our first trip, Dave Styffe and I noted how the weathered blade of Signal 7881 at the east end of Chapelle blended into a distant mesa when in the stop position.

Returning the following day, we were astounded to find the back of the blade wearing a fresh coat of black!

One year later, every semaphore blade west of Las Vegas sported fresh coats of black along with a single aluminum stripe. September 19, 2019, saw Train 3 approaching the east switch at Chapelle protected by three 98-year-old semaphores bearing witness to time-honored Santa Fe pride.

OPPOSITE: Storm clouds gather in the west following the passage of Amtrak trains 3 and 4 at intermediate signals 7861 and 7862 two miles east of Chapelle on Saturday, October 9, 2021.

BOTTOM: Starvation Peak rises in the distance as Amtrak 155 and 169 bring seven cars of the eastbound Southwest Chief past intermediate signals 7861 and 7862 on the same day.

BOTTOM RIGHT: Early on October 9, clouds sweeping across the face of Middle Mesa frame Amtrak 192 leading seven cars of Train 3 past intermediate signals 7861 and 7862.

Santa Fe

The Road to 786

MOST OF THE SEMAPHORES between Glorieta and Raton were readily accessible for photographs. Others, like intermediate signals 7861 and 7862, located two rail miles east of Chapelle and three-and-a-half miles from the nearest paved road, required a fair investment of time and effort. Once rubber tires could go no farther, shoe leather took over — a two-mile round trip 5,800 feet above sea level. The payoff? Images in a setting little changed for 100 years.

Rolling up from the Rio Tecolote on a 1.49 percent grade stiffening to 1.7 percent for the approach to Chapelle, late-running Train 3 charges west beneath cloud-shadowed Middle Mesa on

a spectacular Saturday, October 9, 2021. Eighty minutes later, the sky show continues over Starvation Peak as eastbound Train 4 drops under the code line — Amtrak 155, 169, and seven cars easing downhill toward Las Vegas, one hour and six minutes behind schedule.

Pausing for a few final frames of the semaphores standing tall against storm clouds gathering in the west, Styffe and I begin the hike back from 786, ready for a leisurely drive into town, Navajo tacos for dinner, and another night at the Palomino Motel. On the shady side of 70, one might say we're getting a little old for this. Given the fruits of this day's labors, we couldn't have cared less.



SANTA FE'S
SILENT SENTINELS



ABOVE: Following a round of signal replacements in 2015, the east end of Wagon Mound siding marked the western boundary of semaphores on the Raton Subdivision — 20 signals in eight installations between mileposts 706 and 725. Thursday, October 8, 2020, finds westbound Train 3 approaching the east switch at Wagon Mound behind a trio of P42DCs.

RIGHT: Three hours late in the aftermath of delays to both *Chiefs* the day before, Train 3 boils over the east switch at Colmor, 16 miles north of Wagon Mound, on October 6, 2020. Seven Superliners ride in the wake of Amtrak 816 and 182. Semaphores on the New Mexico Division were installed incrementally following 1921. The section through Colmor was the last to go into service in 1925.



Into the Shortgrass Prairie

EAST OF LAS VEGAS the character of the railroad shifts dramatically. Beyond the Sangre de Cristo Mountains, the westernmost Great Plains take center stage on the *Southwest Chiefs*' dash toward Raton. The rolling character of the land can be likened to a sea of sod, green or tan depending on the season. Mesas become singular in nature, islands in the short-grass prairie ocean.

Foremost among them is Wagon Mound, the last great natural landmark on the Santa Fe Trail. Cornerstone of the Ocate volcanic field, the 5.9 million-year-old basaltic uplift with its eroded lava palisades resembled a Conestoga wagon with a team of oxen for pioneers making their way west. Visible for 125 miles from the top of Raton Pass, Wagon Mound was a place to pause and refresh, knowing that Santa Fe was just over 100 miles and 12 days away.

It was inevitable that a settlement would grow up in the 6,930-foot shadow of Wagon Mound. Established 40 years prior to the Civil War, the community thrived after the railroad arrived in 1879. Fourteen decades later, Wagon Mound is a quieter place, more attuned to its pioneer days. Motorists on I-25 drop by for cold drinks, snacks, and a few gallons of gas; Amtrak barely disturbs the peace; and the miles to Santa Fe are measured in minutes, not days.



TOP: Two miles east of Wagon Mound, the community's namesake bluff dominates the skyline at intermediate signals 7221 and 7222 as Train 4 passes on October 8, 2020.

MIDDLE: Two miles west of Colmor, intermediate signals 7121 and 7122 frame the passage of Amtrak Train 3 traversing the undulating prairie on August 21, 2018.

LEFT: Five miles north of Wagon Mound, the prominent mesa looms large on the skyline. Flying low over the mile-high plains, eastbound Train 4 strides past the west switch at Levy on August 19, 2020.



Santa Fe



Seen across a mile-and-a-half of open plain, eastbound Train 4 spans the Ocate River toward the west switch at Colmor, beginning another dramatic sweep through the abandoned community on Saturday, October 10, 2020. Dust from fresh ballast laid down earlier in the week rises with the train's 1.29 percent ascent toward the east end of the siding, a tawny cloud eclipsing the rear of a seven-car train led by Amtrak 198.



It's been a long time since the wooden blade on eastbound Signal 7102 felt the stroke of a paintbrush. On Saturday, August 22, 2020, nonexistent point is of little concern for a signal scheduled to come down 39 days after today's edition of Amtrak Train 3 leaves town.

Colmor East and West

SEEN FROM A DISTANCE, Colmor seems to be an oasis in the unrelenting rangeland. Up close, Colmor is revealed as a shell of itself, a ghost of a town 450 people once called home. The only signs of life are fleeting, humanity passing in excess of 70 atop steel belts on Interstate 25 and the steel wheels of Amtrak.

BNSF maintains a siding here for maintenance-of-way use. MofW locks

guard the switches at both ends of the 8,250-foot passing track where six semaphores once stood watch over Santa Fe's comings and goings. Half of the blades came down in fall 2020, victims of funding for new technology. In 2023, Colmor's surviving semaphores continued to go through their twice-daily motions, extending a century-old service record dating to 1925.



Secret of 706

ONE MILE BELOW old Robinson station, intermediate signals 7061 and 7062 marked the east end of Santa Fe semaphores in New Mexico for well over 50 years. Standing atop a 1.12 percent east-bound rise 6,026 feet above sea level, the flat-paired T-2s framed Wagon Mound's distinctive mesa on a graceful 1 degree curve. Perfect sidelight for afternoon trains was the frosting on the cake.

The signals weren't always at this location. When the blades came to the New Mexico Division in 1921, Opposed Overlap circuitry was the standard for automatic block installations. With single semaphores staggered half a mile apart as a safety buffer, 36 signals graced the 20 miles between Robinson and Wagon Mound prior to the advent of centralized traffic control.

Absolute Permissive Block circuitry arrived with the expansion of the Traffic Control System south of Raton in the early 1960s, retiring several intermediate blocks and adjusting the lengths of others. The removal of Robinson siding brought signals 7061 and 7062 to their final placement by October 1962.

Easily accessed from the adjoining two-lane blacktop that once carried U.S. Highway 85, the semaphores south of Robinson offered a variety of camera angles with differing degrees of difficulty. Track-level telephoto views of the east-bound *Chief* were particularly challenging. Limited sight lines in the rolling topography made it impossible to see an oncoming train until the final few seconds. Once Signal 7061 transitioned from Approach to Stop, things happened fast.

That was the moment when the secret of 706 was revealed. If you knew exactly where to look the instant the blade began to drop, you'd catch a fleeting glimpse of Train 4 sailing past the east switch at Colmor, 2.5 rail miles away. At a track speed of 70 mph, the train was in and out of the frame in the blink of an eye.

Capturing that moment took a lot longer. Six failed attempts over the course of four years were the price of success for a set of images that finally came together on October 7, 2021. Ten days later, westward Signal 7061 suffered a motor failure. Two weeks after that, both of the semaphores were gone.

ABOVE: Maintaining track speed at 70 mph around a four-inch super-elevated curve, Amtrak units 5 and 23 lead *Southwest Chief* Train 3 past signals 7061 and 7062 on Sunday, August 23, 2020.

OPPOSITE TOP: Train 4 passes the east switch at Colmor, 2.5 rail miles west of the photographer's location on October 7, 2021. The eastermost semaphores on the Raton Subdivision were 10 days away from an unscheduled retirement following a motor failure on westward Signal 7061.

OPPOSITE: Nineteen miles northeast of Wagon Mound, Train 4 surmounts a 1.12 percent grade approaching intermediate signals 7061 and 7062 on October 7, 2021.

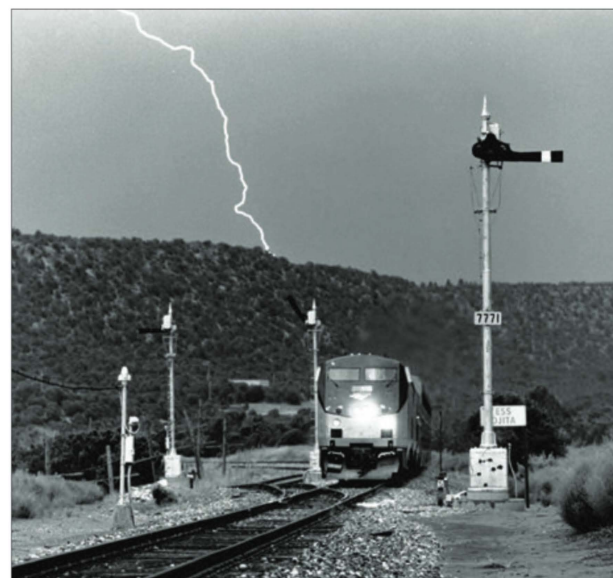


Highland Storms

METEOROLOGISTS AT KRQE-TV's studio in Albuquerque were forecasting a full day of electrical storms over the Northeast Highlands for September 7, 2019. As Tom Taylor and I soon found out, their predictions were spot-on. Over the course of nine hours in pursuit of trains 3 and 4, we counted more than 100 lightning strikes. Another bolt escaped unseen during the 1/125th of a second my Nikon F2 shutter was open to capture Train 4 approaching the east switch at Ojita.

Two weeks later, despair over what appeared to be an image defect on a freshly processed roll of Kodak T-Max immediately turned to joy for someone who'd never before placed lightning on film. Monsoon season was in full bloom the next day, leaving a vibrant prismatic arc in the wake of a storm passing south of Colmor. For a gray-haired leprechaun focusing on the rays appearing to stream from the semaphore quadrant of Signal 7122, silver halide was the only precious metal found at rainbow's end. One year later, photographic images of semaphores 7121 and 7122 were all that remained. Silver halide had finally turned to gold.

Come autumn, highland storms linger longer, drenching parched grasslands with their prelude to winter. Staying in our vehicle as long as possible, Styffe and I waited for Signal 7202 to display an Approach indication before braving the elements at West Levy on October 10, 2021. Fogged viewfinders and soggy blue jeans were a small price to pay for images of Train 3 slicing through the driving rain.



OPPOSITE TOP: The weather is about to get interesting in the grasslands southwest of Colmor on Saturday, August 25, 2018.

OPPOSITE BOTTOM: The autumn rain is coming down in sheets as Amtrak 78 leads Train 3 past West Levy on October 10, 2021. Temporary discomfort was fair trade for a truly atmospheric image.

ABOVE: Monsoon season is in full bloom on Sunday, September 8, 2019, leaving a rainbow in the wake of a storm passing south of Colmor. Photographers seeking a pot of gold on the plains east of Signal 7122 had to settle for silver halide in the rays appearing to stream from the semaphore's upper quadrant.

LEFT: Train 4 approaches the east switch at Ojita beneath a lightning-filled sky on Saturday, September 7, 2019. Electrical storms are a signature of monsoon season on New Mexico's Northeast Highlands.

SANTA FE'S 
SILENT SENTINELS



OPPOSITE: Yesterday and tomorrow await eastbound Train 4 approaching Colmor on August 18, 2020. The replacement for eastbound absolute Signal 7102 on the left provided a perfect vantage point for "human drone" photography prior to the fall of the west-end semaphores on September 30, 2020.

LEFT: Code line dangling in the wind, the remains of Signal 7121 lie at the feet of its replacement on October 7, 2020, one week after the retirement of seven semaphores west of Colmor.

BELOW: Clouds build over the distant Sangre de Cristo Mountains at West Levy on Friday, October 8, 2021.



Tomorrow Never Knows

WITH THE NATION'S LAST main line semaphores approaching a century of service in 2021, the time had come to ponder their place in history. As technology long associated with the steam era, it came as a surprise to learn the silent sentinels had spent nearly three-quarters of their time protecting diesel-powered trains.

Steam departed AT&SF's New Mexico Division in 1953, a mere 28 years after semaphore installations were completed south of Raton. Three generations of road diesels began motoring past the blades in 1936. The F-series Electro-Motive units handled the bulk of the passenger assignments, starting with F3s in 1946 followed by F7s arriving between 1949

and 1953. The ill-fated Amtrak SDP40Fs arrived in 1973 only to be replaced four years later by EMD's F40PH, the enduring face of Amtrak through the 1980s. General Electric Genesis units took over in the early 1990s, outlasting the service lives of Santa Fe's iconic Warbonnet Fs. Amtrak's oldest GE P42DCs notched 30 years of service in 2023.

Odds of the semaphores celebrating their centennials grew longer after 2019. Seven signals between West Colmor and milepost 717 were replaced in September 2020, followed by the unplanned demise of the 706 semaphores in October 2021. The real gut punch came a year later — over the course of two days beginning on

November 18, 2022, every blade west of Las Vegas was laid on the ground.

The pain of losing the pristine pioneers, 22 survivors from the initial installation of 1921, went straight to the heart. While the signals north of Wagon Mound had their own rugged majesty, nothing could match the 17 consecutive miles of blades in a variety of classic locations at the foot of Glorieta Pass. Something of the soul of the Santa Fe went with their passing.

For the 16 semaphores that remained active in December 2023 — the final 11 between Wagon Mound and Colmor plus five more signals on New Mexico DOT rail west of Lamy — fate felt close at hand.

For photographers who'd grown up "one step ahead of the wrecking ball," the end of some railroad tradition always hovered on the horizon. Santa Fe's semaphores were no exception. Styffe and I knew we were racing against the clock the minute we set foot in New Mexico in 2018. Tomorrow was promised to no one.

At the same time, clocks run slow in New Mexico. The next five years saw seven trips to the Land of Enchantment gathering material for this essay. Over the course of those 36,339 miles, lifelong friend Tom Taylor, my wife, Liz, and our grandsons Wyatt and Elijah Degner joined in the experience.

None of those adventures were

guaranteed as we turned for California on Saturday, August 25, 2018. The mood was as gray as the storm clouds that had been gathering all day, dashing our hopes for a final image combining semaphores with a rising moon. Leaving Las Vegas after dark, moonlight filtering through the overcast lent an ethereal glow to the night sky. This could work. "Five minutes" for some time exposures at Signal 7912 outside Bernal turned into half an hour before we folded our tripods and hit the road.

Hours of introspection accompanied the drive back home. There was no way of knowing how far the signal odyssey might go. The more I learned, the more

insightful the work would become. I'd run out of time long before I ran out of material. No matter where the trail to the semaphores led me, one thing was assured: I already had the image on which this journey would begin. 📸

Author's note: This story would not have been possible without research assistance from various sources including Patrick Flynn, Brad Hellman, Elrond Lawrence, Joe McMillan, Steve Patterson, Chip and Leslie Savoye, and Brian Solomon, along with websites by Jake Miille, Trainorders.com, and The Position Light. Special thanks go to John Ryan for the video that started it all.