

## REPORT OF INVESTIGATION

\* For Official Use Only \*

Case #17-05-9478640

Helena Fire et.al.

USDA Forest Service

SA **b6 & b7C**

Final Report

This report contains sensitive and personal data. Information of a personal nature is protected from disclosure by the Privacy Act if such a disclosure would constitute an unwarranted invasion of personal privacy.

Disclosure of other than personal information is subject to the provisions of the Freedom of Information Act.

This report shall be maintained in accordance with FSM 6270.

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(Reference FSH 5309.11)

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**INTRODUCTION**

On August 30, 2017, at approximately 4:57 p.m., [b6 & b7C] and [b6 & b7C] had just finished picking up their highway traffic control signs and began traveling east on Highway 299. At approximately 5:00 p.m., they witnessed a vegetation fire burning north of Highway 299 across from the Bagdad river access road. [b6 & b7C] called 911 and reported the fire at approximately 5:00 p.m. In addition to calling 911 [b6 & b7C] took a picture of the vegetation fire with his cellular telephone. [b6 & b7C] reported the vegetation fire to the Weaverville Fire Department at approximately 5:02 p.m. At approximately 5:04 p.m., [b6 & b7C] and [b6 & b7C] flagged down [b6 & b7C] and [b6 & b7C] who were driving a US Forest Service utility truck westbound on Highway 299. [b6 & b7C] and [b6 & b7C] both work as Wildland Firefighters for the US Forest Service. [b6 & b7C] reported the fire to his engine crew, who was following [b6 & b7C] directing them to attack the fire. Redding Interagency Command Center was notified by [b6 & b7C] at approximately 5:15 p.m., with an estimated size of fire to be three acres. The fire was designated as the "Helena Fire" and logged as USFS Fire Incident # CA-SHF-2017-1770, Account Code #P5LA7C-0514 (Exhibit 1, WildCAD Incident Card)

**DETAILS OF THE INVESTIGATION**

1. On August 30, 2017, US Forest Service Special Agent (SA) [b6 & b7C] was informed of a vegetation fire near the town of Helena in Trinity County by [b6 & b7C] around 5:30 p.m. On August 31, 2017 [b6 & b7C] met US Forest Service Special Agent (SA) [b6 & b7C] in Redding, California and the two of them traveled to Junction City, a small town

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approximately eight miles east of Helena. An Incident Command Post (ICP) had been set up in Junction City to coordinate incoming resources to the Helena Fire. At approximately 8:15 a.m., while at ICP, [b6 & b7C] and [b6 & b7C] learned of two possible witnesses, [b6 & b7C] and [b6 & b7C] [b6 & b7C], who flagged down the first resource on scene and may have been the first people to report the fire.

2. At approximately 8:45 a.m., on August 31, 2017, [b6 & b7C] and [b6 & b7C] met [b6 & b7C] at ICP in Junction City. [b6 & b7C] for Forest Service Engine 334 and his engine crew was the first to respond to the Helena Fire. At approximately 8:50 a.m., Law Enforcement Officer (LEO) [b6 & b7C] arrived at ICP and met with [b6 & b7C] and [b6 & b7C] is a member of the Fire Investigation Response Strike Team (FIRST) which would be handling the origin and cause investigation.

3. [b6 & b7C] and [b6 & b7C] followed [b6 & b7C] in their vehicles to Cemetery Road near the location [b6 & b7C] first observed the fire, it was approximately 9:15 a.m. While standing on Cemetery Road, near the area [b6 & b7C] first observed the fire, [b6 & b7C] told [b6 & b7C] and [b6 & b7C] that he was driving home from a fire he had been demobilized from August 30, 2017. [b6 & b7C] was traveling in a Forest Service Utility truck with firefighter [b6 & b7C] heading west on Highway 299 when he witnessed two people who appeared to be flagging him down, it was approximately 5:00 p.m. [b6 & b7C] drove past the two people and witnessed a vegetation fire in his review mirror. [b6 & b7C] pulled south off Highway 299, activated his emergency flashing lights and turned his utility truck around to size up (acres burned, rate of spread, flame lengths, intensity, fuel type, wind direction) the fire.

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4. [b6 & b7C] observed the fire burning on the middle of a hillside, above Cemetery Road and below Brock Gulch Road beneath some powerlines. [b6 & b7C] estimated the fire to be approximately 1/8 acre in size and no more than 80 feet below Brock Gulch Road. [b6 & b7C] radioed to Forest Service Engine 334 to prepare for initial attack and provided the crew with directions to Brock Gulch road. The crew took the wrong road (Cemetery Road) and began attacking the fire. According to [b6 & b7C] the fire quickly spread and jumped Brock Gulch Road. (**Exhibit 2, Wildland Fire Origin and Cause Supplemental Incident report.**)
  
5. [b6 & b7C] continued to interview [b6 & b7C] and obtained a written statement from [b6 & b7C] (**Exhibit 2, Wildland Fire Origin and Cause Supplemental Incident report, Attachment 4.**) In addition to [b6 & b7C] LEO's [b6 & b7C] and [b6 & b7C] had arrived on Cemetery Road and asked [b6 & b7C] what needed to be done. [b6 & b7C] directed LEO's [b6 & b7C] and [b6 & b7C] to relieve [b6 & b7C] crew from securing the area where [b6 & b7C] had first witnessed the fire and restricted access.
  
6. On August 31, 2017 at approximately 4:15 p.m., [b6 & b7C] and [b6 & b7C] met with [b6 & b7C] at Highway Specialties in Redding, California and conducted an interview with [b6 & b7C] [b6 & b7C] told [b6 & b7C] and [b6 & b7C] that on August 30, 2017, [b6 & b7C] was working as a flagger on Highway 299 approximately one mile west of Helena in Trinity County. [b6 & b7C] and her partner, [b6 & b7C], began putting construction signs and cones out on Highway 299 at approximately 6:30 a.m. A Changeable Message Sign (CMS) was placed at the west side of the bridge near Helena, on a large pullout near the eastbound lane south of Highway 299,

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approximately 100 yards from where the fire was first observed. The Changeable Message Sign is a large sign that is towed behind a truck on its own trailer. At 7:00 a.m., the road signs and cones had all been placed and [b6 & b7C] and [b6 & b7C] began directing traffic. (Exhibit 3, Memorandum of Interview, [b6 & b7C])

7. Around 4:30 p.m., [b6 & b7C] and [b6 & b7C] began picking up the road signs and cones. They began picking up the road signs and cones in the westbound lane first. Once all the westbound road signs and cones were picked up they transitioned to the eastbound road signs and cones. The last sign to be picked up was the Changeable Message Sign located south of the eastbound lane of Highway 299, just west of the bridge near Helena. (Exhibit 3, Memorandum of Interview, [b6 & b7C])

8. At approximately 4:58 p.m., all the road signs and cones had been picked up and [b6 & b7C] and [b6 & b7C] began traveling east, on Highway 299 towards Weaverville, California. When [b6 & b7C] and [b6 & b7C] began traveling east [b6 & b7C] witnessed a fire burning on the middle of the hillside, north of Highway 299. [b6 & b7C] pulled over and called in the fire to the Weaverville Fire Department. The time was approximately 5:02 p.m. (Exhibit 4, picture taken of [b6 & b7C] Cellphone call.)

9. [b6 & b7C] asked [b6 & b7C] to describe the fire when she first seen it. [b6 & b7C] described the fire to be about 20 feet by 15 feet in size, small flames approximately three feet in length and felt the fire had just started. [b6 & b7C] went on to say that the fire was not near a road and it was in the middle of a hillside. The interview with [b6 & b7C] was concluded at approximately 4:45 p.m.

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**(Exhibit 3, Memorandum of Interview, b6 & b7C )**

10. On September 1, 2017, at approximately 10:00 a.m., b6 & b7C and b6 & b7C conducted an interview with b6 & b7C at Starbucks in Red Bluff, California. On August 30, 2017, b6 & b7C had been working as a flagger on Highway 299 approximately one mile west of Helena in Trinity County. b6 & b7C and his partner, b6 & b7C began putting construction signs and cones out on Highway 299 at approximately 6:30 a.m. b6 & b7C worked all day flagging traffic. At approximately 4:58 p.m., all the road signs and cones had been picked up and b6 & b7C and b6 & b7C began traveling east on Highway 299 towards Weaverville, California. **(Exhibit 5, Memorandum of Interview, b6 & b7C)**
11. While b6 & b7C and b6 & b7C began traveling east he witnessed a four door car that was dark in color pulled over north of Highway 299, across from the Bagdad river access. b6 & b7C said the car was occupied by a single female who appeared to be using her cellphone. After observing the parked car, b6 & b7C immediately noticed a fire burning on the middle of the hillside, north of Highway 299, approximately 30 yards east of where the car was parked. b6 & b7C pulled their vehicle off Highway 299, near the entrance to Bagdad river access and b6 & b7C immediately called 911. The time stamp on b6 & b7C cellphone to 911 was 5:00 p.m., and the call lasted one minute. **(Exhibit 6, picture taken of b6 & b7C cellphone documenting 911 call.)** In addition to calling 911, b6 & b7C took a picture of the fire with his cellphone. **(Exhibit 7, picture of fire taken by b6 & b7C)**
12. b6 & b7C said the fire was approximately 20 feet by 20 feet in size, with three foot tall flame lengths when the fire truck arrived on scene. b6 & b7C went on to say the fire appeared to have started up



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slope below the upper road. [b6 & b7C] described the sound of the fire to be a big chainsaw that was being operated at full rotation per minute (RPM.) [b6 & b7C] further described the sound of the fire as being multiple Christmas trees being lit on fire. (Exhibit 5, Memorandum of Interview, [b6 & b7C]

[b6 &amp; b7C]

13. [b6 & b7C] asked [b6 & b7C] how long he stayed at the fire after the firefighters arrived and he said about ten minutes. [b6 & b7C] went on to say the wind appeared to be pushing the fire east and up the hill. [b6 & b7C] told [b6 & b7C] and [b6 & b7C] the fire had doubled in size in the ten minute's he had stayed after reporting the fire. [b6 & b7C] and [b6 & b7C] concluded the interview with [b6 & b7C] at approximately 10:30 a.m., on September 1, 2017. (Exhibit 5, Memorandum of Interview, [b6 & b7C]

14. From September 1<sup>st</sup> through September 3<sup>rd</sup>, 2017, FIRST members; SA [b6 & b7C] LEO's [b6 & b7C] and [b6 & b7C] Fire Prevention Technician (FPT) [b6 & b7C] and FPT [b6 & b7C] investigated the specific cause of the Helena Fire. FIRST members conducted their investigation of the Helena Fire in a systematic and thorough manner pursuant to the guidelines set forth in the Guide to Wildland Fire Origin and Cause Determination (NWCG Handbook, PMS 412, NFES 1874, April 2016.) FIRST members concluded the Ignition Area (IA) was a branch from a Gray Pine tree where it came into contact with Trinity Public Utility District (TPUD) powerlines. The powerlines being a source of heat in direct contact with the Gray Pine branch, creating the ignition source for the Helena Fire. (Exhibit 2, Wildland Fire Origin and Cause Supplemental Incident report.)

15. On September 2, 2017, [b6 & b7C] responded to the area of origin and

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inspected the Gray Pine tree that had a branch fail and come to rest on TPUD powerlines. **b6 & b7C** concluded that "the branch was destined to fail because the abnormally long length of the branch growing at an abnormal angle with little support caused it to be unbalanced." **b6 & b7C** reported that green wood can conduct electricity and Gray Pines contain highly flammable resin. (Exhibit 8, report by **b6 & b7C**)

16. On September 2, 2017 at approximately 5:10 p.m., **b6 & b7C** and **b6 & b7C** met with TPUD Lineman **b6 & b7C**, was working with other utility workers replacing a powerline pole along the south side of Highway 299 approximately 3 miles east of the area of origin (AOR.) **b6 & b7C** asked **b6 & b7C** if he could provide an assessment on how to remove a section of powerline. **b6 & b7C** agreed and got into his company pickup truck and followed **b6 & b7C** and **b6 & b7C** to the area where the fire initially started. **b6 & b7C** informed **b6 & b7C** and **b6 & b7C** that the pole used to hold up the powerlines was relatively new and had been replaced within the last couple of years. **b6 & b7C** went on to say that obtaining the section of powerlines would be easy but **b6 & b7C** needed to clear it through his boss first.

17. On September 3, 2017 **b6 & b7C** was requested to assist with the examination of the Helena Fire AOR. **b6 & b7C** reported a very large branch from a Gray Pine tree had fallen onto two overhead powerlines belonging to TPUD. The result of the falling Gray Pine branch caused a "phase to phase fault," "creating a conductive path between utility conductors allowing electrical arc tracking to occur." **b6 & b7C** reported the arc tracking to be the most likely source of ignition on the Gray Pine branch itself. (Exhibit 9, **b6** report by **b6 & b7C**)

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b6 & b7C) After b6 & b7C finished inspecting the AOR, two Forest Service Smokejumpers climbed the Gray Pine tree and removed the Gray Pine branch from TPUD's powerlines using ropes and pulleys. The Gray Pine branch was cut into manageable pieces and collected as evidence item E10 A-K.

18. At approximately 8:00 a.m., on September 4, 2017, b6 & b7C received a call from b6 & b7C of TPUD, and the two of them arranged to meet on Brock Gulch road. b6 & b7C told b6 & b7C that he had received b6 & b7C cellphone number from his Lineman b6 & b7C.

19. At approximately 9:40 a.m., on September 4, 2017, b6 & b7C and b6 & b7C met b6 & b7C on Brock Gulch road approximately 100 yards from the AOR. While standing on Brock Gulch road, b6 & b7C asked b6 & b7C if he could have the sections of powerlines that the Gray Pine branch had been laying on and pointed to the sections of powerlines. b6 & b7C said he did not think it would be a problem and called b6 & b7C. b6 & b7C arrived to our location at approximately 10:00 a.m., with another Lineman. The two Lineman tied a rope to a tree, using the rope to steady themselves as they traveled into the AOR. b6 & b7C requested b6 & b7C and b6 & b7C to accompany him to the AOR. b6 & b7C and b6 & b7C observed b6 & b7C climb the power pole and remove the sections of powerlines. b6 & b7C provided b6 & b7C and b6 & b7C with two sections of powerlines approximately ten feet in length. b6 & b7C and b6 & b7C wrapped the lines with bubble wrap and collected them as evidence items E12 and E13.

20. On September 16, 2017, b6 & b7C, who works for PG&E Law-Claims, emailed b6 & b7C information regarding the PG&E circuit relay information on transmission circuits near TPUD's powerlines



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from August 30, 2017. The email indicates two outages, one at 5:32 p.m., and the other at 6:05 p.m. (See Exhibit 10, email from **b6 & b7C** )

21. As of September 21, 2017 the Helena Fire is still burning, managed by a Type II incident management team with an estimated containment date of October 1, 2017.



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**SUBJECT OF THE INVESTIGATION**

Trinity County Public Utility District  
P.O. Box 1216,  
Weaverville, CA 96093

**JUDICIAL ACTION**

Unknown

**ADMINISTRATIVE ACTION**

Solved/Closed



**WildCAD Incident Card - Redding Interagency Command Center: CA-SHF 2017-1770**  
*"HELENA" Wildfire 08/30/2017 17:05:00*  
Area T7 (BAT-3 Tone 4/9)

**Reporting Party:** e334

**Initial Report On Conditions:**  
veg fire mm37

**Initial Location:** helena bridge up on the hillside  
Lat: 40°44',59.09", Lon: 123°7',5.89", T34N, R11W, SESW Sec 33

**Actual Location:**  
Lat: 40°46',14.98", Lon: 123°7',30", T34N, R11W, SWSW Sec 21

**Incident Notes:**  
DPA: FRA UNIFIED COMMAND WITH CAL FIRE SHU

**Dispatcher:** b6 & b7C **Status:** Open **Sub-Type:** Batt 5

**Fiscal Codes:** P5LA7C-0514

**Web Comment:**

**Timer:** Closed Timer for Resource AA-240  
08/30/2017 17:30:38 RW OK: off redding ete 17:40 + AFF Registration: N421DF Callsign: N-421DF Speed: 165 knots Heading: 294° true Altitude: 2,637' msl Make: Rockwell Model: OV-10 Lat: 40° 29.5800' Long: -122° 22.3200' Time: 08/30/2017 17:28:56 UTC-0700  
08/30/2017 17:45:26 RW OK: ops normal Registration: N421DF Callsign: N-421DF Speed: 157 knots Heading: 284° true Altitude: 6,466' msl Make: Rockwell Model: OV-10 Lat: 40° 43.8600' Long: -123° 2.2302' Time: 08/30/2017 17:44:11 UTC-0700

**Timer:** Closed Timer for Resource H-104  
08/30/2017 18:30:24 RW OK: heading to redding for fuel Registration: N481DF Callsign: H-481DF Speed: 110 knots Heading: 18° true Altitude: 4,324' msl Make: Bell Model: UH-1H 703/S Lat: 39° 54.1902' Long: -122° 37.8300' Time: 08/30/2017 18:29:18 UTC-0700  
08/30/2017 18:44:32 RW OK: Registration: N481DF Callsign: H-481DF Speed: 118 knots Heading: 24° true Altitude: 1,551' msl Make: Bell Model: UH-1H 703/S Lat: 40° 18.4302' Long: -122° 25.3896' Time: 08/30/2017 18:42:56 UTC-0700

08/30/2017 19:00:14 RW OK: on the ground redding  
08/30/2017 19:21:14 RW OK: off redding ete 19:40 + AFF Registration: N481DF Callsign: H-481DF Speed: 116 knots Heading: 297° true Altitude: 1,122' msl Make: Bell Model: UH-1H 703/S Lat: 40° 30.9402' Long: -122° 20.5104' Time: 08/30/2017 19:19:38 UTC-0700

**Timer:** Closed Timer for Resource  
**Timer:** Closed Timer for Resource AA-05  
08/31/2017 12:21:46 RW OK: returning redding 11 min ete + AFF Registration: N32WS Callsign: N-32WS Speed: 178 knots Heading: 116° true Altitude: 11,092' msl Make: Aero Commander Model: 690A Lat: 40° 40.7700' Long: -122° 57.9096' Time: 08/31/2017 12:19:37 UTC-0700  
08/31/2017 12:24:32 RW OK: switcvhed to NOPS

**Incident Commander(s):**  
08/30/2017 1809 b6 & b7C Effective  
08/30/2017 1808 b6 & b7C (Trainee) Effective  
08/30/2017 1810 Effective

**Resource Details:**

**LE-14E5:**  
Committed at 08/31/2017 09:16:37  
**LE-14E8:**  
Committed at 08/31/2017 09:16:41, On Scene at 08/31/2017 09:16:46  
**BC-11:**  
Committed at 08/30/2017 20:14:21, On Scene at 08/30/2017 21:10:14  
**BC-31:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 20:51:13

**BC-41:**  
Committed at 08/31/2017 06:36:11

**D-3:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 17:34:12, Returning at 08/30/2017 18:20:56, Released at 08/30/2017 22:54:49

**PT-21:**  
Responding at 08/30/2017 17:13:06, Released at 08/30/2017 20:30:32

**PT-31:**  
Committed at 08/30/2017 17:27:49

**PT-51:**  
Committed at 08/30/2017 17:26:50, Responding at 08/30/2017 17:34:27, On Scene at 08/30/2017 19:05:22, Returning at 08/31/2017 09:54:23, Released at 08/31/2017 09:54:40

**E-2468 SHU:**  
Committed at 08/30/2017 17:12:01, Responding at 08/30/2017 17:28:47, On Scene at 08/30/2017 17:39:52

**E-321:**  
Committed at 08/30/2017 17:27:01, On Scene at 08/30/2017 18:32:04

**E-331:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 17:17:39

**E-333 SRF:**  
Committed at 08/30/2017 19:20:32, Avail Inc at 08/30/2017 19:20:37, Avail Inc at 08/30/2017 19:21:00, Cover at 08/30/2017 19:21:06

**E-341:**  
Committed at 08/30/2017 17:30:29, On Scene at 08/30/2017 17:30:33

**E-343:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 17:30:12

**E-346 CNF:**  
Responding at 08/30/2017 17:13:06, Responding at 08/30/2017 18:04:57, On Scene at 08/30/2017 18:19:51

**E-44 MDF:**  
Committed at 08/30/2017 19:08:11, Responding at 08/30/2017 19:08:16, On Scene at 08/30/2017 22:29:44

**E-62 TNF:**  
Committed at 08/30/2017 19:06:35, Responding at 08/30/2017 19:06:41, On Scene at 08/30/2017 22:30:13

**E-82 LNF:**  
Committed at 08/30/2017 19:19:18, On Scene at 08/30/2017 19:19:25

**DZ-29:**  
Committed at 08/30/2017 19:11:34, On Scene at 08/30/2017 21:54:07

**WT-25 SRF:**  
Committed at 08/30/2017 19:38:33, On Scene at 08/30/2017 22:30:19

**WT-2542JCF:**  
Committed at 08/30/2017 19:05:10, On Scene at 08/30/2017 19:05:19

**CR-2 SRF:**  
Committed at 08/30/2017 19:09:34

**CR-CR11:**  
Committed at 08/31/2017 05:11:51

**CR-TR3 SHU:**  
Committed at 08/30/2017 19:13:24, Responding at 08/30/2017 19:13:41, On Scene at 08/30/2017 20:00:12

**CR-TR4 SHU:**  
Committed at 08/30/2017 17:13:39, On Scene at 08/30/2017 18:06:15

**CR-TRUCKEE:**  
Committed at 08/30/2017 20:05:17, On Scene at 08/30/2017 23:51:06

**CR-UKANOM:**  
Committed at 08/30/2017 20:07:13

**CPT-334:**  
Committed at 08/30/2017 17:18:49

**H-104:**  
Committed at 08/30/2017 17:55:37, On Scene at 08/30/2017 17:55:42, Responding at 08/30/2017 19:07:16, Released at 08/30/2017 20:20:13

**AA-05:**  
Committed at 08/31/2017 11:44:24, Responding at 08/31/2017 11:44:30

**AA-240:**  
Responding at 08/30/2017 17:29:59, On Scene at 08/30/2017 17:54:26, Released at 08/30/2017 20:20:19

**AT-D1 :**  
Committed at 08/30/2017 18:24:09, On Scene at 08/30/2017 18:24:15, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:25

**AT-07:**  
Committed at 08/30/2017 17:58:16, On Scene at 08/30/2017 18:23:31, Responding at 08/30/2017 18:24:19, On Scene at 08/30/2017 19:07:09, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

**AT-83:**  
Committed at 08/30/2017 17:32:59, Responding at 08/30/2017 17:33:22, On Scene at 08/30/2017 18:23:32, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

**AT-88:**  
Committed at 08/30/2017 19:26:38, On Scene at 08/30/2017 19:27:13, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

AT-95:

Committed at 08/30/2017 18:23:46, On Scene at 08/30/2017 18:23:50, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

L-44:

Committed at 08/30/2017 19:06:56, Responding at 08/30/2017 19:07:01, On Scene at 08/30/2017 19:07:09

SAFETY1:

Committed at 08/31/2017 05:20:23, On Scene at 08/31/2017 06:33:15, Released at 08/31/2017 14:30:47

E-2534 JCF:

Committed at 08/30/2017 18:53:16, On Scene at 08/30/2017 18:53:21

Entry Date/Time	From	To	Details
08/30/2017 17:15:21	E334	jo	size up north side of hwy grass timber high winds rapid ros, chp and cal trans smoke impacting hwy. 3 acres, need 2 water tenders
08/30/2017 17:17:11	jo	chp	with req for chp and cal trans for traffic, smoke impeding the hwy
08/30/2017 17:20:13	PT31	DC	will go to hwy 299 and help with logistics if needed
08/30/2017 17:34:03	DC	PGE	Called power company
08/30/2017 17:46:55	IC	DC	Is there a fill on watertenders
08/30/2017 17:49:16	jo	Email	Email SHF-2017-1770 Helena. DV3 PT51 E321 E331E341 E2468 E343 CNF E346 TRR CREW 4, UKANOM IHC, TRUCKEE IHC, TNF E62 MDF E44 JCF WT 2542 & E2534 responding. at scene AA240 on order 6 tankers and 2 copters. 150 acres rapid ros, T34N R11W sec 21 "jo" Sent to: Notifications group
08/30/2017 17:52:23	PT51	DC	requesting LE for investigation, or additional inv
08/30/2017 17:54:39	aa240	rwjo	over the fire 100-150 acres rapid ros, order 4 additional multi engine tankers, and 4 additional helo's
08/30/2017 17:59:15	jo	ch3	ok to extend staffing till 2000
08/30/2017 17:59:28	jo	blm	advised land is on fire
08/30/2017 18:00:45	ic	jo	structure threat will be shortly, crossed trinity river will have structure threat shortly.
08/30/2017 18:03:24	jo	log	placed order for an oes strike team
08/30/2017 18:07:02	pge rep	jo	unit should be arriving in the area in about 30
08/30/2017 18:12:18	ic	jo	fire is about 200+ acres burning on both sides of the trinity river, structures are threatened in the trinity canyon lodge area and helena old town. need some structure protection engines
08/30/2017 18:13:43	UT 2459	DC	At scene
08/30/2017 18:19:28	ic	jo	looking for operations for tonite
08/30/2017 18:24:13	jo	bc11	can you do operations on the fire tonite? affirm will be there in about 3 hours
08/30/2017 18:27:40	14E8	DC	can not respond
08/30/2017 18:34:51	MDF 44	DC	MDF 44, TNF 62 and ukinom i/s
08/30/2017 18:43:04	AA	DC	Structures threatened in coopers bar, will be very soon in Red Hill as well
08/30/2017 18:45:13	jo	Email	Email SHF-2017-1770 HELENA: updated fire size 200+ acres, structures threatened in the helena and coopers bar area. multiple resources for structure protection on order. IC b6 & b7C Sent to: Notifications group
08/30/2017 18:46:14	aa	rwjo	requesting a lead plane if availo
08/30/2017 18:50:02	Truckee HS	DC	i/s Fire
08/30/2017 18:51:03	14e8	jo	E384 and D444 have been notified. he will call pt51 in the morning
08/30/2017 19:07:16	jo	Email	Email SHF-2017-1770 HELENA: Fire has spotted into the coopers bar area, structures threatended. fire is burning due east.. Multiple crews, engines, watertenders and additional aircraft on order/responding "jo" Sent to: Notifications group
08/30/2017 19:29:29	wt-25	nn	SRF WT-25 on forest responding to incident
08/30/2017 19:36:02	jo		Acres set to 300
08/30/2017 20:27:22	Trinity CO	DC	b6 & b7C possible Elderly female trapped in burning structure

Entry Date/Time	From	To	Details
08/30/2017 20:41:41	st-9246C	NN	ST-9246 C responding to Junction City
08/30/2017 20:53:03	CHP	RW	Asked if media would be ok to pass through the closer of hwy 299. I told them for fire fighter and public safety that it was not advised. CHP said that was all they needed to hear and would not let them through the road closer.
08/30/2017 21:08:31	IC	NN	HAVE ALL RESOURCES STAGE @ JUNCTION CITY GUARD STATION.
08/30/2017 21:23:58	IC	NN	WE NEED LE INVESTIGATOR ASAP. MAKE SURE WE ORDERED ONE.
08/30/2017 21:27:54	TACBAS	NN	b6 & b7C OR AGENT b6 & b7C OR b6 & b7C WILL BE THERE FIRST THING IN THE MORNING/DAY LIGHT
08/30/2017 21:33:48	9246	NN	s/t 9246c ON SCENE
08/30/2017 23:02:27	jo		ADS flipped to Sit/209
08/30/2017 23:04:35	jo		ADS returned to dispatch
08/30/2017 23:04:50	jo		ADS flipped to Sit/209
08/30/2017 23:04:57	jo		ADS returned to dispatch
08/31/2017 00:53:15	FD	FD	b6 & b7C is Radio Operator for incident, working from WVVL DO.
08/31/2017 00:55:52	FD	FD	b6 & b7C is night ops
08/31/2017 02:01:51	STAGING	FD	Request CALTRANS to respond to JC Guard Station at 0700 hrs to maintain traffic control on Hwy 299 and provide a large truck w/ blade to remove fire debris from the road
08/31/2017 06:11:23	jo		Acres set to 5000
08/31/2017 06:28:22	JC	NN	per b6 & b7C put an order in for the Cobra Fire Watch. Deliver to Weaverville Airport 1400 today.
08/31/2017 06:32:56	jc	NN	see if you can get H-14HX to come to Weaverville airport @ 090 for Recon. Pick up 2-3 people.
08/31/2017 06:37:25	ld	FD	OES S/T 2812A enroute to staging area from Redding
08/31/2017 06:51:09	NN	Log	Per b6 & b7C D-3 is requesting H-14HX for recon this morning @ 0900 in weaverville. Per b6 & b7C IC they can not give it up this morning as they have a stop over but later this afternoon they may be able to accomodate/loan the heli for 1 recon.
08/31/2017 07:04:49	FD	FD	OES S/T 2813A ENROUTE FROM REDDING
08/31/2017 07:16:51	FD	FD	S/T 2253A enroute to staging area from Redding
08/31/2017 09:17:07	14e5	TB	inv team activated, i am enroute to meet up with pt-51 and start the investigation
08/31/2017 11:43:34	AA-05	RW	off redding 2sob 4hr lob 13 min etc + AFF Registration: N32WS Callsign: N-32WS Speed: 159 knots Heading: 289° true Altitude: 4,576' msl Make: Aero Commander Model: 690A Lat: 40° 34 2102' Long: -122° 20.6400' Time: 08/31/2017 11:41:12 UTC-0700
08/31/2017 11:53:36	AA-05	RW	over the fire assuming AA looking to make contact with the IC on A/G

**Command:**

FOREST: TX [REDACTED] b7(E) & b7(F) Tone - 4 ADDED 08/30/2017 19:27:57  
FOREST: TX [REDACTED] b7(E) & b7(F) Tone - 9 CHANGED 08/30/2017 19:28:09

**Ground:**

TAC 2: [REDACTED] b7(E) & b7(F) ADDED 08/30/2017 19:28:19  
R5 TAC 4: [REDACTED] b7(E) & b7(F) ADDED 08/30/2017 20:09:55  
NIFC TAC [REDACTED] ADDED 08/31/2017 07:40:36  
NIFC TAC [REDACTED] ADDED 08/31/2017 07:40:46  
NIFC TAC [REDACTED] ADDED 08/31/2017 07:41:15

**Air Tactics:**

AIR TACTICS [REDACTED] b7(E) & b7(F) Primary ADDED 08/30/2017 19:28:29

**Victor:**

V: [REDACTED] b7(E) & b7(F) (P) ADDED 08/30/2017 19:28:34  
[REDACTED] b7(E) & b7(F) ADDED 08/31/2017 07:39:39  
[REDACTED] b7(E) & b7(F) 8/31 CHANGED 08/31/2017 07:40:05

**FS A/G:**

FS Air/Ground 43 (P): [REDACTED] b7(E) & b7(F) ADDED 08/30/2017 19:28:44  
[REDACTED] b7(E) & b7(F) ADDED 08/31/2017 07:39:12  
[REDACTED] b7(E) & b7(F) 8/31 CHANGED 08/31/2017 07:40:19

**VOR**

41nm 275° RDD: REDDING VO  
43nm 180° FJS: FORT JONES  
46nm 089° ACV: ARCATA VOR  
51nm 064° FOT: FORTUNA VO  
57nm 297° RBL: RED BLUFF

**ATB**

41nm 278° RDD: REDDING AI  
48nm 059° FOT: FORTUNA AI  
49nm 179° SCV: FORT JONES  
67nm 191° SIY: SISKIYOU A  
82nm 299° CIC: CHICO AIR

**Helibase**

9nm 262° WVR: WEAVERVILL  
14nm 254° PET: TRINITY/PE  
23nm 220° TCR: TRINITY CE  
36nm 259° MTG: MOUNTAIN G  
37nm 070° KNE: KNEELAND H

**Initial Report On Conditions**

Fuels: Acres: W Speed: Dir: Slope: Aspect:  
Spread: Complexity: Jurisdiction:  
Structures:  
Initial Strategy: Full Suppression

**Fire Report Information**

Fire #: 98 SubUnit: 54 SubUnit #: 14  
Acres: 5000 Size Class: G Elevation: Land Status: 2  
Contain: Control: Out:  
Statistical Cause: Miscellaneous Specific Cause: Other

**Incident Command Post**

**ICP Location:**

Lowden Park, Weaverville CA

**Directions:**

Right on Washington St. .5 miles to park.

Lat: 40.7311 Lon: 122.9338

**Staging, Helispots, Phones:**

8/30-8/31 staging at Junction City Forest Service Station

 USDA Forest Service	<b>Wildland Fire Origin and Cause Supplemental Incident Report</b> (Reference FSH 5309.11, Chapter 20)					Incident Number	17-05-9478640								
						Incident Date	08/30/2017								
<b>LOCATION</b>															
Fire Name		Dispatch #	Account Code	Region	Forest	District	State	County							
Helena Fire		SHF-1770	P5LA7C	05	14	54	CA	Trinity							
Origin Location: geographical landmarks, highways, roads, trails, etc.				Township	Range	Section	¼ Sec	Meridian/Datum							
North of State Route 299 near the historic town of Helena, CA, Bureau of Land Management in Forest Service DPA.				34N	11W	21	SWSW	Mt. Diablo							
Latitude (D - M' - S")					Longitude (D - M' - S")										
40		46		18.0		123		07 29.7							
<b>JURISDICTION</b>															
USFS Only		Identify Other Agency(s)		Lead Origin & Cause Investigator			Est. Suppression Cost		Injuries/Deaths						
Yes		None		FIRST			Pending		Pending						
<b>EVENT SEQUENCE</b>															
Estimated Time of Ignition				Time Fire Reported				Time Origin Protected				Time Origin Released			
Mo.	Day	Year	HHMM	Mo.	Day	Year	HHMM	Mo.	Day	Year	HHMM	Mo.	Day	Year	HHMM
08	30	2017	1655	08	30	2017	1700	08	30	2017	1705	09	03	2017	1730
Who		b6 & b7C		Who		b6 & b7C		Who		b6 & b7C		Who FIRST			
<b>FIRE BEHAVIOR</b>															
Estimated Acres		Fuel Type @ Ignition Area Material First Ignited			Weather Observer (On Scene)		Date	Time	Temp	RH	Wind Dir	Wind Speed			
14,000+		Pine limb			E-334		8/30/17	18:30	88	25	UNK	UNK			
Slope %		Aspect N E S W		Elevation		Weather Station		Date	Time	Temp	RH	Wind Dir	Wind Speed		
70		W		1490		Big Bar		8/30/17	1700	85	23	284	4, gust @17		
<b>CAUSE DETERMINATION CODE: (PS) = POSSIBLE, (PR) = PROBABLE, (EX) = EXCLUDED (EXPLAIN IN NARRATIVE)</b>															
EX	Lightning		(Detection Method)												
Lightning detection resources identified no lightning within 10 miles of the specific origin area.															
EX	Equipment Use		(Exhaust, Brake Shoe, Mechanical, Friction, Aircraft, Vehicle Fire, Other)												
No evidence of equipment use observed in the specific origin area.															
EX	Smoking		(Tobacco, Other)												
No evidence of smoking observed in the specific origin area.															
EX	Campfire		(Cooking, Warming, Ceremonial, Other)												
No evidence of a campfire in the specific origin area.															
EX	Debris Burning		(Land, Slash, Refuse, Other)												
No evidence of debris burning in the specific origin area.															
EX	Railroad		(Ignition Activities Associated with Railroad Companies)												
No known operational railroads in Trinity County.															
EX	Incendiary		(Ignition Component / Material First Ignited)												
No evidence of Incendiary in the specific origin area.															
EX	Children		(Ignition Activities Associated with Children; 12- years and younger)												
No evidence of children in the specific origin area.															
PR	Miscellaneous		(Blasting, Structure, Fireworks, Welding, Cutting, Grinding, Pest Control, Powerlines, Glass, Target Shooting, Spontaneous Combustion, Other)												
Evidence supports Powerlines as the probable cause of the Helena Fire.															
Cause Determined: State brief reason & explain in the narrative					Cause Undetermined: State brief reason & explain in the narrative										
The cause of the Helena Fire is determined to be MISCELLANEOUS (POWERLINES)															
PREPARED BY		FIRST		Date	9/7/17	Submitted to		SA b6 & b7C	Date	9/7/17					
EXHIBITS - IF INCLUDED		LE Incident Report	<input type="checkbox"/>	Supplemental Reports	<input type="checkbox"/>	Interviews	<input checked="" type="checkbox"/>	Statements	<input checked="" type="checkbox"/>						
		Fire Stat Report	<input type="checkbox"/>	Sketches / Diagrams	<input checked="" type="checkbox"/>	Maps	<input checked="" type="checkbox"/>	Photographs	<input checked="" type="checkbox"/>	Other	<input checked="" type="checkbox"/>				

 USDA Forest Service	<b>Wildland Fire Origin and Cause Supplemental Incident Report</b> (Reference FSH 5309.11, Chapter 20)	Incident Number	17-05-9478640
		Incident Date	08/30/2017

(CODE: S – SUBJECT, W – WITNESS, V – VICTIM, RP – REPORTING PARTY, O – OTHER)

Name (Last, First, Middle)		Alias	DOB	Race	Gender
W	b6 & b7C		b6 & b7C		M
Address (Home)		Phone (Home)	Hair Color	Eye Color	SSN
b6 & b7C		b6 & b7C			
Address (Business) (Tax Identification Number if Required)		Phone (Work)	Height	Weight	License / ID
USFS Burnt Ranch Fire Station					b6 & b7C
Name (Last, First, Middle)		Alias	DOB	Race	Gender
W	b6 & b7C		b6 & b7C		M
Address (Home)		Phone (Home)	Hair Color	Eye Color	SSN
b6 & b7C		b6 & b7C			
Address (Business) (Tax Identification Number if Required)		Phone (Work)	Height	Weight	License / ID
					b6 & b7C
Name (Last, First, Middle)		Alias	DOB	Race	Gender
W	b6 & b7C		b6 & b7C		F
Address (Home)		Phone (Home)	Hair Color	Eye Color	SSN
		b6 & b7C			
Address (Business) (Tax Identification Number if Required)		Phone (Work)	Height	Weight	License / ID
b6 & b7C					b6 & b7C

VEHICLE INFORMATION (CODE: D – DAMAGED, E – EVIDENCE, I – IMPOUND, S – SUBJECT W – WITNESS, O – OTHER)

License Number	State	VIN	Year	Make	Style	Other Information

INSURANCE INFORMATION (HOME, AUTO, LIABILITY, OTHER)

Insurance Company	Policy Number	Insurance Agent	Address	Phone Number

 USDA Forest Service	<b>Wildland Fire Origin and Cause Supplemental Incident Report</b> (Reference FSH 5309.11, Chapter 20)	Incident Number	17-05-9478640
		Incident Date	08/30/2017
<b>SYNOPSIS (DATE, FIRE NAME, ESTIMATED ACRES, LOCATION, JURISDICTION); (ESTIMATED COST, DAMAGE; PROPERTY / RESOURCE); (CAUSE; DETERMINED / UNDETERMINED)</b>			
On August 30, 2017, at approximately 1655 hours, the Helena Fire was ignited on Bureau of Land Management (BLM) lands near the Historic town of Helena, California, within the Forest Service Direct Protection Area (DPA). At the time of this report, the Helena Fire has burned in excess of 14,000 acres across BLM, United States Forest Service (USFS), state and private lands, causing significant resource and property damage. Final acreage, suppression costs and damage assessments are pending. The cause of the Helena Fire is determined to be MISCELLANEOUS (POWERLINES).			
<b>DETAILS OF INVESTIGATION: (INITIAL REPORT, INITIAL ATTACK, INITIAL INVESTIGATION, FIRE BEHAVIOR ANALYSIS, STATEMENTS, ORIGIN EXAMINATION, CAUSE DETERMINATION)</b>			
<p><b>Initial Report</b></p> <p>On August 30, 2017, at approximately 1700 hours, Highway Specialty Company employees b6 &amp; b7C and b6 &amp; b7C were driving eastbound on Highway 299 when they observed a fire burning on the north side of Highway 299 between Cemetery Road and Brock Gulch Road. They parked on the south side of Highway 299 in front of the Bagdad River Access Road where they could observe and report the fire. Several minutes later, b6 &amp; b7C and b6 &amp; b7C flagged down a US Forest Service Utility truck occupied by firefighters b6 &amp; b7C and b6 &amp; b7C who had been driving westbound on Highway 299. At approximately 1705 hours, firefighter b6 &amp; b7C reported the fire to the Redding Interagency Command Center. The fire, later named the Helena Fire, was burning on Bureau of Land Management (BLM) lands north of Highway 299 between Cemetery Road and Brock Gulch Road. The location, just east of Helena, CA, lies within Trinity County and within the Direct Protection Area (DPA) of the United States Forest Service.</p> <p><b>Initial Attack</b></p> <p>On August 30, 2017, at approximately 1705 hours, the USFS Utility truck occupied by firefighters b6 &amp; b7C and b6 &amp; b7C stopped and parked off Hwy 299 about ¼ mile west of the Helena Fire where they could see the fire and direct incoming USFS Fire Engine 334. At that time Engine 334, who had also been travelling west on Hwy 299, stopped and began initial attack of the Helena Fire. Engine 334's occupants included three USFS Firefighters b6 &amp; b7C and b6 &amp; b7C. From b6 &amp; b7C vantage point, he directed Engine 334 to turn on Brock Gulch Road and take suppressive action on the fire which was advancing uphill towards Brock Gulch Road. According to Engine 334 b6 &amp; b7C, they turned off Hwy 299 and drove north on Cemetery Road below the fire. Engine 334 b6 &amp; b7C observed the fire uphill of Cemetery Road and believed they could access the Brock Gulch Road above the fire. b6 &amp; b7C drove approximately 200 yards north on Cemetery Road where the roads stops ("dead end") at an old cemetery. From that point, b6 &amp; b7C turned around and parked Engine 334 at the junction of Cemetery Road and Hwy 299. At about that point, the Helena Fire was advancing east, southeast uphill and crossing Brock Gulch Road. b6 &amp; b7C determined, due to inherent danger, they could not get above the rapidly advancing fire and remained below the fire where they took suppressive action off Cemetery Road.</p> <p>Firefighter b6 &amp; b7C assumed initial responsibilities as Incident Commander (IC) of Helena Fire. According to the Helena Fire WildCAD Incident Card: (Attachment 1, Helena WildCAD Incident Card)</p> <ul style="list-style-type: none"> <li>• 1715 hours: Engine 334 reports fire is 3 acres with high winds and rapid rate of spread, smoke is impacting the highway, and requests California Highway Patrol, CAL Trans, and 2 water tenders.</li> <li>• 1754 hours: Air Attack 240 conducts reconnaissance of the Helena Fire and reports it has grown to 100-150 acres with a rapid rate of spread, and requests 4 additional Air Tankers and 4 additional Helicopters for fire suppression efforts.</li> <li>• 1800 hours: b6 &amp; b7C advised the Helena Fire has crossed the Trinity River and threatening structures.</li> <li>• 1812 hours: b6 &amp; b7C advised the Helena Fire has grown to over 200 acres and burning on both sides of the Trinity River with structures threatened in the Trinity Canyon Lodge area and old town Helena.</li> <li>• 1843 hours: Air Attack reports the Helena Fire is threatening structures in the Coopers Bar and Red Hill area.</li> <li>• 1907 hours: The Helena Fire has spread east and has moved in to the Coopers Bar area. Multiple fire crews, fire engines, water tenders, and additional aircraft are on order and responding.</li> <li>• 1936 hours: The Helena Fire is reported to be 300 acres in size.</li> <li>• 2100 hours: All incoming fire suppression resources are instructed to respond and stage at the Junction City Guard Station.</li> </ul>			

- 8/31/2017 0611 hours: The Helena Fire is estimated at 5,000 acres.

### Initial Investigation

On August 31, 2017, at approximately 0845 hours, USFS Law Enforcement Officer (LEO) [b6 & b7C] began responding to the Helena Fire. LEO [b6 & b7C] is a member of the Fire Investigation Response Strike Team (FIRST). At approximately 1000 hours, LEO [b6 & b7C] arrived at the heel of the fire located off Hwy 299 at Cemetery Road and met with the Engine 334 crew to include Firefighters [b6 & b7C] and [b6 & b7C]. Engine 334 had remained in that area since their initial attack efforts the previous evening.

After initial interviews with the members of Engine 334, LEO [b6 & b7C] entered the heel of the fire on Brock Gulch Road where he parked and observed macroscale advancing fire pattern indicators associated with angle of char and foliage freezing on trees. The indicators suggested the Helena Fire had advanced uphill in an easterly direction towards Brock Gulch Road. At this point, LEO [b6 & b7C] observed that Brock Gulch Road had been marked with bright colored flagging along the road.

Firefighter [b6 & b7C] advised he had strung the flagging 8/31/2017 at approximately 0900 hours in an effort to alert people not to travel downhill of Brock Gulch Road where he had seen the fire in its early stage and where the general origin area would most likely be located. [b6 & b7C] also advised that numerous PG&E personnel had been entering Brock Gulch Road to access the PG&E access road to the east but had not observed any of them, or anyone else, enter the area west (below) Brock Gulch Road where the GOA would most likely be located.

On August 31, 2017, at approximately 1100 hours, law enforcement personnel were posted in three spots to ensure no persons entered the heel of the fire where the general origin area would most likely be located. These spots were: (1) Brock Gulch Road @ Hwy 299, (2) Brock Gulch Road on north side of the heel of the fire, and (3) Cemetery Road @ Hwy 299. At approximately 1120 hours, USFS Fire Prevention Technician (FPT) [b6 & b7C], a member of FIRST, arrived on scene.

On August 31, 2017 at approximately 1107 hours LEO [b6 & b7C] observed Trinity Public Utility District (TPUD) employee [b6 & b7C] exiting Brock Gulch Rd. [b6 & b7C] advised that he had entered the area about 15 minutes earlier to inspect TPUD powerlines. [b6 & b7C] stated that he had not entered the area below Brock Gulch Road (where the GOA would most likely be located), nor had he removed anything from the area. [b6 & b7C] added that there was a second TPUD truck on the PG&E access road east of Brock Gulch Road occupied by TPUD employee [b6 & b7C]. Approximately 20 minutes later, origin security personnel on Brock Gulch Road advised LEO [b6 & b7C] that [b6 & b7C] had exited the area.

LEO [b6 & b7C] and FPT [b6 & b7C] conducted video recorded interviews with [b6 & b7C] and [b6 & b7C] who explained where they had first observed the fire between Cemetery Road and Brock Gulch Road.

LEO [b6 & b7C] and FPT [b6 & b7C] walked the perimeter of the heel of the fire multiple times both clockwise and counterclockwise. Observations from Brock Gulch Road showed macroscale advancing indicators associated with angle of char and foliage freeze were noted by both [b6 & b7C] and [b6 & b7C] and showed the fire had made a run (advanced) uphill in an easterly direction towards Brock Gulch Road. Observations from Cemetery Road showed the fire had been of lesser intensity where forest fuels had been less damaged and consistent with backing and lateral fire direction indicators. During the perimeter walk, [b6 & b7C] and [b6 & b7C] noted a location where a large Grey Pine tree limb appeared to be in contact with powerlines. The advancing run had progressed from that area. LEO [b6 & b7C] took overall photographs from various points around the heel of the fire to include the tree branch that was in contact with the powerlines.

### Fire Behavior Analysis

The heel of the fire consisted of a steep rocky hillside between Cemetery Road and Brock Gulch Road. The hillside consisted of Pine, Oak, and Madrone trees with open grass to the south.

USFS Engine 334 took on scene weather readings on 8/30/2017, at approximately 1830 hours: Temperature 88 degrees, Relative Humidity 25%, Winds were not reported to the FIRST.

On 8/30/2017 at 1700 hours, Big Bar Weather Station (RAWS) recorded the following weather readings: Temperature 85 degrees, Relative Humidity 23, Wind average speed 4 MPH, Wind max speed 17 MPH, Wind direction 284 degrees.

According to Firefighter **b6 & b7C** who was first on scene at the heel of the fire, the winds were out of the west and blowing in an easterly direction and pushing the fire that direction uphill towards Brock Gulch Road. The fire was advancing and flanking uphill and across the slope with 2-3 foot advancing flame lengths and 1-2 foot flanking flame lengths.

Redding Interagency Emergency Command Center maintains the daily fire danger analysis and weather observations for the Shasta-Trinity National Forest. The fire danger analysis for 8/30/2017: (Attachment 2, Fire Danger Analysis)

- Fire Danger: VERY HIGH
- Project Activity Level (PAL): D; no wood cutting after 1300 hours
- Energy Release Component (ERC): 82
- Ignition Component: 52

## STATEMENTS

### Statement of **b6 & b7C**

On August 30, 2017, around 1700 hours, Highway Specialty employee **b6 & b7C** and **b6 & b7C** picked up their road work signs on the west side of the North Fork bridge on Highway 299. **b6 & b7C** began heading east on Highway 299, towards the east side of the North Fork bridge, when she observed a fire on the north side of the road. **b6 & b7C** pulled off the road at the bathroom and parking area, where she called the fire department and flagged down a ranger and fire truck. **b6 & b7C** advised Law Enforcement Officer (LEO) **b6 & b7C** the fire was on the hillside between Highway 299 and Brock Gulch Road. (Attachment 3, **b6 & b7C** Statement / Video)

### Statement of **b6 & b7C**

On August 30, 2017, at approximately 1700 hours, **b6 & b7C** was travelling westbound on Highway 299 when **b6 & b7C** and he were flagged down by two Highway Safety workers **b6 & b7C** at the Bagdad river access near Helena. As they drove by the worker, **b6 & b7C** looked in his mirror and observed the fire. The fire was approximately 1/8 acre in size and no more than 80 feet below Brock Gulch Road. The bottom of the fire was approximately 100 feet above Highway 299. Within 2-3 minutes the fire had jumped Brock Gulch Road. From **b6 & b7C** perspective the fire was directly below the 6 strands of electrical transmission lines. (Attachment 4, **b6 & b7C** Statement / Video)

### Statement of **b6 & b7C**

On August 30, 2017, Forestry Aid **b6 & b7C** was one of the first responders to the Helena Fire on engine 334. The fire was on a west facing slope, kind of under some powerlines, close to the Bagdad river access. The fire looked to be 1/8 of an acre with fast erratic winds, which took the fire out of control very quick. Bureau of Land Management Ranger (BLM) **b6 & b7C** asked **b6 & b7C** where the location of the fire was on the west facing slope. **b6 & b7C** said it was between the second Pine tree and the power poles. (Attachment 5, **b6 & b7C** Statement)

### Statement of **b6 & b7C**

On August 30, 2017, **b6 & b7C** was driving westbound on Highway 299 with his captain. **b6 & b7C** observed two individuals **b6 & b7C** waving them down at Bagdad river access. They observed the fire on the hill above Highway 299 and below the powerlines. The fire started moving east along the powerlines and spread rapidly (Attachment 6, **b6 & b7C** Statement)

### Statement of **b6 & b7C**

On August 30, 2017, **b6 & b7C** was travelling west on Highway 299 in Engine 334. **b6 & b7C** called on the radio advising there was a fire east of Helena, on the north side of the road. **b6 & b7C** observed a small fire, approximately 1/8 acre in size on the hill across from Bagdad river access. The fire was burning in grass, mid-slope above Highway 299 and below the powerlines. The fire was just left of a large Digger Pine above Highway 299. (Attachment 7, **b6 & b7C** Statement)

### Statement of **b6 & b7C**

On August 30, 2017, Fire Engine **b6 & b7C** arrived on scene of the Helena Fire. The heel of the fire was approximately 150 feet above Cemetery Road and below Brock Gulch Road. At approximately 1703 hours, the crew started a hose

lay up the left flank of the fire. At this time the fire was still above Cemetery Road and actively backing and flanking to the north. At approximately 1715 hours, the fire reached Cemetery Road in a couple of areas. The fire was approximately ¼ acres in size when the crew started the hose lay. (Attachment 8, b6 & b7C Statement / Video)

#### Statement of b6 & b7C

On August 30, 2017, around 1700-1705 hours, b6 & b7C heard what appeared to be a rifle shot (from his property, b6 & b7C b6 & b7C which drew his attention to look down towards the area (Junction of 299 & Brock Gulch Road) where he observed a fire, which did not appear to be large (The fire was already burning at the time of the shot). The fire was near old Helena, north of Trinity River, east of N. Fork Trinity River, above and below Brock Gulch access Road, approximately 200 yards from intersection of Brock Gulch Road and Hwy 299 W. By 1710 to 1715 hours, he called 911 and reported the fire. When he first noticed the fire it was not large (picture included taken at 1723) and there was a white pickup truck in the area, on Highway 299. The fire had not yet spread down to Highway 299 and was not yet on the ridge where the PG&E access road is (Brock Gulch Road). By 1759, the fire had crossed the river (Trinity River).. (Attachment 9, b6 & b7C Statement / Photos / Audio)

#### ORIGIN EXAMINATION

On September 1, 2017, at approximately 0800 hours, Fire Investigation Response Strike Team (FIRST) members; Special Agent (SA) b6 & b7C, Law Enforcement Officer (LEO) b6 & b7C, LEO b6 & b7C Fire Prevention Technician (FPT) b6 & b7C b6 & b7C and FPT b6 & b7C arrived at the General Origin Area (GOA) of the Helena Fire. Based upon statements made by reporting parties, first responders, suppression activity observed, and the observed fire behavior indicators, the GOA was identified and the boundaries were flagged off: to the south of the GOA the boundary was flagged at highway 299, to the east of the GOA the boundary was flagged at the edge of Brock Gulch Road, to the west the boundary was flagged along Cemetery Road.

The north end boundary of the GOA was determined by a hose lay established by initial attack resources starting on Cemetery Road and extending uphill towards Brock Gulch Road. The GOA is on a 70 percent slope, with the bottom being Cemetery Road and the top being Brock Gulch Road. The distance between the two roads is approximately 220 feet. FIRST members b6 & b7C b6 & b7C and b6 & b7C walked complete circles around the Helena Fires GOA in a clockwise and counterclockwise manner. The same FIRST members observed macroscale foliage freeze and droop on understory brush and low lying tree crowns, and grass stem fire pattern indicators on the west flank of the GOA adjacent to Cemetery Road. FIRST identified backing fire vectors transitioning to a lateral vector as the fire progressed further up the slope. FIRST observed lateral and advancing fire vectors consistent with the slope and wind direction at the time of ignition, with the fire moving in an easterly direction up the slope crossing Brock Gulch Road. The GOA is in steep rocky terrain with very little understory vegetation.

There are two sets of electrical transmission lines running perpendicular to one another. The taller and larger set of lines are owned and operated by Pacific Gas and Electric (PG&E), running northeast to southwest. The PG&E lines consist of 6 parallel running lines. The second set of lines are distribution lines owned and operated by Trinity Public Utility District (TPUD), running in a northwest to southeast direction. The TPUD lines consist of two parallel running lines. (Attachment 10, TPUD Powerline Map)

On the east side of the GOA, which is Brock Gulch Road, FIRST observed macroscale fire pattern indicators such as; angle of char on the boles of trees steeper than the slope, grass stems and clumps burned off at, or near the base, cupping on branch stems primarily pointed downhill, and foliage freeze in vegetation indicating a wind direction blowing west to east, which aligns with the slope. FIRST identified a distinct and predominant advancing fire run to the east and south, across Brock Gulch Road and continue to the east. At approximately 1145 hours, FIRST entered the GOA at this location at the top end of Brock Gulch Road and began a search pattern contouring the slope downhill to the west and north.

The first grid pattern was approximately 50 feet wide with team members tying into one another as they followed fire pattern indicators to the west and north. FIRST followed primarily lateral fire vectors at the top end of the grid and primarily advancing fire movement in the bottom of the grid. FIRST moved across the slope flagging these indicators for approximately 150 feet. FIRST then moved back to where they started and adjusted further down the slope and began the same grid pattern and directional movement, contouring across the slope, tying into one another as they moved to the northwest. FIRST observed primarily advancing fire movement on the top portion of the grid and lateral fire movement on the bottom portion of the grid as they moved towards the northwest. FIRST determined the fire advanced and flanked upwards and across the slope towards the north and east crossing Brock Gulch Road.

After working across the advancing run and identifying lateral transitions on both sides of the advancing run, FIRST identified a Specific Origin Area (SOA), approximately 20 x 20 feet in size. FIRST then readjusted towards the bottom of the slope and lined out a grid pattern starting from the northwest and moving uphill in an easterly direction. FIRST identified and flagged backing fire

indicators in this grid pattern as they worked towards the SOA. Once the grid was complete, FIRST walked around the SOA perimeter numerous times in each direction.

Directly above the SOA, FIRST observed a tree limb resting on the TPUD lines. The limb rested on both lines and was connected to a standing, living Grey Pine, approximately 40 feet from the TPUD lines. Unburned pine needles were still located on the tree limb above the SOA. Burnt remnants of branches were also observed on the tree limb above the SOA. The portion of the tree limb between the TPUD powerlines appeared to be burnt, however, approximately 10 feet of the tree limb beyond the powerlines, towards the tree itself, appeared to be unburnt. FIRST completed the GOA grid at approximately 1745 hours.

On Saturday, September 2, 2017, at approximately 0917 hours, FIRST personnel entered the SOA to perform a grid search pursuant to the guidelines set forth in the Guide to Wildland Fire Origin and Cause Determination (NWCG Handbook, PMS 412, NFES 1874, April 2016.) FIRST observed and marked Fire Pattern Indicators consistent with the Indicator Categories, and methodology set forth in Chapter 2 of the Handbook. All personnel in the grid search area were adhering to the standards set forth in the Handbook. LEO [REDACTED] was the photographer during the Origin and Cause Investigation of the Helena Fire (Attachment 11, Law Enforcement and Investigations Photographic Log).

The grid lane was set up at 16' 4" long by 16" wide, on a very steep slope moving in an easterly direction up the slope beginning on the bottom end of the SOA. A wooden power pole within the SOA, dated 11/2015 was identified and marked as Reference Point 1 (RP1).

Grid lane 1: FIRST visually examined lane 1. An advancing indicator was observed showing fire movement uphill. A burnt pine branch was collected under a madrone tree and labeled as evidence 1 (E1). E1 was collected 17' 2" @ 168 degrees from RP1. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 2: FIRST visually examined lane 2 which largely consisted of barren soil. FIRST was unable to locate any obvious indicators or evidence. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 3: FIRST visually examined lane 2 which largely consisted of barren soil. FIRST was unable to locate any obvious indicators or evidence. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 4: FIRST visually examined lane 4. An advancing indicator was identified on the south end of the grid, and a backing indicator was identified on the north end of the grid. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 5: FIRST visually examined lane 5. A metal hardware bracket was located in the middle of the grid, buried approximately 2' in the ground. A magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects. Other than the metal bracket, no other metallic objects were located.

Grid lane 6: FIRST visually examined lane 6. A backing indicator was identified. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 7: The lane length was increased to 18' 4" to compensate for terrain. FIRST visually examined lane 7. Lane 7 was visually searched with no obvious indicators or evidence located. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 8: FIRST visually examined lane 8. A backing indicator was identified and two pine branches were collected and labeled evidence 2, (E2), and evidence 3 (E3). E2 was collected 9'11" @ 161 degrees from RP1. E3 was collected 8'10" @ 161 degrees from RP1. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 9: FIRST visually examined lane 9. An advancing indicator was identified directly above the backing indicator observed in grid 8, indicating a possible Ignition Area (IA). A pine branch was collected and labeled evidence 4 (E4). E4 was collected 9'10" @ 160 degrees from RP1. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 10: FIRST visually examined lane 10. Lateral and backing indicators were marked and a section of coiled metal was collected and labeled evidence 5 (E5). E5 was collected 7'5" @ 150 degrees from RP1. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects. The coiled metal was the only metal object detected.

Grid lane 11: FIRST visually examined lane 11. A backing indicator was observed next to a lateral indicator, suggesting another IA. 3 tree limbs were collected and labeled evidence 6 (E6), evidence 7 (E7), and evidence 8 (E8). E6 was a large branch with a burnt end that would have attached to a limb, with green needles still affixed. E6 was collected 14'10" @ 130 degrees from RP1. E7 was a smaller branch with a burnt end that would have attached to a limb. E7 is a forked limb, with one side having burn marks on one side and green needles on the other. E7 was collected 17'9" @ 130 degrees from RP1. E7 was collected 17'9" @ 130 degrees from RP1. E8 was a small pine branch resting in an unburned area, but had burn marks on the bottom side of the branch. E8 was collected 14'5" @ 130 degrees from RP1. E8 was a small pine branch with burn marks underneath. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 12: FIRST visually examined lane 12, The grid length was adjusted to 16' long to compensate for the power pole, RP1, and terrain. An advancing indicator showing fire movement uphill and a lateral indicator next to each other suggested another IA. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 13: FIRST visually examined lane 13. Advancing indicators were marked. A tree branch was collected and labeled as evidence 9 (E9). E9 was collected 14' @ 166 degrees from RP1. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 14: FIRST visually examined lane 14. Advancing indicators were observed and marked moving up slope. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

Grid lane 15: FIRST visually examined lane 15. Advancing indicators were observed and marked moving up slope. Next, a magnet was used to search for ferrous metallic objects and a metal detector was used to search for ferrous and non-ferrous metallic objects; both with negative results.

The grid search of the SOA was completed at 1430 hours.

On September 3, 2017, Forest Service Smokejumpers b6 & b7C and b6 & b7C cut the tree limb from the powerlines by climbing the tree and tying a rope to the tree limb while utilizing a pully system to raise the limb from the powerlines and lowering the limb after it had been cut from the tree. This tree limb was collected and labeled as E10 A-K. After inspecting the portion of the limb that was laying across the powerlines (E10-B), FIRST observed charring, remnants of burnt branches and what appeared to be sparatic small burn spots. FIRST members b6 & b7C and b6 & b7C utilized a FARO LIDAR system to scan the SOA. The memory card utilized for the scan is labeled as E11.

FIRST determined the Ignition Area (IA) was the Grey Pine limb, specifically where the tree limb was in contact with the TPUD powerlines. This IA was the smallest area which FIRST could define within the SOA in which a heat source and fuel interacted with each other and a fire began. The three IAs that FIRST identified on the ground within the SOA grid lanes appeared to have resulted from the IA overhead where the tree limb was in contact with the TPUD powerlines.

### CAUSE DETERMINATION

**Lightning** - Lightning is discharged static electricity associated with thunderstorm activity. Lightning is typically a series of short bursts approximately two inches in diameter, lasting for about one-half second. These lightning discharges include cloud-to-ground strikes which are in the range of 100 million volts, 200,000 amperes, and 54,000 °F. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 197, (2016). The circumstances indicating a possible lightning strike as a cause includes recent electrical storm (hours/days/weeks) activity in the area, the presence of indicators of sleepers and holdovers, scarring on trees or snags, precipitated sap, needle shower, ballistic penetration of adjoining vegetation by needles and small twigs or splinters, blow-holes at base of tree, fulgurites, and splintered wood or vegetation. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 197, (2016).

FIRST generated a CoreLogic STRIKENet lightning report for this incident that showed no strikes within the last 14 days within 10 miles of the fire area (Exhibit 1, CoreLogic Strikenet Report). No lightning scars were observed on any of trees or shrubs in the incident area. No blowholes or fulgurites were observed in the incident area. For these reasons, Lightning can be excluded as a possible cause of the Helena Fire. (Attachment 13, STRIKENet Map)

**Equipment Use** - Wildland fires resulting from the operation of mechanical equipment excluding railroads. Types of mechanical equipment range from heavy construction to small portable engines. Equipment use caused fires may be viewed in five parts; 1. Exhaust system particles, 2. Friction and sparks, 3. Fuel, lubricant, fluids, 4. Mechanical breakdown or other malfunction 5. Radiant or conductive heat transfer. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 215, (2016).

No evidence of Equipment Use was discovered in or near the specific origin area. For these reasons, Equipment Use can be excluded as a possible cause of the Helena Fire.

**Smoking** - Wildfires caused by smoking activities or accoutrements, including matches, cigarettes, cigars, pipes, illegal substances, etc. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 207, (2016). To effectively assess the probability of a cigarette as a competent ignition source, consider the following; physical characteristics of the cigarette, environmental factors, physical placement factors. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 207, (2016). Cigarette ignition factors are; 0% RH, Start Likely, 10% RH, Start Possible, 18% RH, Start Unlikely and 22% RH, No Start. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 208, (2016). Environmental factors include; finely particulated fuel bed, loose fuel arrangement, fine dead fuel moisture (FDFM) less than 14%, 80 of F + ambient temperature, microclimate location (temperature at ground level vs. temperature at higher level), Relative Humidity (RH) of 22% or less. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 208, (2016).

No evidence of cigarettes or smoking was discovered in or near the specific origin area. The Big Bar Remote Automated Weather Station (RAWS) recorded a period of time, prior to discovery of the fire, when weather conditions would allow a cigarette ignition. The specific origin area was located in a place where smoking typically would not occur, on a steep slope away from roads and trails. Witnesses did not report any smoking activities or human occupancy in the origin area prior to discovery of the fire. For these reasons, Smoking can be excluded as a possible cause of the Helena Fire. (Attachment 14, RAWS Data)

**Camp Fire** - Any fire kindled for warmth, cooking, light, religious or ceremonial purpose. Campfires may occur at any location. Responsible parties may include hunters, campers, anglers, hikers or transients (homeless). Regulations often address attendance, clearance, and periods of use, suppression tools, and proper extinguishment. Violations of these regulations often result in escaped fires. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 202, (2016).

There was no sign of a rock ring, cooking, food wrappers or human inhabitation in the specific origin area. For these reasons, Camp Fire can be excluded as a possible cause of the Helena Fire.

**Debris Burning** - Wildland fires caused by debris burning activities including residential (pile, barrel, hazard reduction) and industrial (logging operations, land clearing, agricultural, forestry, right-of-way hazard reduction, or other controlled burning). "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 211, (2016).

There was no evidence of debris burning or piles of debris in the area of the Helena Fire general origin area. The specific origin area was on a steep slope, located on public land. For these reasons, Debris Burning can be excluded as a possible cause of the Helena Fire.

**Railroad** - Fires caused by any railroad operations, personnel, rolling stock and can include track and right-of-way maintenance. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 229, (2016). Railroad structures such as trestles, bridges, and ties, are included in this category of fire cause. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 229, (2016). General railroad ignition factors include; exhaust carbon, brake shoe particles, track maintenance, right-of-way maintenance, dynamic grid failure, signal flares, wheel slip, wheel bearing failure (hotbox) and transients. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 230, (2016).

There are no known railroad operations in the vicinity of the Helena Fire specific origin area. For these reasons, Railroad can be excluded as a possible cause of the Helena Fire.

**Incendiary** - Wildfires deliberately or maliciously set with the intent to damage or defraud. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 215, (2016). **Arson**: The intentional and wrongful burning of someone else's property or one's own property (as to fraudulently collect insurance). (Garner, 2009) "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 299,

(2016). **Incendiary:** Deliberately and unlawfully set fire to property. (Garner, 2009) "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 299, (2016). These terms are often used interchangeably.

There is no recent history of incendiary caused or suspicious fires in the area. No evidence was recovered that would indicate an incendiary cause such as a time delay ignition device. The specific origin area was located a short distance from State Route 299, a heavily traveled highway. An individual wanting to avoid detection would likely choose a more secluded location. For these reasons, Incendiary can be excluded as a possible cause of the Helena Fire.

**Children -** Wildfires started by persons 12 years of age or younger. The child may be motivated by normal curiosity and use fire in experimental or play fashion. Matches or lighters are the most frequent ignition source. It often involves multiple children. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 243, (2016).

The specific origin area was located on a steep slope near State Route 299. There was no evidence or reports of children in the general origin area. The nearest schools and playgrounds area several miles away. The Bagdad River Access Area is located on the opposite side of State Route 299 from the specific origin area. The hazards presented by the highway make it unlikely that children would access the origin area from river access area. For these reasons, Children can be excluded as a possible cause of the Helena Fire.

**Miscellaneous -** Wildfires that cannot be properly classified under other standard causes. Some of these are listed below but can include other ignition sources that are not listed. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 245, (2016).

**Powerlines:** The category of powerlines includes all electrical equipment associated with the production, transmission, and use of electricity. The electrical grid or system for the transmission, distribution, and service of customers forms a complex web and is governed by regulations. The transmission of electricity has long been recognized as having an inherent danger above and beyond typical hazards. Early electrical distribution systems caused numerous fires, better engineering and prevention efforts have reduced the number. Powerlines are an ignition source that can lead to major fires, as many of the conditions that contribute to system faults and failures coincide with extreme fire behavior. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 245, (2016).

Two sets of powerlines traversed the GOA. The SOA and suspected ignition areas were located below a set of two powerlines which had a large limb from a nearby pine tree contacting both lines. The tree limb exhibited fire damage around and between the two wires which appeared to be independent of the ground fire that spread through the area. Witness photographs and statements indicated that the fire was initially observed in the area of the powerlines. Evidence collected from the SOA also supports the fire originated from the tree limb along the powerlines. For these reasons, powerlines are included as the probable cause of the Helena Fire.

**Fireworks:** Fireworks may be classified in several different ways depending upon the jurisdiction. Most fireworks will fall into one of three categories, ground based and hand-held, aerial, or explosive. Fireworks are known to cause major property damage annually including fires to both wildland and structures. Used in an unsafe manner, fireworks can discharge burning material into flammable vegetation. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 263, (2016).

There was no evidence of fireworks found in the origin area including packaging, fuses, matches, mortar tubes or the remains of spent fireworks. There were no reports of fireworks being seen in the area of the origin. For these reasons, fireworks can be excluded as a possible cause of the Helena Fire.

**Firearms and Ammunition:** Black powder discharge, tracer, incendiary, solid copper and copper jacketed and various types of ammunition are capable of causing wildfires through the discharge of hot materials or mechanical sparks caused when a bullet strikes a hard object and fragments, creating hot particles which land in the dry fuels. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 266, (2016).

There was no evidence of firearm use in or near the origin area. There was no ammunition packaging or targets found in the area. For these reasons, firearms and ammunition use can be excluded as a cause for the Helena Fire.

**Exploding Targets:** Exploding targets detonate upon impact of the projectile, sending out hot particles. Exploding targets are typically a mixture of more than one compound which is generally not considered an explosive until combined. Exploding targets come commercially manufactured in either low or high velocity types. Homemade versions are also being used with similar effects. Once mixed, the compounds form an explosive device. Wildland fire investigators working a scene which may include an exploding target should use caution when handling, collecting, packaging and storing residue or devices. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 270, (2016).

There was no evidence of exploding targets being used in the area of the origin. No spent bullet casings or ammunition packaging were found in the area. No damage to forested land was found, which would have been likely from the explosion. For these reasons, exploding targets can be excluded as a cause for the Helena Fire.

**Cutting, Welding, and Grinding:** These types of ignitions are normally caused by an industrial or agricultural operation, but may also result from an individual or residential activity. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 274, (2016).

There was no evidence of cutting, welding and/or grinding in the specific origin area of the Helena Fire. There were no industrial or agricultural operations occurring in the vicinity of the Helena Fire. For these reasons, cutting, welding, and grinding can be excluded as a cause for the Helena Fire.

**Spontaneous Heating:** Certain fuels will self-heat and ignite spontaneously when conditions support a combination of biological and chemical processes. This action is most likely to occur after periods of warm humid days in decomposing piles of organic material such as hay, grains, feeds, manure, sawdust, wood chip piles, and piled peat moss. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 277, (2016).

The materials and conditions required for a spontaneous heating ignition were not present at the Helena Fire. For this reason, spontaneous heating can be excluded as a cause for the Helena Fire.

**Coal Seam Fires:** Coal seams may be ignited by lightning, wildfires, or other ignition sources. Fires typically burn slowly along the seam and may resurface when seam nears the surface which cracks, and oxygen is introduced to the burning seam. These fires are dangerous to investigate as the burning coal seam may lie just under the surface. Coal seam fires may be visible in the winter with steam plumes and random bare patches in the snow from underground heating. Patches of dead vegetation may also be a tip that underground heating from a coal seam fire is taking place. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 282, (2016).

Coal seams do not exist in the vicinity of the Helena Fire. For this reason, coal seam fires can be excluded as a cause for the Helena Fire.

**Electric Fences:** Fires originating from electric fences used to contain domestic animals. Rapid electric pulse cycle does not allow fuel to cool down. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 283, (2016).

Electric fences do not exist in the vicinity of the Helena Fire. For this reason, electric fences can be excluded as a cause for the Helena Fire.

**Refraction (Reflection):** The sun's rays can be focused to a point of intense heat if concentrated by certain glass or shiny objects. This refraction or reflection process bends light rays, similar to that which occurs through a magnifying glass. The shiny, concave end of a metal-can may focus sunlight, but its short focal distance makes the potential as a possible cause highly unlikely. Fires started by these items are extremely rare occurrences; however, objects possessing these characteristics recovered from the specific origin Area may need to be carefully examined to determine their fire starting potential. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 285-286, (2016).

No glass or other light focusing materials were found in the specific origin area. For this reason, refraction (reflection) can be excluded as a cause of the Helena Fire.

**Blasting:** Fires started by flaming debris associated with blasting activities. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 286, (2016).

No blasting had been conducted in the vicinity of the Helena Fire. For this reason, blasting can be excluded as a cause for the Helena Fire.

**Flares:** Fires resulting from commercial, industrial, or military flares. Compound is usually a mixture of sawdust, wax, sulphur, strontium nitrate, and potassium perchlorate. Flares burn at approximately 3600°F. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 287, (2016).

No burned out flares, slag, plastic caps or other discarded parts of a flare were discovered in the Helena Fire general origin area (GOA) or in the general vicinity. There were no reports of aerial type flares preceding the discovery of the Helena Fire. For

these reasons, flares can be excluded as a cause of the Helena Fire.

**Oil and Gas Fires:** Fires associated with the recovery and pumping of oil and gas products in the wildland. Flare pit and stack fires are among some types of oil and gas fires which may be encountered in the wildland environment. Flare pit and stack operations are designed to burn off excess or unwanted petroleum by-products. Occasionally these will start fires from direct flame impingement, the igniter flare or stack particles. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 290, (2016).

Neither gas nor oil extraction operations exist in the vicinity of the Helena Fire. For this reason, oil and gas fires can be excluded as a cause for the Helena Fire.

**Flying Lanterns:** Flying lanterns are miniature hot air balloons made from paper or plastic, bamboo or lightweight wood, and wire with a solid fuel package. Homemade lanterns may use plastic garbage sacks. Originating in Asia and called happiness balloons or wish balloons their use has spread around the world and they are commonly used during weddings or other celebrations. Experimentation by young adults or teenagers is commonly associated to fires caused by flying lanterns, particularly if homemade. Manufacturers claim that the paper is treated with a fire retardant but many are not. Flying lanterns can travel miles away from release site and are capable of reaching several thousand feet in altitude. Multiple lanterns may be released at a single time. Releases typically occur during nighttime hours for full visual effect, but can also be deployed during daytime activities. Note: Oregon has classified flying lanterns as fireworks and banned them from use within the state. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 293, (2016).

No remains of a flying lantern were found in the origin area of the Helena Fire. There were no reports of flying lanterns being seen in the area prior to discovery of the fire. For these reasons, flying lanterns can be excluded as a cause for Helena Fire.

**Wind Turbines:** Wind turbines use wind flow to generate electrical energy and are increasingly being placed into the wildland environment. Where more than one wind turbine is located in the same area, the term wind farm may be used. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 295, (2016).

Wind turbines do not exist in the vicinity of the Helena Fire. For this reason, wind turbines can be excluded as a cause for the Helena Fire.

**Home Outdoor Wood Burning Furnaces:** Referred to as outdoor wood furnaces or outdoor wood boilers, these devices can be modern manufactured models or homemade. They can be used to heat a structure by way of connecting to a central heating unit and/or are used to provide hot water. Either way, the furnace operates by burning firewood and may be burning wood even in the warmer parts of the year if it is being used to heat water also. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 296, (2016).

No wood burning furnaces or boilers exist in the general or specific origin areas. For this reason, home outdoor wood burning furnaces can be excluded as a cause for the Helena Fire.

**Structures:** Fire spreading to the wildland due to failures or activities associated with a structure. "NWCG Handbook", PMS 412, NFES 1874, Chapter 6, page 296, (2016).

No residences or other structures exist in the general or specific origin areas. For this reason, structures can be excluded as a cause for the Helena Fire.

FIRST Members Signatures

b6 & b7C

9/7/17  
9/7/17  
9/7/17  
9/7/17



**Instructions for filling out the FS-5300-45, Wildland Fire Origin and Cause Supplemental Incident Report****LOCATION**

**Fire Name:** The fire incident name assigned to the individual fire. If several fires have been combined into a Complex, use the individual name of the fire rather than the Complex name. There may be several independent investigations for the various individual fires within a Complex, each requiring an individual O&C report.

**Dispatch #:** The alpha-numeric designator used by dispatch for the State-County-Year-WildCad # (e.g. CO-MLX-2013-246)

**Account code** – the “P code” assigned to the fire.

**REGION:** Two digit Region identifier (e.g. 01)

**FOREST:** Two digit Forest identifier (e.g. 08)

**DISTRICT:** The single or two digit District identifier (e.g. 3 or 50)

**STATE:** Two letter alpha identifier of the State (e.g. AZ)

**COUNTY:** Spell out the county name.

**ORIGIN LOCATION:** Use common geographical names and road numbers that would allow the reader to locate the general fire location on a map.

**TOWNSHIP/RANGE/SECTION/ ¼ SECTION:** Example 39N, 1W, 18

**MERIDIAN/DATUM:** Enter the meridian used for the Township and Range reference and enter the datum used for the latitude and longitude reference (e.g. NMPM/NAD83)

**JURISDICTION**

**USFS ONLY:** Enter “yes” or “no” based on the land ownership burned by the fire. If the fire burned onto non-National Forest System land enter “no” and then fill in “IDENTIFY OTHER AGENCY(S)” with the State or local agency having concurrent jurisdictional responsibility for the fire investigation.

**LEAD ORIGIN & CAUSE INVESTIGATOR:** Title and name of the lead Forest Service O&C Investigator.

**EST. SUPPRESSION COST:** Estimated total suppression costs. This includes Forest Service and assisting agencies’ costs. This information can generally be obtained from Incident Business Management Team or IC.

**INJURIES/DEATHS:** Number of serious injuries or deaths as a result of the fire.

**EVENT SEQUENCE**

**ESTIMATED TIME OF IGNITION:** An estimate based on factors such as the time of the initial report, the fire behavior, and the O&C investigation. The “WHO” is the name of the individual making the estimate.

**TIME FIRE REPORTED:** The time of the first report of the fire. The “WHO” is the name of the individual who first reported the fire.

**TIME ORIGIN PROTECTED:** The time and date the actual origin area was secured, either by fire crews or investigators.

**TIME ORIGIN RELEASED:** The time and date the actual origin area investigation was complete and the area was opened to the public or other investigators.

**FIRE BEHAVIOR**

**ESTIMATED ACRES:** Estimated total acreage at fire containment, or at time of report.

**FUEL TYPE @ IGNITION AREA, MATERIAL FIRST IGNITED:** e.g. grasses, pine needles, duff

**WEATHER OBSERVER (ON SCENE):** Name of the individual who took weather readings or weather observations at time closest to ignition of fire. Generally is a person with the initial attack crew.

**SLOPE:** Percent slope at the specific origin area.

**ASPECT N E S W:** Direction the specific origin area is facing.

**ELEVATION:** Elevation of the specific origin area.

**WEATHER STATION: DATE, TIME, TEMP, RH, WIND DIR, WIND SPEED:** Name of the closest Remote Automated Weather Station (RAWS) and the readings from the RAWS at the time closest to the estimated time of ignition.

**CAUSE DETERMINATION**

Use a two letter identifier for the level of certainty for each of the nine cause categories listed. The level of certainty is based on the definitions used in NFPA 921, 4.5.1. Explain the determination (PS, PR, EX) in detail for each of the nine categories. It is not necessary to go into detail on the ignition sources that are clearly not possible. This is based on the investigation results and/or the absence of the cause at the origin (e.g. no railroad in the origin area). The form expands to accept unlimited narrative in each of the nine cause categories blocks.

**PS = POSSIBLE:** At this level of certainty, the hypothesis can be demonstrated to be feasible but cannot be declared probable. If two or more hypotheses are equally likely, then the level of certainty must be “possible.” Describe how you “tested” each hypothesis.

**PR = PROBABLE:** This level of certainty corresponds to being more likely true than not. At this level of certainty, the likelihood of the hypothesis being true is greater than 50%. Describe how you "tested" the hypothesis and arrived at a determination of probable.

**EX = EXCLUDED:** A determination of "excluded" should be used if the cause is not possible or probable.

**CAUSE DETERMINED:** Either this field or the "cause undetermined" field should be filled out; not both. State the actual cause and give a brief summary explaining the cause.

**CAUSE UNDETERMINED:** Give a brief summary of why the cause is "undetermined." An undetermined fire cause may later be changed to "cause determined" if new evidence becomes available.

**SUBJECT/WITNESS/VICTIM/REPORTING PARTY/OTHER:** Self-explanatory.

**VEHICLE INFORMATION:** Self-explanatory

**EVIDENCE/PROPERTY INFORMATION:**

Use evidence/property on form FS-5300-48 and FS-5300-49 and attached to FS 5300-45. (Law Enforcement and Investigation Inventory of Seized or Impounded Property).

**INSURANCE INFORMATION:**

The cost of fire suppression and resource damages can often be recovered by ASC-Claims through Homeowners, Automobile, or Umbrella policies of the individual or company who caused the fire. Include as much of this information as available.

**SYNOPSIS:**

**(DATE, FIRE NAME, ESTIMATED ACRES, LOCATION, JURISDICTION); (ESTIMATED COST, DAMAGE; PROPERTY / RESOURCE); (CAUSE; DETERMINED / UNDETERMINED):** Give a brief, one or two paragraph summary of the fire, including information on each of the items listed in this heading.

**DETAILS OF INVESTIGATION:**

**(INITIAL REPORT, INITIAL ATTACK, INITIAL INVESTIGATION, FIRE BEHAVIOR ANALYSIS, STATEMENTS, ORIGIN EXAMINATION, CAUSE DETERMINATION:** Provide a detailed write-up of the fire origin and cause investigation, including but not limited to how and when the fire was initially reported, who reported it, who it was reported to; provide details on who responded on the initial attack, both citizens and initial fire crew response, and describe the suppression actions they took that are relevant to the origin investigation. Describe in detail the methodology used by the qualified fire investigator(INVF) for the investigation of the General Origin Area, the Specific Origin Area, and the Ignition Area of the fire. Also include details in this section about on scene weather data, lightning data, 911 call logs, and RAWs information as it relates to the origin and cause determination. Reference and attach documents, statements, and photographs as needed. Include information about the fire behavior as it relates to the ignition factors and origin determination. Attach the report of the Fire Behavior Analyst (FBAN) if used or referenced. Describe in detail the cause determination: how did the heat source come in contact with the materials first ignited, what were the ignition factors (e.g. windy conditions, burning without proper clearances, no screen on burn barrel, inadequate spark arrestor, etc.).

**FIRE SCENE SKETCH**

**(INCLUDE SCALE, TITLE, AUTHOR, NORTH ARROW, DATE AND TIME):** Insert the fire scene sketch or diagram on this page. The document can be scanned and inserted electronically at this location in the form.

**PHOTO LOG**

**DATE:** The date the photographs were taken.

**CAMERA:** The camera model used to take the photographs (e.g. Nikon D100).

**PHOTOGRAPHER:** The name of the person taking the photographs. If there are multiple photographers, consider using a separate page for the additional photographer(s).

**IMAGE NO:** Enter the original image number assigned by the camera (e.g. DSC\_0171). If the image number is "renamed" by the author include that in the "Description" section.

**DESCRIPTION:** Enter a description of what the photograph is showing. If the photograph is showing a fire pattern indicator include the indicator category, the item depicted, and the fire vector (e.g. Protection, pine cone, Advancing).

**DIRECTION OF PHOTO (COMPASS):** Enter the compass direction the camera is facing when the picture was taken (e.g. N, ENE, SW, etc).

# **ATTACHMENT 1**

Reporting Party: e334

Initial Report On Conditions:  
veg fire mm37

Initial Location: helena bridge up on the hillside  
Lat: 40°44',59.09", Lon: 123°7',5.89", T34N, R11W, SESW Sec 33

Actual Location:  
Lat: 40°46',16.46", Lon: 123°7',27.47", T34N, R11W, SWSW Sec 21

Incident Notes:  
DPA: FRA UNIFIED COMMAND WITH CAL FIRE SHU

Dispatcher: b6 & b7C Status: Open Sub-Type: Batt 3

Fiscal Codes: P5LA7C-0514

Web Comment:

Timer: Closed Timer for Resource AA-240

08/30/2017 17:30:38 RW OK: off redding ete 17:40 + AFF Registration: N421DF Callsign: N-421DF Speed: 165 knots Heading: 294° true Altitude: 2,637' msl Make: Rockwell Model: OV-10 Lat: 40°29.5800' Long: -122°22.3200' Time: 08/30/2017 17:28:56 UTC-0700

08/30/2017 17:45:26 RW OK: ops normal Registration: N421DF Callsign: N-421DF Speed: 157 knots Heading: 284° true Altitude: 6,466' msl Make: Rockwell Model: OV-10 Lat: 40°43.8600' Long: -123°2.2302' Time: 08/30/2017 17:44:11 UTC-0700

Timer: Closed Timer for Resource H-104

08/30/2017 18:30:24 RW OK: heading to redding for fuel Registration: N481DF Callsign: H-481DF Speed: 110 knots Heading: 18° true Altitude: 4,324' msl Make: Bell Model: UH-1H 703/S Lat: 39°54.1902' Long: -122°37.8300' Time: 08/30/2017 18:29:18 UTC-0700

08/30/2017 18:44:32 RW OK: Registration: N481DF Callsign: H-481DF Speed: 118 knots Heading: 24° true Altitude: 1,551' msl Make: Bell Model: UH-1H 703/S Lat: 40°18.4302' Long: -122°25.3896' Time: 08/30/2017 18:42:56 UTC-0700

08/30/2017 19:00:14 RW OK: on the ground redding

08/30/2017 19:21:14 RW OK: off redding ete 19:40 + AFF Registration: N481DF Callsign: H-481DF Speed: 116 knots Heading: 297° true Altitude: 1,122' msl Make: Bell Model: UH-1H 703/S Lat: 40°30.9402' Long: -122°20.5104' Time: 08/30/2017 19:19:38 UTC-0700

Timer: Closed Timer for Resource

Timer: Closed Timer for Resource AA-05

08/31/2017 12:21:46 RW OK: returning redding 11 min ete + AFF Registration: N32WS Callsign: N-32WS Speed: 178 knots Heading: 116° true Altitude: 11,092' msl Make: Aero Commander Model: 690A Lat: 40°40.7700' Long: -122°57.9096' Time: 08/31/2017 12:19:37 UTC-0700

08/31/2017 12:24:32 RW OK: switcvhed to NOPS

Timer: Closed Timer for Resource AA-05

08/31/2017 17:00:05 RW OK: off rdd 2 sob 4 hr fob 12min + AFF

08/31/2017 17:00:20 RW OK: Registration: N32WS Callsign: N-32WS Speed: 110 knots Heading: 0° true Altitude: 505' msl Make: Aero Commander Model: 690A Lat: 40°30.5004' Long: -122°17.6898' Time: 08/31/2017 16:54:19 UTC-0700

08/31/2017 17:08:42 RW OK: so me as Helena AA

08/31/2017 17:55:43 RW OK: returning redding Visability still to Bad to see into the fire 13 min ete Registration: N32WS Callsign: N-32WS Speed: 239 knots Heading: 123° true Altitude: 11,761' msl Make: Aero Commander Model: 690A Lat: 40°37.0200' Long: -123°9.6600' Time: 08/31/2017 17:54:03 UTC-0700

08/31/2017 18:01:14 RW OK: aa-05 switched to NOPS

**Timer: Closed Timer for Resource AA-05**

09/01/2017 09:16:11 RW OK: off rdd 2sob 4 hr fob 14 min ete + AFF Registration: N32WS  
Callsign: N-32WS Speed: 112 knots Heading: 360° true Altitude: 501' msl Make: Aero  
Commander Model: 690A Lat: 40° 30.4902' Long: -122° 17.6898' Time: 09/01/2017 09:13:52  
UTC-0700

09/01/2017 13:15:37 RW OK: in route Redding + AFF Registration: N32WS Callsign: N-32WS  
Speed: 176 knots Heading: 6° true Altitude: 10,262' msl Make: Aero Commander Model: 690A  
Lat: 40° 51.3204' Long: -122° 57.9600' Time: 09/01/2017 13:13:41 UTC-0700

09/01/2017 13:19:33 RW OK: switching to NOPS for Flight following

**Timer: Closed Timer for Resource AA-6DV**

09/01/2017 13:04:43 RW OK: tied in with Helena AA getting Briefing Registration: N586DV  
Callsign: N-586DV Speed: 190 knots Heading: 143° true Altitude: 9,721' msl Make: Aero  
Commander Model: 690B Lat: 40° 45.8802' Long: -123° 4.6704' Time: 09/01/2017 13:02:27  
UTC-0700

09/01/2017 16:13:39 RW OK: returning redding + AFF Registration: N586DV Callsign: N-586DV  
Speed: 182 knots Heading: 120° true Altitude: 10,039' msl Make: Aero Commander Model: 690B  
Lat: 40° 43.0800' Long: -122° 53.4900' Time: 09/01/2017 16:13:05 UTC-0700

09/01/2017 16:18:06 RW OK: switching to NOPS

**Timer: Closed Timer for Resource HT-95B**

09/01/2017 13:03:58 RW OK: ops normal Registration: N7095B Callsign: HT-7095B Speed: 96  
knots Heading: 191° true Altitude: 5,055' msl Make: Sikorsky Model: CH-54A Lat: 41° 3.2526'  
Long: -122° 42.6762' Time: 09/01/2017 13:02:52 UTC-0700

09/01/2017 13:25:57 RW OK: returning due to visablity Registration: N7095B Callsign:  
HT-7095B Speed: 95 knots Heading: 46° true Altitude: 5,190' msl Make: Sikorsky Model:  
CH-54A Lat: 40° 46.3206' Long: -123° 0.3276' Time: 09/01/2017 13:24:52 UTC-0700

09/01/2017 13:38:08 RW OK: mott load and hold + AFF Registration: N7095B Callsign:  
HT-7095B Speed: 98 knots Heading: 48° true Altitude: 4,616' msl Make: Sikorsky Model:  
CH-54A Lat: 40° 59.2362' Long: -122° 40.6782' Time: 09/01/2017 13:36:52 UTC-0700

09/01/2017 13:51:33 RW OK: landing assured Mott

**Timer: Closed Timer for Resource HT-716**

09/01/2017 12:51:58 RW OK: Registration: N716HT Callsign: HT-716HT Speed: 87 knots  
Heading: 229° true Altitude: 6,194' msl Make: Sikorsky Model: CH-54B Lat: 41° 10.0902' Long:  
-122° 25.8300' Time: 09/01/2017 12:50:28 UTC-0700

09/01/2017 13:07:19 RW OK: Registration: N716HT Callsign: HT-716HT Speed: 101 knots  
Heading: 196° true Altitude: 3,740' msl Make: Sikorsky Model: CH-54B Lat: 40° 53.3100' Long:  
-122° 48.1398' Time: 09/01/2017 13:05:29 UTC-0700

09/01/2017 13:26:25 RW OK: returning due to visablity Registration: N716HT Callsign:  
HT-716HT Speed: 87 knots Heading: 41° true Altitude: 5,715' msl Make: Sikorsky Model:  
CH-54B Lat: 40° 46.9998' Long: -122° 59.4402' Time: 09/01/2017 13:25:00 UTC-0700

09/01/2017 13:51:49 RW OK: landing assured mott

**Incident Commander(s):**

08/30/2017 1809 b6 & b7C Effective

08/31/2017 1834 b6 & b7C Effective

08/31/2017 1834 b6 & b7C (Trainee) Effective

09/01/2017 1737 b6 & b7C Effective 1800 9/1

08/30/2017 1808 b6 & b7C (Trainee) Effective

08/30/2017 1810 Effective

**Resource Details:**

**LE-14E5:**

Committed at 08/31/2017 09:16:37

**LE-14E8:**

Committed at 08/31/2017 09:16:41, On Scene at 08/31/2017 09:16:46, Released at 09/03/2017  
10:26:36, Committed at 09/03/2017 10:43:08

**BC-11:**

Committed at 08/30/2017 20:14:21, On Scene at 08/30/2017 21:10:14, Returning at 09/01/2017  
07:19:11, Released at 09/01/2017 09:27:49, Committed at 09/01/2017 10:19:07, On Scene at  
09/01/2017 10:20:52, Released at 09/01/2017 12:14:36

**BC-31:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 20:51:13, Released at 09/02/2017 07:57:56

**BC-41:**  
Committed at 08/31/2017 06:36:11, Released at 09/02/2017 07:59:55

**BC-52:**  
Committed at 09/01/2017 16:51:42, Returning at 09/02/2017 10:52:06, Released at 09/02/2017 18:34:22

**D-3:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 17:34:12, Returning at 08/30/2017 18:20:56, Released at 08/30/2017 22:54:49

**PT-21:**  
Responding at 08/30/2017 17:13:06, Released at 08/30/2017 20:30:32

**PT-31:**  
Committed at 08/30/2017 17:27:49, On Scene at 09/01/2017 10:20:52

**PT-51:**  
Committed at 08/30/2017 17:26:50, Responding at 08/30/2017 17:34:27, On Scene at 08/30/2017 19:05:22, Returning at 08/31/2017 09:54:23, Released at 08/31/2017 09:54:40

**PT-53:**  
Committed at 09/01/2017 10:20:46, On Scene at 09/01/2017 10:20:52

**E-2468 SHU:**  
Committed at 08/30/2017 17:12:01, Responding at 08/30/2017 17:28:47, On Scene at 08/30/2017 17:39:52

**E-321:**  
Committed at 08/30/2017 17:27:01, On Scene at 08/30/2017 18:32:04

**E-331:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 17:17:39, Released at 09/01/2017 09:07:39, Committed at 09/04/2017 07:57:35, Released at 09/04/2017 08:06:48

**E-333 SRF:**  
Committed at 08/30/2017 19:20:32, Avail Inc at 08/30/2017 19:20:37, Avail Inc at 08/30/2017 19:21:00, Cover at 08/30/2017 19:21:06, Released at 09/01/2017 09:08:16

**E-341:**  
Committed at 08/30/2017 17:30:29, On Scene at 08/30/2017 17:30:33, Released at 09/01/2017 09:02:17

**E-343:**  
Responding at 08/30/2017 17:13:06, On Scene at 08/30/2017 17:30:12, Released at 09/01/2017 09:09:13, Committed at 09/04/2017 07:57:43

**E-346 CNF:**  
Responding at 08/30/2017 17:13:06, Responding at 08/30/2017 18:04:57, On Scene at 08/30/2017 18:19:51

**E-44 MDF:**  
Committed at 08/30/2017 19:08:11, Responding at 08/30/2017 19:08:16, On Scene at 08/30/2017 22:29:44

**E-62:**  
Committed at 09/04/2017 07:55:46, Responding at 09/04/2017 07:56:55

**E-62 TNF:**  
Committed at 08/30/2017 19:06:35, Responding at 08/30/2017 19:06:41, On Scene at 08/30/2017 22:30:13

**E-73:**  
Committed at 09/04/2017 07:55:55, Responding at 09/04/2017 07:56:55

**E-82 LNF:**  
Committed at 08/30/2017 19:19:18, On Scene at 08/30/2017 19:19:25

**S/T 3675C:**  
Committed at 09/04/2017 07:56:15

**DZ-29:**  
Committed at 08/30/2017 19:11:34, On Scene at 08/30/2017 21:54:07

**WT-25 SRF:**  
Committed at 08/30/2017 19:38:33, On Scene at 08/30/2017 22:30:19

**WT-2542JCF:**  
Committed at 08/30/2017 19:05:10, On Scene at 08/30/2017 19:05:19

**CR-2 SRF:**  
Committed at 08/30/2017 19:09:34

**CR-CR11:**  
Committed at 08/31/2017 05:11:51

**CR-TR3 SHU:**  
Committed at 08/30/2017 19:13:24, Responding at 08/30/2017 19:13:41, On Scene at 08/30/2017 20:00:12

**CR-TR4 SHU:**  
Committed at 08/30/2017 17:13:39, On Scene at 08/30/2017 18:06:15

**CR-TRUCKEE:**  
Committed at 08/30/2017 20:05:17, On Scene at 08/30/2017 23:51:06

**CR-UKANOM:**  
Committed at 08/30/2017 20:07:13

**CPT-334:**  
Committed at 08/30/2017 17:18:49

**CPT-52:**  
Committed at 09/02/2017 16:05:05

**CR-FST15A:**  
Committed at 09/03/2017 14:27:42, Released at 09/04/2017 08:30:58

**H-104:**

Committed at 08/30/2017 17:55:37, On Scene at 08/30/2017 17:55:42, Responding at 08/30/2017 19:07:16, Released at 08/30/2017 20:20:13

**AA-05:**

Committed at 08/31/2017 11:44:24, Responding at 08/31/2017 11:44:30, On Scene at 09/01/2017 09:37:34, Released at 09/03/2017 12:14:50

**AA-240:**

Responding at 08/30/2017 17:29:59, On Scene at 08/30/2017 17:54:26, Released at 08/30/2017 20:20:19

**AT-01 :**

Committed at 08/30/2017 18:24:09, On Scene at 08/30/2017 18:24:15, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:25

**AT-07:**

Committed at 08/30/2017 17:58:16, On Scene at 08/30/2017 18:23:31, Responding at 08/30/2017 18:24:19, On Scene at 08/30/2017 19:07:09, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

**AT-83:**

Committed at 08/30/2017 17:32:59, Responding at 08/30/2017 17:33:22, On Scene at 08/30/2017 18:23:32, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

**AT-88:**

Committed at 08/30/2017 19:26:38, On Scene at 08/30/2017 19:27:13, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

**AT-95:**

Committed at 08/30/2017 18:23:46, On Scene at 08/30/2017 18:23:50, Returning at 08/30/2017 19:50:00, Released at 08/30/2017 20:20:06

**L-44:**

Committed at 08/30/2017 19:06:56, Responding at 08/30/2017 19:07:01, On Scene at 08/30/2017 19:07:09

**SAFETY1:**

Committed at 08/31/2017 05:20:23, On Scene at 08/31/2017 06:33:15, Released at 08/31/2017 14:30:47

**E-2534 JCF:**

Committed at 08/30/2017 18:53:16, On Scene at 08/30/2017 18:53:21

Entry Date/Time	From	To	Details
08/30/2017 17:15:21	E334	jo	size up north side of hwy grass limber high winds rapid ros, chp and cal trans smoke impacting hwy, 3 acres, need 2 water tenders
08/30/2017 17:17:11	jo	chp	with req for chp and cal trans for traffic, smoke impeding the hwy
08/30/2017 17:20:13	PI31	DC	will go to hwy 299 and help with logistics if needed
08/30/2017 17:34:03	DC	PGE	Called power company
08/30/2017 17:46:55	IC	DC	Is there a fill on watertenders
08/30/2017 17:49:16	jo	Email	Email SHF-2017-1770 Helena: DV3 PT51 E321 E331E341 E2468 E343 CNF E346 TRR CREW 4, UKANOM IHC, TRUCKEE IHC, TNF E62 MDF E44 JCF WT 2542 & E2534 responding. at scene AA240 on order 6 tankers and 2 copters. 150 acres rapid ros, T34N R11W sec 21 "jo" Sent to: Notifications group
08/30/2017 17:52:23	PT51	DC	requesting LE for investigation, or additional inv
08/30/2017 17:54:39	aa240	rwjo	over the fire 100-150 acres rapid ros, order 4 additional multi engine tankers, and 4 additional helo's
08/30/2017 17:59:15	jo	ch3	ok to extend staffing till 2000
08/30/2017 17:59:28	jo	blm	advised land is on fire
08/30/2017 18:00:45	ic	jo	structure threat will be shortly, crossed trinity river will have structure threat shortly.
08/30/2017 18:03:24	jo	log	placed order for an oes strike team
08/30/2017 18:07:02	pge rep	jo	unit should be arriving in the area in about 30
08/30/2017 18:12:18	ic	jo	fire is about 200+ acres burning on both sides of the trinity river, structures are threatened in the trinity canyon lodge area and helena old town. need some structure protection engines
08/30/2017 18:13:43	UT 2459	DC	At scene
08/30/2017 18:19:28	ic	jo	looking for operations for tonite
08/30/2017 18:24:13	jo	bc11	can you do operations on the fire tonite? affirm will be there in about 3 hours
08/30/2017 18:27:40	14E8	DC	can not respond
08/30/2017 18:34:51	MDF 44	DC	MDF 44, TNF 62 and ukinom i/s
08/30/2017 18:43:04	AA	DC	Structures threatened in coopers bar, will be very soon in Red Hill as well

Entry Date/Time	From	To	Details
08/30/2017 18:45:13	jo	Email	Email SHF-2017-1770 HELENA: updated fire size 200+ acres, structures threatened in the helena and coopers bar area. multiple resources for structure protection on order. IC- <b>b6 &amp; b7C</b> Sent to: Notifications group
08/30/2017 18:46:14	aa	rwjo	requesting a lead plane if availo
08/30/2017 18:50:02	Truckee HS	DC	i/s Fire
08/30/2017 18:51:03	14e8	jo	E384 and D444 have been notified. he will call pt51 in the morning
08/30/2017 19:07:16	jo	Email	Email SHF-2017-1770 HELENA: Fire has spotted into the coopers bar area, structures threatended. fire is burning due east.. Multiple crews, engines, watertenders and additional aircraft on order/responding. <b>b6 &amp; b7C</b> Sent to: Notifications group
08/30/2017 19:29:29	wt-25	nn	SRF WT-25 on forest responding to incident
08/30/2017 19:36:02	jo		Acres set to 300
08/30/2017 20:27:22	Trinity CO	DC	<b>b6 &amp; b7C</b> possible Elderly female trapped in burning structure
08/30/2017 20:41:41	st-9246C	NN	ST-9246 C responding to Junction City
08/30/2017 20:53:03	CHP	RW	Asked if media would be ok to pass through the closer of hwy 299. I told them for fire fighter and public safety that it was not advised. CHP said that was all they needed to hear and would not let them through the road closer.
08/30/2017 21:08:31	IC	NN	HAVE ALL RESOURCES STAGE @ JUCTION CITY GUARD STATION.
08/30/2017 21:23:58	IC	NN	WE NEED LE INVESTIGATOR ASAP. MAKE SURE WE ORDERED ONE.
08/30/2017 21:27:54	TACBAS	NN	<b>b6 &amp; b7C</b> OR AGENT <b>b6 &amp; b7C</b> OF <b>b6 &amp; b7C</b> WILL BE THERE FIRST THING IN THE MORNING/DAY LIGHT
08/30/2017 21:33:48	9246	NN	s/t 9246c ON SCENE
08/30/2017 23:02:27	jo		ADS flipped to Sit/209
08/30/2017 23:04:35	jo		ADS returned to dispatch
08/30/2017 23:04:50	jo		ADS flipped to Sit/209
08/30/2017 23:04:57	jo		ADS returned to dispatch
08/31/2017 00:53:15	FD	FD	<b>b6 &amp; b7C</b> is Radio Operator for incident, working from WVVL DO.
08/31/2017 00:55:52	FD	FD	<b>b6 &amp; b7C</b> is night ops
08/31/2017 02:01:51	STAGING	FD	Request CALTRANS to respond to JC Guard Station at 0700 hrs to maintain traffic control on Hwy 299 and provide a large truck w/ blade to remove fire debris from the road.
08/31/2017 06:11:23	jo		Acres set to 5000
08/31/2017 06:28:22	JC	NN	per <b>b6 &amp; b7C</b> put an order in for the Cobra Fire Watch. Diver to Weaverville Airport 1400 today.
08/31/2017 06:32:56	jc	NN	see if you can get H-14HX to come to Weaverville airport @ 090 for Recon. Pick up 2-3 people.
08/31/2017 06:37:25	fd	FD	OES S/T 2812A enroute to staging area from Redding
08/31/2017 06:51:09	NN	Log	Per <b>b6 &amp; b7C</b> D-3 is requesting H-14HX for recon this morning @ 0900 in weaverville. Per <b>b6 &amp; b7C</b> they can not give it up this morning as they have a stop over but later this afternoon they may be able to accomidate/loan the heli for 1 recon.
08/31/2017 07:04:49	FD	FD	OES S/T 2813A ENROUTE FROM REDDING
08/31/2017 07:16:51	FD	FD	S/T 2253A enroute to staging area from Redding
08/31/2017 09:17:07	14e5	TB	inv team activated, I am enroute to meet up with pt-51 and start the investigation
08/31/2017 11:43:34	AA-05	RW	off redding 2sob 4hr job 13 min etc + AFF Registration: N32WS Callsign: N-32WS Speed: 159 knots Heading: 289° true Altitude: 4,576' msl Make: Aero Commander Model: 690A Lat: 40° 34.2102' Long: -122° 20.6400' Time: 08/31/2017 11:41:12 UTC-0700
08/31/2017 11:53:36	AA-05	RW	over the fire assuming AA looking to make contact with the IC on A/G
08/31/2017 18:35:21	IC	DC	<b>b6 &amp; b7C</b> has transferred command to <b>b6 &amp; b7C</b>

Entry Date/Time	From	To	Details
09/01/2017 08:38:35	TB		Acres set to 5170
09/01/2017 09:37:10	aa-05	NN	ASUMING HELENA AA
09/01/2017 12:39:35	aa	RW	REQUESTING USE OF DIP SIT @ 40 44.33 X 122 55.85 JUST S/W OF WEAVERVILLE AIRPORT.
09/01/2017 12:40:32	RW/JO	AA	THAT A NEGATIVE ON THAT DIP SITE IT IS A HOLDING TANK FOR THE CITY WEAVERVILLE.
09/01/2017 12:43:32	AA	RW	CAN WE CHECK ON AN ADDITIONAL DIP SIT 40 42.81 X 123 0.16 SWEED STATE PL.
09/01/2017 12:47:35	AA-6DV	RW	over wiskeytown + AFF Registration: N586DV Callsign: N-586DV Speed: 180 knots Heading: 287° true Altitude: 10,393' msl Make: Aero Commander Model: 690B Lat: 40° 36.1698' Long: -122° 36.8100' Time: 09/01/2017 12:45:14 UTC-0700
09/01/2017 12:48:50	HT-95B	RW	off weed for Helena 3sob 35 min + AFF Registration: N7095B Callsign: HT-7095B Speed: 96 knots Heading: 220° true Altitude: 7,020' msl Make: Sikorsky Model: CH-54A Lat: 41° 25.3200' Long: -122° 30.0744' Time: 09/01/2017 12:47:52 UTC-0700
09/01/2017 13:19:05	aa-6DV	RW	assuming Helena AA
09/01/2017 13:27:14	AA	RW	the 2 heavy helicopters returning molt due to visability
09/01/2017 17:41:12	IC mathiso	jo	transitioning with Team 4 <b>b6 &amp; b7C</b> at 1800. please make announcement on radio at 1800 for the transition
09/01/2017 18:37:22	tcso	NN	RP OFF UPPER ROAD REPORTS TREE EXPLODING IN THE AREA 690-710 UPPER RD. RESIDENCE DO NOT CURRENTLY HAVE EVACUATIONS IN THAT AREA. <b>b6 &amp; b7C</b>
09/01/2017 18:38:14	OPS	NN	WE CURRENTLY HAVE PEOPLE PATROLLING THAT AREA AND DO HAVE SINGLE AND GROUP TORCHING IN THAT AREA. WILL SEND SOMEONE UP TO THAT AREA
09/02/2017 10:36:37	div. z	NN	Minor medical on Div Z ops has been notified. Inmate off one of the 9114 Golf Crews. They are being walked off the line now by S/T leader and will be transported via ground ambulance to hospital. Trinity Hospital Weaverville for stitches of lacerations over the eye.
09/03/2017 11:26:39	TB		Acres set to 7440
09/03/2017 13:13:28	TB		ADS flipped to Sit/209
09/03/2017 14:29:10	15A	hk	per dom Fire Storm 15A enroute eta 2.5 hrs
09/03/2017 22:23:49	COML	JT	Commo unit cell # <b>b6 &amp; b7C</b>
09/04/2017 08:07:10	jo	log	s/t 3675c committed to the incident with the agreement from operations that they will be available to the forest for IA. STEN <b>b6 &amp; b7C</b> E73 E321 E62 E331 E343. will merry up at the ICP lowden park 9/4 at 1000
09/04/2017 08:17:36	RF	Email	Email SHF-2017-1770 HELENA: 3675C Assigned to Helena E-73, 321, 62, 331 & 343. ETA to Lowden Park to meet up 1000. STEN <b>b6 &amp; b7C</b> STEN( <b>b6 &amp; b7C</b> ) *RF* Sent to: Notifications group

**Command:**

FOREST: TX [REDACTED] b7(E) & b7(F) Tone - 4 ADDED 08/30/2017 19:27:57  
 FOREST: TX [REDACTED] b7(E) & b7(F) Tone - 9 CHANGED 08/30/2017 19:28:09

**Ground:**

TAC 2: [REDACTED] b7(E) & b7(F) ADDED 08/30/2017 19:28:19  
 R5 TAC 4: [REDACTED] b7(E) & b7(F) ADDED 08/30/2017 20:09:55  
 NIFC TAC [REDACTED] ADDED 08/31/2017 07:40:36  
 NIFC TAC [REDACTED] ADDED 08/31/2017 07:40:46  
 NIFC TAC [REDACTED] ADDED 08/31/2017 07:41:15  
 R5 TAC 4: [REDACTED] DELETED 09/01/2017 14:56:13  
 TAC 2: [REDACTED] b7(E) & b7(F) DELETED 09/01/2017 14:56:23

**Air Tactics:**

AIR TACTICS 64: [REDACTED] b7(E) & b7(F) Primary ADDED 08/30/2017 19:28:29  
 AIR TACTICS 64: [REDACTED] Primary DELETED 09/01/2017 14:57:01

**Victor:**

V: [REDACTED] b7(E) & b7(F) (P) ADDED 08/30/2017 19:28:34  
 [REDACTED] b7(E) & b7(F) ADDED 08/31/2017 07:39:39  
 [REDACTED] b7(E) & b7(F) 8/31 CHANGED 08/31/2017 07:40:05  
 V: [REDACTED] b7(E) & b7(F) (P) DELETED 09/01/2017 14:57:07

**FS A/G:**

FS Air/Ground 43 (P): [REDACTED] b7(E) & b7(F) ADDED 08/30/2017 19:28:44  
 [REDACTED] b7(E) & b7(F) ADDED 08/31/2017 07:39:12  
 [REDACTED] b7(E) & b7(F) - 8/31 CHANGED 08/31/2017 07:40:19  
 FS Air/Ground 43 (P): [REDACTED] b7(E) & b7(F) DELETED 09/01/2017 14:57:19

**VOR**

41nm 275° RDD: REDDING VO  
 43nm 180° FJS: FORT JONES  
 46nm 089° ACV: ARCATA VOR  
 51nm 064° FOT: FORTUNA VO  
 57nm 297° RBL: RED BLUFF

**ATB**

41nm 278° RDD: REDDING AI  
 48nm 059° FOT: FORTUNA AI  
 49nm 179° SCV: FORT JONES  
 67nm 191° SIY: SISKIYOU A  
 82nm 299° CIC: CHICO AIR

**Helibase**

9nm 262° WVR: WEAVERVILL  
 14nm 254° PET: TRINITY/PE  
 23nm 220° TCR: TRINITY CE  
 36nm 259° MTG: MOUNTAIN G  
 37nm 070° KNE: KNEELAND H

**Initial Report On Conditions**

**Fuels:** Acres: W Speed: Dir: Slope: Aspect:  
**Spread:** Complexity: Jurisdiction:  
**Structures:**  
**Initial Strategy:** Full Suppression

**Fire Report Information**

**Fire #:** 98 **SubUnit:** 54 **SubUnit #:** 14  
**Acres:** 8940 **Size Class:** G **Elevation:** **Land Status:** 2  
**Contain:** **Control:** **Out:**  
**Statistical Cause:** Miscellaneous **Specific Cause:** Other

**Incident Command Post****ICP Location:**

Lowden Park, Weaverville CA

**Directions:**

Right on Washington St. .5 miles to park.

**Lat:** 40.7311 **Lon:** 122.9338

**Staging, Helispots, Phones:**

8/30-8/31 staging at Junction City Forest Service Station

# **ATTACHMENT 2**

# SHASTA-TRINITY NATIONAL FOREST FIRE DANGER

DATE: 08/30/2017							DATE: 08/31/2017					
ACTUAL							PREDICTED					
NFDRA	FUEL MODEL	SL	IC	ERC	BI	FIRE DANGER	SL	IC	ERC	BI	FIRE DANGER	DISPATCH LEVEL
230 591 HF/BB/WV	G	4	52	82	70	VH	4	50	81	64	V	H
238 594 YB	G	3	48	72	59	H	3	53	70	62	H	H
240 593 MS	G	3	42	80	65	M	4	57	79	77	V	H
241 592 SL	G	3	55	90	78	H	5	72	90	92	E	H
243 593 MC	G	4	61	72	74	VH	4	57	70	75	V	H

**Fire Danger:** L: Low      M: Moderate      H: High      VH: Very High      E: Extreme  
**Dispatch Level:** (BI) LOW = 0 – 30,    Medium = 31 – 50,    High = 51 +      **Staffing Level:** 1 thru 5

### AVERAGE FOREST BI

ACTUAL:	08/30/2017	PREDICTED:	08/31/2017
BURNING INDEX	71	BURNING INDEX	72
STAFFING LEVEL	4	STAFFING LEVEL	4

### PROJECT ACTIVITY LEVELS

AREA	GEOGRAPHIC AREA	LEVEL	IC	ERC
PAL AREA 1	MT SHASTA	D	48	70
PAL AREA 2	ASH CREEK	C	37	59
PAL AREA 3	OAK MOUNTAIN & SUGARLOAF	Ev	72	90
PAL AREA 4	FRIEND MOUNTAIN	Ev	56	85
PAL AREA 5	BIG BAR & TRINITY CAMP	D	50	82

### SALE ACTIVITY LEVELS

TRINITY ZONE	-	WIND	-	FUEL STICK	-
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### BURNING RESTRICTIONS

ACTUAL FOR	08/30/2017	AIR BASIN	PREDICTED FOR:	08/31/2017
NO BURN DAY		NORTH COAST / TRINITY	NO BURN DAY	
NO BURN DAY		NE PLATEAU	NO BURN DAY	
NO BURN DAY		SACRAMENTO VALLEY	Available After 0915	



**USDA**  
**Forest Service**

**STATEMENT**  
(Reference FSH 5309.11)

Case/File Number  
**9478640**

Initial Report  Follow-Up

2. NATURE OF INVESTIGATION

3. PERSON MAKING STATEMENT (Last, First, Middle)

X **b6 & b7C**

4. SOCIAL SEC. NO.

- -

5. DOB

**b6 & b7C**

6. SEX

F

7. HOME ADDRESS (Last, First, Middle, City, State, ZIP Code)

X Highway speciality

8. DRIVER'S LIC. NO.

X **b6 & b7C**

9. PHONE (H) (Area Code)

X **b6 & b7C**

10. EMPLOYMENT (Occupation and Location)

X Hwy 299 at Junction city

11. PHONE (W) (Area Code)

( ) -

12. LOCATION STATEMENT TAKEN

Hwy 299 Junction City

13. NAME OF OFFICER TAKING STATEMENT

**b6 & b7C**

14. DATE TIME STARTED

9/11/17 0745

15. STATEMENT

X I was picking up my closure with **b6 & b7C** I work for highway speciality. I had just picked up my closure on the west end past North Fork bridge and was leaving heading east towards Redding with my cms board. Towards the end of the bridge I saw a fire on the North side. I pulled off immediately to the right where a bathroom area and parking lot were and called the fire department. **b6 & b7C** was able to contact someone. I stayed and flagged a ranger and fire truck down.

August 30, 2017 at 5:02 pm outgoing call to weaverville, ca volunteer fire department (530) 623-6156

I saw the fire and called between one to five minutes

on 9/1/17 I showed officer **b6 & b7C** where I saw the fire.

I have read the foregoing statement consisting of 1 pages. I fully understand this statement and declare that the foregoing is true, accurate, and complete to the best of my knowledge. I have signed or initialed each and every page and have been given an opportunity to make any corrections or additions.

I have made this statement freely and voluntarily, without threats or rewards, or promises of rewards having been made to me in return for it.

**b6 & b7C**

16. DATE/TIME ENDED

9/1/17 8:24

17. OFFICER'S SIGNATURE

**b6 & b7C**

18. WITNESS' SIGNATURE (If Applicable)

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USDA  
Forest Service

STATEMENT  
(Reference FSH 5309.11)

1. CASE NUMBER

9478640

2. NATURE OF INVESTIGATION

3. PERSON MAKING STATEMENT (Last, First, Middle)

b6 & b7C

4. SOCIAL SEC. NO.

b6 & b7C

5. DOB

6. SEX

M

7. HOME ADDRESS (St., City, State, ZIP Code)

b6 & b7C

8. DRIVER'S LIC. NO.

9. PHONE (H) (Area Code)

10. EMPLOYMENT (Occupation and Location)

b6 & b7C

BURNT RANCA, CA

11. PHONE (W) (Area Code)

b6 & b7C

12. LOCATION STATEMENT TAKEN

HWY 299/ Cemetery Rd

13. NAME OF OFFICER TAKING STATEMENT

b6 & b7C

14. DATE/TIME START

8/31/17 1230

15. STATEMENT

ON AUG 30, 2017 AT APPROX. 1200, WHILE DRIVING WESTBOUND ON HWY 299 W, WE (b6 & b7C AND I) WERE FLAGGED DOWN BY TWO HIGHWAY SAFETY WORKERS. LOCATION WAS BAGDAD RIVER ACCESS NEAR HELENA. WE DROVE BY THE WORKER AND I LOOKED IN MY MIRROR AND SAW THE FIRE. WE PULLED INTO THE ROAD TO HELENA AND PARKED TO GET A BETTER VANTAGE POINT. AT THAT TIME THE FIRE WAS APPROX 1/8 OF AN ACRE. THE FIRE WAS BELOW THE BROCK GULCH ROAD AND NO MORE THAN 80 FT. BELOW THE BROCK GULCH ROAD. THE BASE OF THE FIRE WAS APPROX 100 FT. ABOVE THE HIGHWAY. WITHIN 2-3 MINUTES THE FIRE HAD JUMPED THE BROCK GULCH ROAD. FROM MY PERSPECTIVE THE FIRE WAS DIRECTLY BENEATH THE ELECTRICAL TRANSMISSION LINES. (6 STRANDS). ONCE THE FIRE STARTED TO MAKE A RUN UPHILL AND EAST WE DROVE THE VEHICLE TO THE BAGDAD TURNOUT. WHEN WE ARRIVED AT THE TURNOUT I NOTICED THAT THE HIGHWAY SAFETY WORKERS WERE NOT THERE. I DID NOT HAVE A CHANCE TO SPEAK WITH THEM BEFORE THE LEFT.

I have read the foregoing statement consisting of \_\_\_\_\_ pages. I fully understand this statement and declare that the foregoing is true, accurate, and correct. I have signed or initialed each and every page and have been given an opportunity to make corrections or additions. I have not received any gifts or rewards, or promises of rewards having been made to me in return for it.

b6 & b7C

STATEMENT

16. DATE/TIME ENDED

8/31/17 1245

17. OFFICER'S SIGNATURE

b6 & b7C

18. WITNESS' SIGNATURE (If Applicable)

# **ATTACHMENT 5**



**USDA**  
**Forest Service**

**STATEMENT**  
(Reference FSH 5309.11)

Case/File Number

9478640

Initial Report  Follow-Up

2. NATURE OF INVESTIGATION

3. PERSON MAKING STATEMENT (Last, First, Middle)

b6 & b7C

4. SOCIAL SEC. NO.

- -

5. DOB

b6 & b7C

6. SEX

M

7. HOME ADDRESS (St., City, State, ZIP Code)

8. DRIVER'S LIC. NO.

9. PHONE (H) (Area Code)

b6 & b7C

10. EMPLOYMENT (Occupation and Location)

11. PHONE (W) (Area Code)

b6 & b7C - Burnt Ranch

b6 & b7C

12. LOCATION STATEMENT TAKEN

13. NAME OF OFFICER TAKING STATEMENT

14. DATE TIME STARTED

Bagdad

b6 & b7C

8/31/17 1330

15. STATEMENT

I was one of the first IA responders on engine 334, we were returning back to our station from an assignment when our UT in front was pointed to notice a wildfire above 299. It was on a west facing slope kind of under some powerlines really close to Bagdad river access. I was busy getting my gear on so didn't have best view of the initial flames, but to me looked like an 1/8th acre. We tried to get the engine as close as possible down cemetery road, but best spot was next to highway. The winds were so fast & erratic it took the fire out of control very quick. Our first hose lay was compromised because of ~~all~~ the winds blowing it over our line. We eventually got hose lay in to the river with help from Calfire trinity digging line. For the rest of the night we patrolled that line we put in putting out spots & keeping it in control.

QUESTION (b6 & b7C) - WHERE (b6 & b7C) WAS THE LOCATION OF THE FIRE ON THE WEST FACING SLOPE (b6 & b7C) BETWEEN THE SECOND PINE TREE AND THE POWER POLES.

I have read the foregoing statement consisting of 1 pages. I fully understand this statement and declare that the foregoing is true, accurate, and complete to the best of my knowledge. I have signed or initialed each and every page and have been given an opportunity to make any corrections or additions.

I have made b6 & b7C return for it. b6 & b7C but threats or rewards, or promises of rewards having been made to me in

SIGNATURE OF PERSON GIVING STATEMENT

16. DATE/TIME ENDED

8/31/17 1340

b6 & b7C

18. WITNESS' SIGNATURE (If Applicable)

NOTE: This document is for OFFICIAL USE ONLY. It and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.

# **ATTACHMENT 6**



**USDA**  
**Forest Service**

**STATEMENT**  
*(Reference FSH 5309.11)*

Case/File Number

9478640

Initial Report  Follow-Up

2. NATURE OF INVESTIGATION

WILDFIRE

3. PERSON MAKING STATEMENT (Last, First, Middle)

b6 & b7C

4. SOCIAL SEC. NO.

- -

5. DOB

b6 & b7C

6. SEX

7. HOME ADDRESS (St., City, State, ZIP Code)

b6 & b7C

8. DRIVER'S LIC. NO.

b6 & b7C

9. PHONE (H) (Area Code)

10. EMPLOYMENT (Occupation and Location)

U.S. Forest Service

b6 & b7C

11. PHONE (W) (Area Code)

b6 & b7C

12. LOCATION STATEMENT TAKEN

@ SCENE

13. NAME OF OFFICER TAKING STATEMENT

b6 & b7C

14. DATE TIME STARTED

8/31/17 12:25

15. STATEMENT

I was driving west bound on 299 with b6 & b7C in UT-74 I saw 2 people Male & female waving us down from Baghdad River access. we slowed and turned around past the bridge on Helena Road. Then we noticed fire when he looked back east on the hill above 299 and below the powerlines Then it started moving up east along the powerlines and before we knew it the it spread rapidly.

I have read the foregoing statement consisting of 1 pages. I fully understand this statement and declare that the foregoing is true, accurate, and complete to the best of my knowledge. I have signed or initialed each and every page and have been given an opportunity to make any corrections or additions.

I have made this statement freely and voluntarily, without threats or rewards, or promises of rewards having been made to me in return for it.

b6 & b7C

SIGNATURE OF PERSON GIVING STATEMENT

16. DATE/TIME ENDED

8/31/17 12:45

17. OFFICER

b6 & b7C

18. WITNESS SIGNATURE (If Applicable)

NOTE: This document is for OFFICIAL USE ONLY. It and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.

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**ATTACHMENT 7**



**USDA**  
**Forest Service**

**STATEMENT**  
(Reference FSH 5309.11)

Case/File Number  
**9478640**

Initial Report  Follow-Up

2. NATURE OF INVESTIGATION

3. PERSON MAKING STATEMENT (Last, First, Middle)

**b6 & b7C**

4. SOCIAL SEC. NO.

- - - - -

5. DOB

**b6 & b7C**

6. SEX

**M**

7. HOME ADDRESS (St., City, State, ZIP Code)

**b6 & b7C**

8. DRIVER'S LIC. NO.

**b6 & b7C**

9. PHONE (H) (Area Code)

10. EMPLOYMENT (Occupation and Location)

**b6 & b7C**, Burnt RANCH

11. PHONE (W) (Area Code)

**b6 & b7C**

12. LOCATION STATEMENT TAKEN

Bagdad, CA

13. NAME OF OFFICER TAKING STATEMENT

**b6 & b7C**

14. DATE TIME STARTED

8 / 31 / 2017

15. STATEMENT

While traveling in My Fire engine (E-334) west on hwy 299 from weaverville to Burnt Ranch, **b6 & b7C** who was traveling ahead of the engine, called on the radio saying that there was a fire just East of Helena on the North side of the road. As we approached the bridge just before the Helena turn we saw A Male and a female at the Bagdad river access waving us down. I initially did not see any fire. The engine made a U-turn and that is when I saw a small fire approximately 1/8th of an acre up on the hill across from Bagdad River access. It was burning in grass mid slope above the road 299 and below the power lines. It was just left of a large digger pine looking up slope. I was then ordered to identify a mile marker and Road Name, Therefore I stopped looking at the fire. The engine tried to make access along the Cemetery Road just below the fire and above 299. There wasn't a good place to anchor into so we turned around parking at the Cemetery Rd @ 299 intersection and started our fire suppression tactics (Hose lay)

I have read the foregoing statement consisting of 1 pages. I fully understand this statement and declare that the foregoing is true, accurate, and complete to the best of my knowledge. I have signed or initialed each and every page and have been given an opportunity to make any corrections or additions.

I have made this statement freely and voluntarily, without threats or rewards, or promises of rewards having been made to me in return

**b6 & b7C**

16. DATE/TIME ENDED

8/31/17 1344

17. OFFICER'S SIGNATURE

**b6 & b7C**

18. WITNESS' SIGNATURE (If Applicable)

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**USDA**  
**Forest Service**

**STATEMENT**  
(Reference FSH 5309.11)

1. CASE NUMBER

9478640

2. NATURE OF INVESTIGATION

3. PERSON MAKING STATEMENT (Last, First, Middle)

b6 & b7C

4. SOCIAL SEC. NO.

ON FILE

5. DOB

b6 & b7C

6. SEX

7. HOME ADDRESS (St., City, State, ZIP Code)

b6 & b7C

8. DRIVER'S LIC. NO.

9. PHONE (H) (Area Code)

10. EMPLOYMENT (Occupation and Location)

USFS Fire b6 & b7C

BURNT RANCH, CA

11. PHONE (W) (Area Code)

b6 & b7C

12. LOCATION STATEMENT TAKEN

Hwy 299 / Cemetery Rd

13. NAME OF OFFICER TAKING STATEMENT

b6 & b7C

14. DATE/TIME START

8/31/17

15. STATEMENT

AT APPROXIMATELY 1700 HRS 8/30/17 ARRIVED AT SCENE OF THE HELENA FIRE THE HEEL OF THE WAS APPROX 150 FT ABOVE THE CEMETARY ACCESS ROAD AND BELOW THE BROCK GULGE RD. I DROVE PAST UNDER THE FIRE ON CEMETARY ACCESS RD TO TRY AND GAIN ACCESS TO UPPER RD (BROCK GULGE RD). COULD NOT ACCESS SO TURNED AROUND AND SET UP ENGINE AT INTERSECTION OF HWY 299 AND CEMETARY ACCESS RD. AT APPROX 1703 THE CREW STARTED A HOSE DOWN ACCESS RD AND UP THE LEFT FLANK. FIRE WAS STILL ABOVE THE ACCESS RD ACTIVELY BACKING AND FLANKING TO THE NORTH. THE HOSE LAY STARTED UP THE HILL BEFORE THE CEMETARY, AT APPROXIMATELY 1715 THE FIRE WAS TO THE ACCESS RD IN A COUPLE OF AREAS, WHERE I TOOK SUPPRESSION ATTEMPTS TO PROTECT THE ENGINE AND TRY TO PREVENT SPOT FIRES ACROSS THE ACCESS RD. I WOULD ESTIMATE FIRE SIZE AT 1/4 ACRE WHEN CREW STARTED HOSE LAY.

I have read the foregoing statement consisting of 16F1 pages. I fully understand this statement and declare that the foregoing is true, accurate, and complete to the best of my knowledge. I have signed or initiated each and every page and have been given an opportunity to make any corrections or additions.

I have not been threatened with, or offered, threats or rewards, or promises of rewards having been made to me in return for it.

b6 & b7C

SIGNATURE OF PERSON GIVING STATEMENT

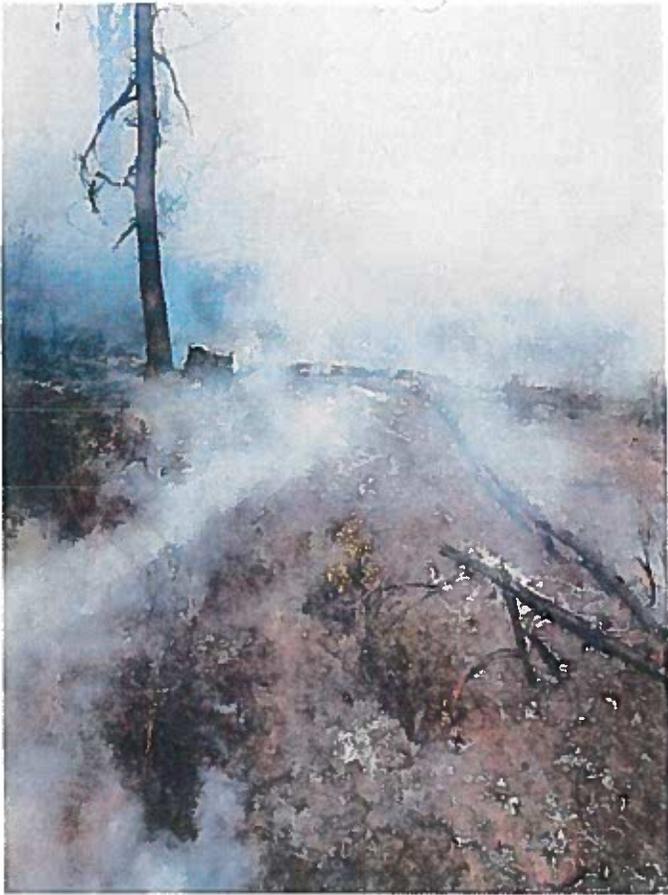
16. DATE/TIME ENDED

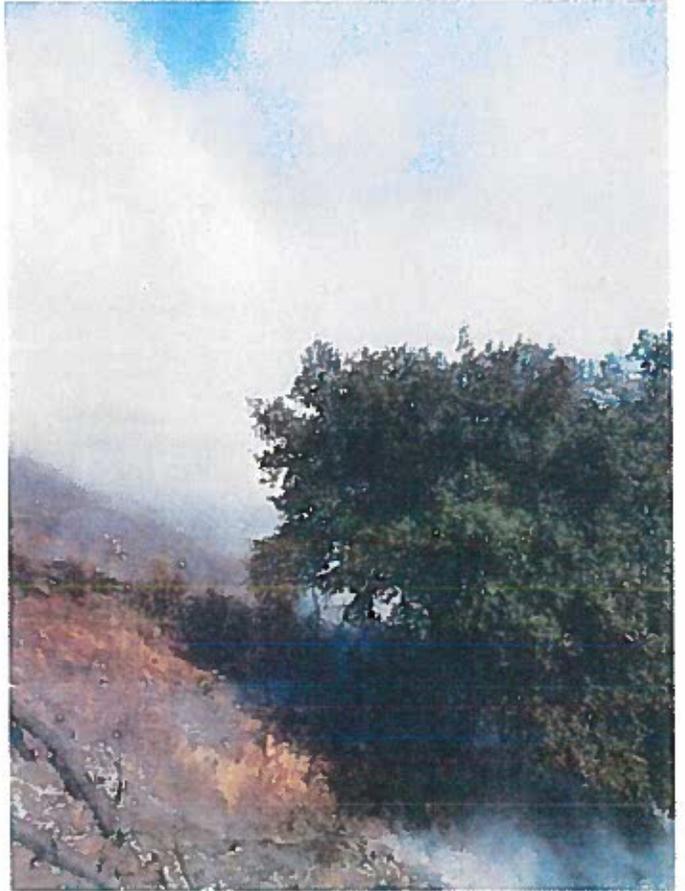
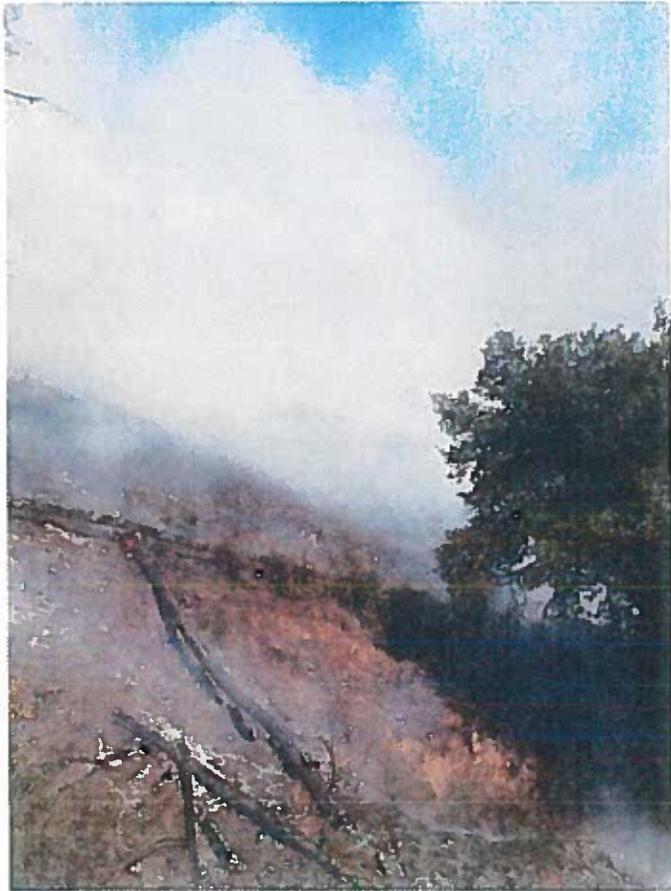
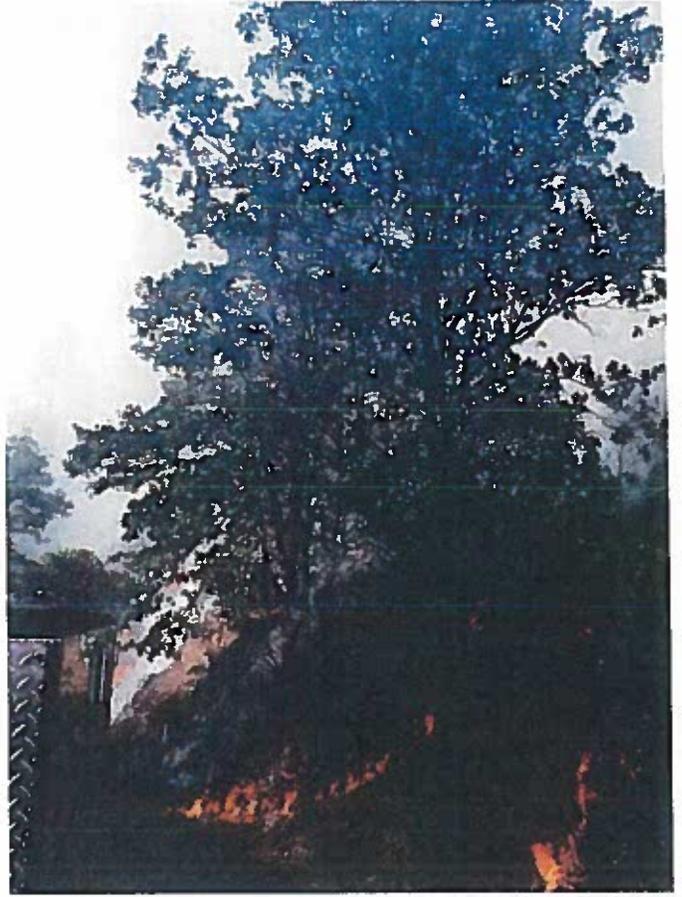
8/31/17 1300

17. OFFICER'S

b6 & b7C

18. WITNESS' SIGNATURE (If Applicable)









**USDA**  
**Forest Service**

**STATEMENT**  
(Reference FSH 5309.11)

Case/File Number  
**9478640**

Initial Report  Follow-Up

2. NATURE OF INVESTIGATION

WILDFIRE

3. PERSON MAKING STATEMENT (Last, First, Middle)

b6 & b7C

4. SOCIAL SEC. NO.

- -

5. DOB

b6 & b7C

6. SEX

M

7. HOME ADDRESS (City, State, Zip)

b6 & b7C

8. DRIVER'S LIC. NO.

CA ID.  
b6 & b7C

9. PHONE (H) (Area Code)

( ) -

10. EMPLOYMENT (Occupation and Location)

b6 & b7C

11. PHONE (W) (Area Code)

b6 & b7C

12. LOCATION STATEMENT TAKEN

HWY 299 e. Bagdad CG

13. NAME OF OFFICER TAKING STATEMENT

b6 & b7C

14. DATE TIME STARTED

8/31/17 13:15

15. STATEMENT

X On August 30, 2017 I observed a fire begin about 5:50:05 PM near old Helena, N. of Trinity River, E. of N. Fort Taylor Rd. above & below Birch Creek Access Road approximately 200 yards from intersection of Birch Creek Road and Hwy 299 W.

By 5:10 to 5:15 I called 911 & reported the fire which was already burning but was asked to say if the fire was N. or S. of the Trinity River. I told them.

When I first noticed the fire it was not large (pictures attached taken at 5:23 PM) and there was a white pickup truck in the area along HWY 299 W. I drove by in the area to first report the fire.

I have pictures & video available (I was supplied the T. C. binoculars for my cell phone - The fire had not yet come down to HWY 299 W. Road was not yet over the ridge when the 911 Access road is. By 5:59 it had crossed the road south & to the river & moved east over the ridge.

I have read the foregoing statement consisting of 1 pages. I fully understand this statement and declare that the foregoing is true, accurate, and complete to the best of my knowledge. I have signed or initialed each and every page and have been given an opportunity to make any corrections or additions.

I have made this statement freely and voluntarily, without threats or rewards, or promises of rewards having been made to me in return for it.

b6 & b7C

SIGNATURE OF PERSON GIVING STATEMENT

16. DATE/TIME ENDED

8/31/17 13:50

17. OFFICER

b6 & b7C

18. WITNESS' SIGNATURE (If Applicable)

b6 & b7C

NOTE: This statement and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.



**USDA**  
Forest Service

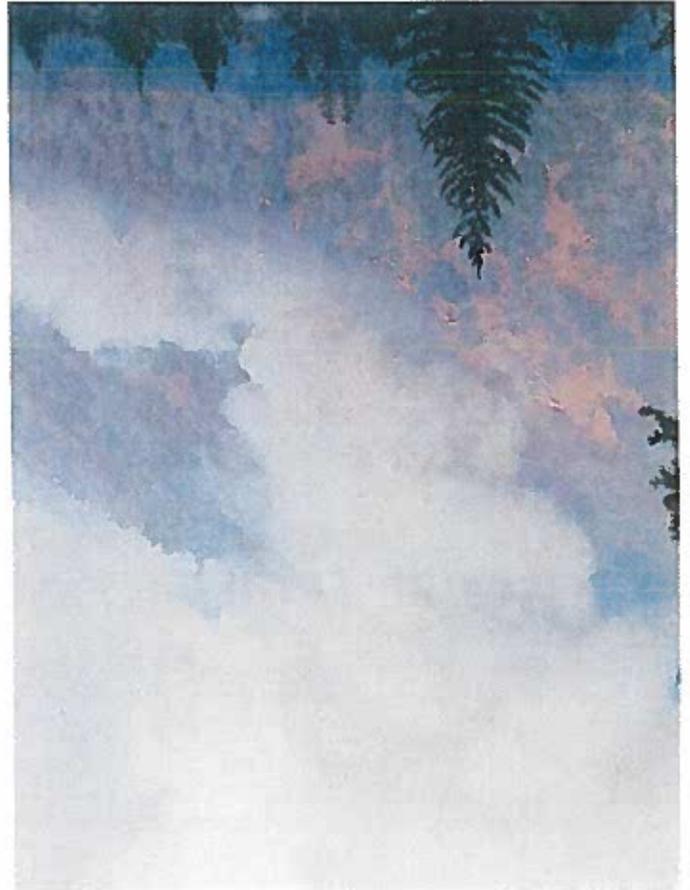
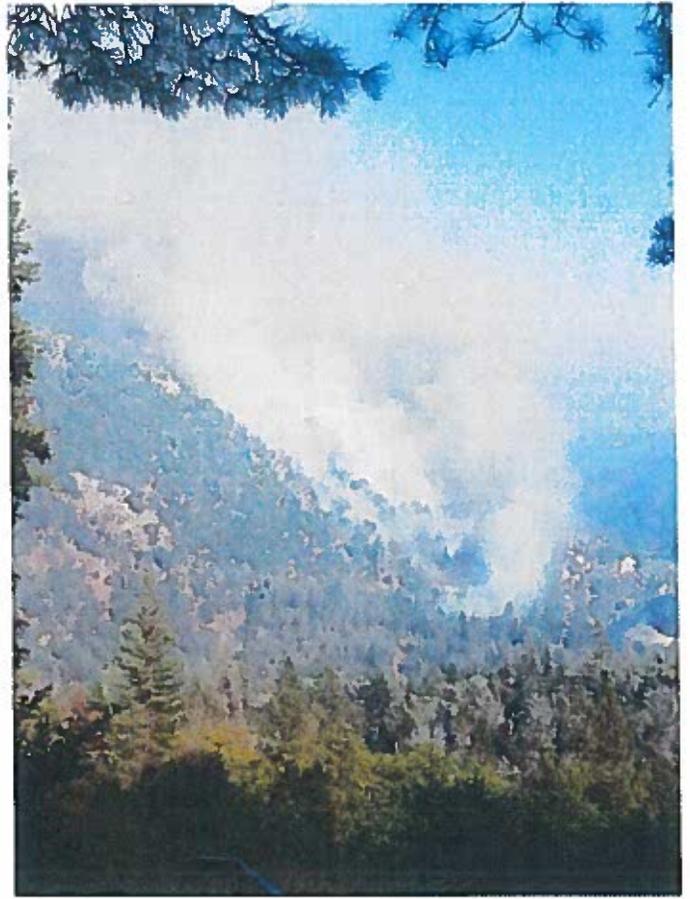
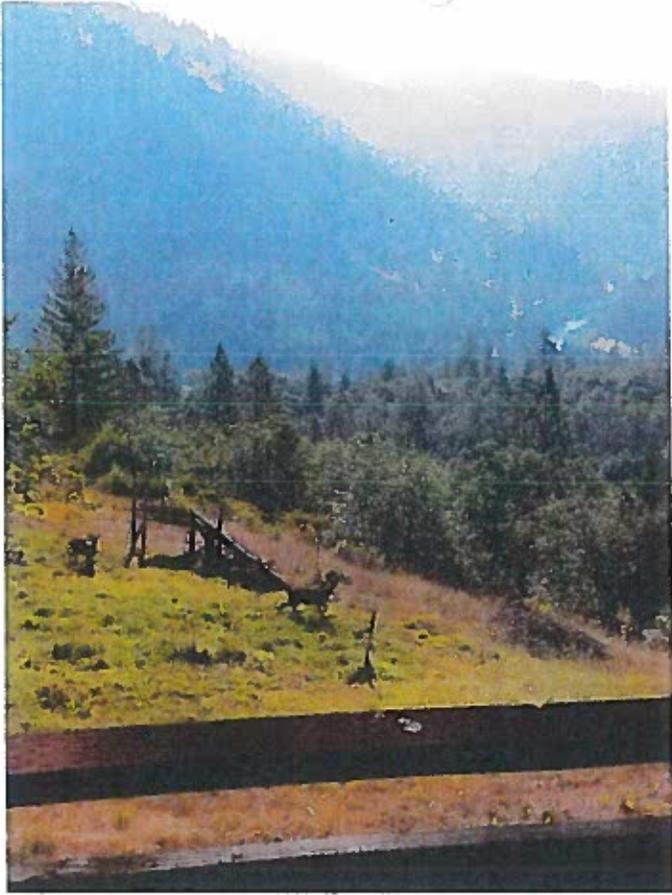
**STATEMENT**  
(Reference FSH 5309.11)

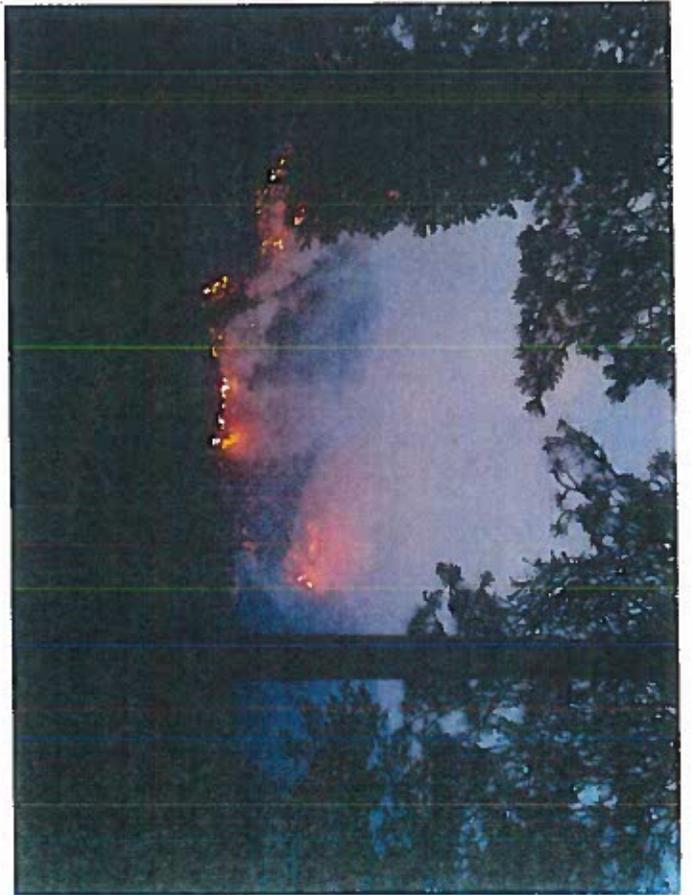
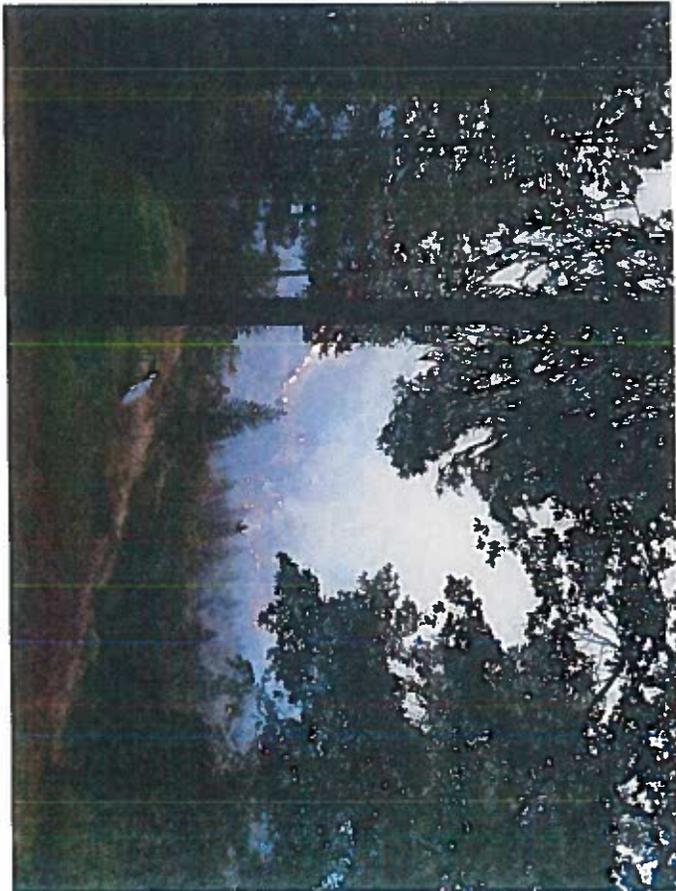
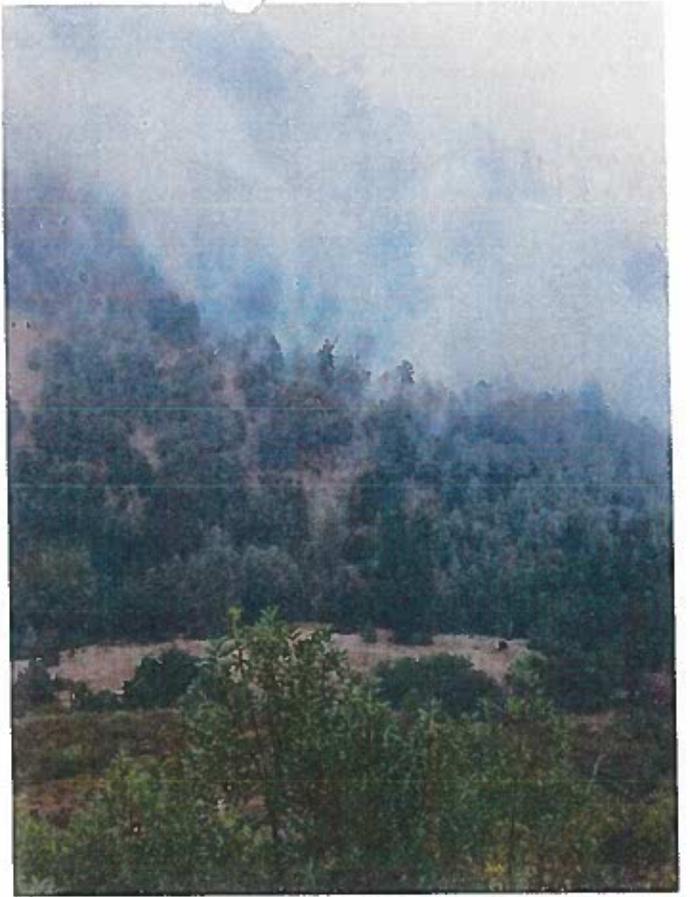
Case/File Number  
9478640

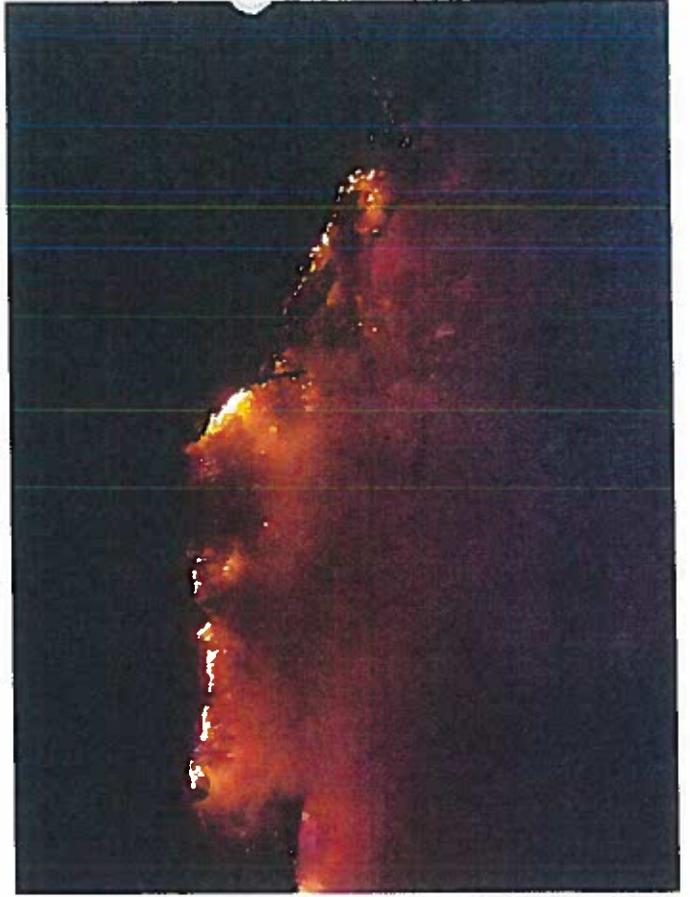
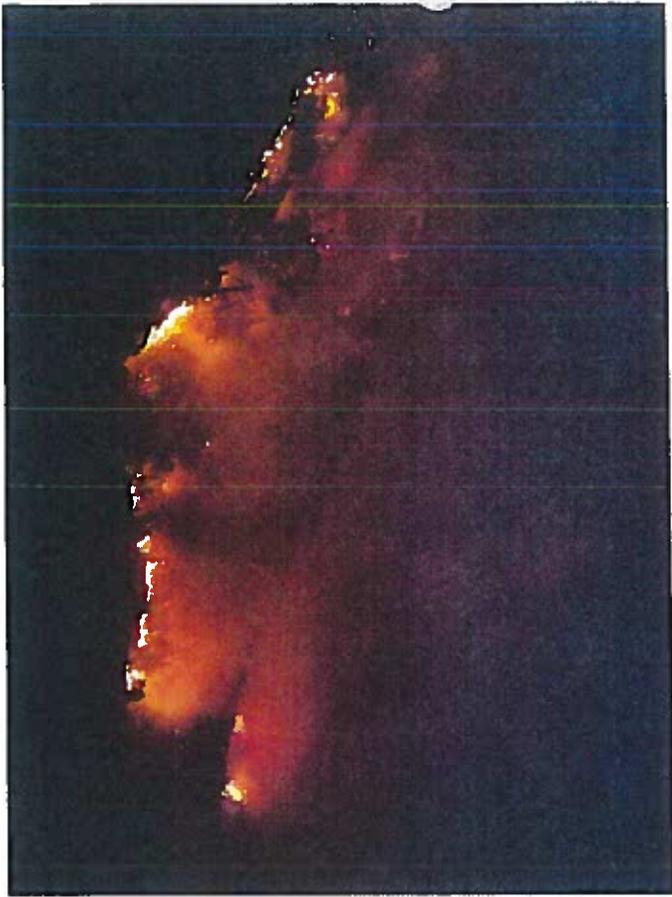
Initial Report  Follow-Up

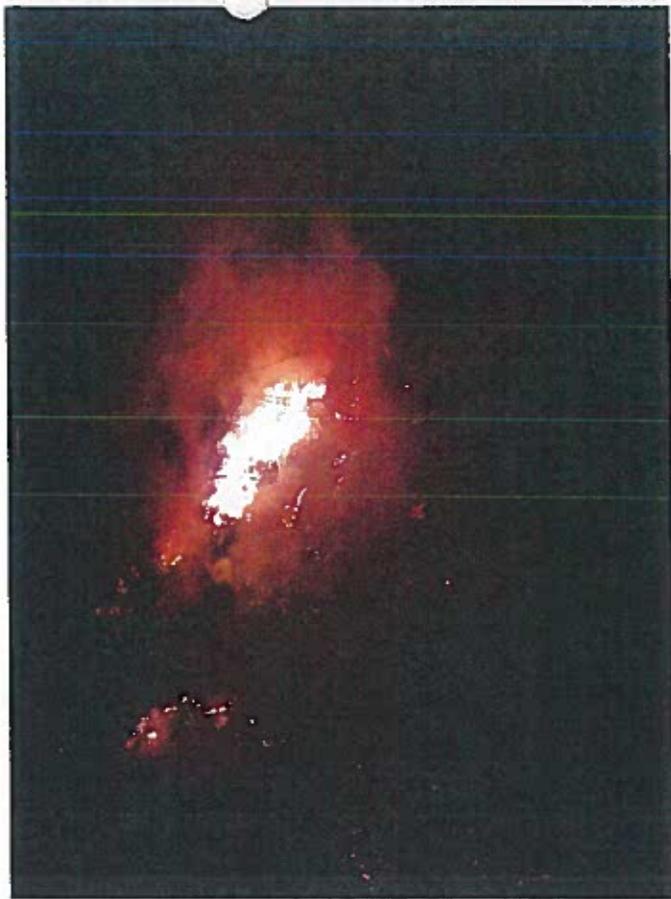
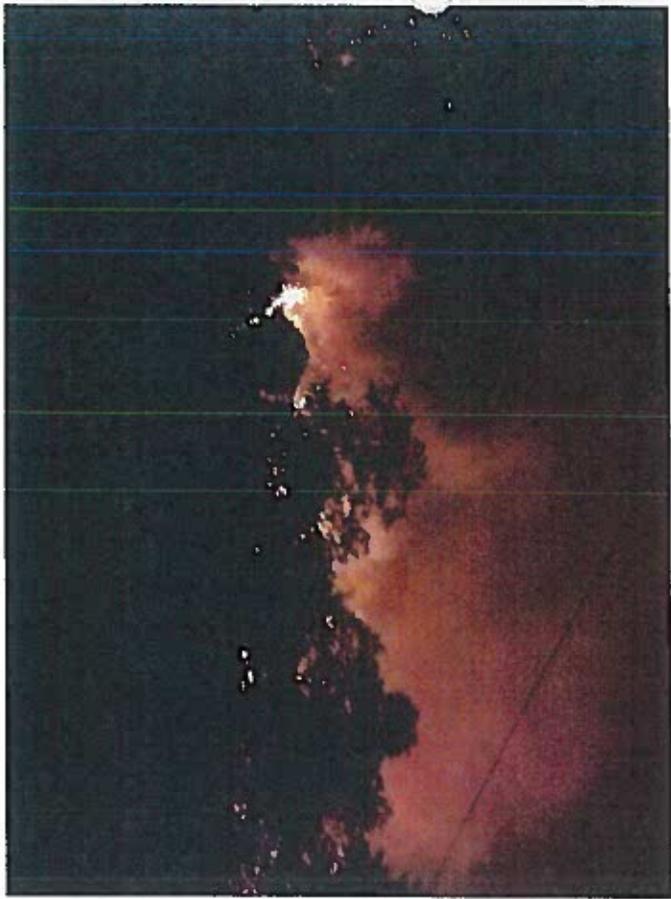
(continued 9/3/17 1215 hrs)

Additional to previous report, I first  
heard what appeared to be a Rifle shot  
(from my position, [redacted] [redacted])  
Cabore and Hakea (insight) - that I saw  
my attention to look down towards the  
stream area (just west of 295 W with Brook  
Gulch across road) and saw a fire which  
did not appear to be too large.  
The fire was already burning at the time of  
the shot).

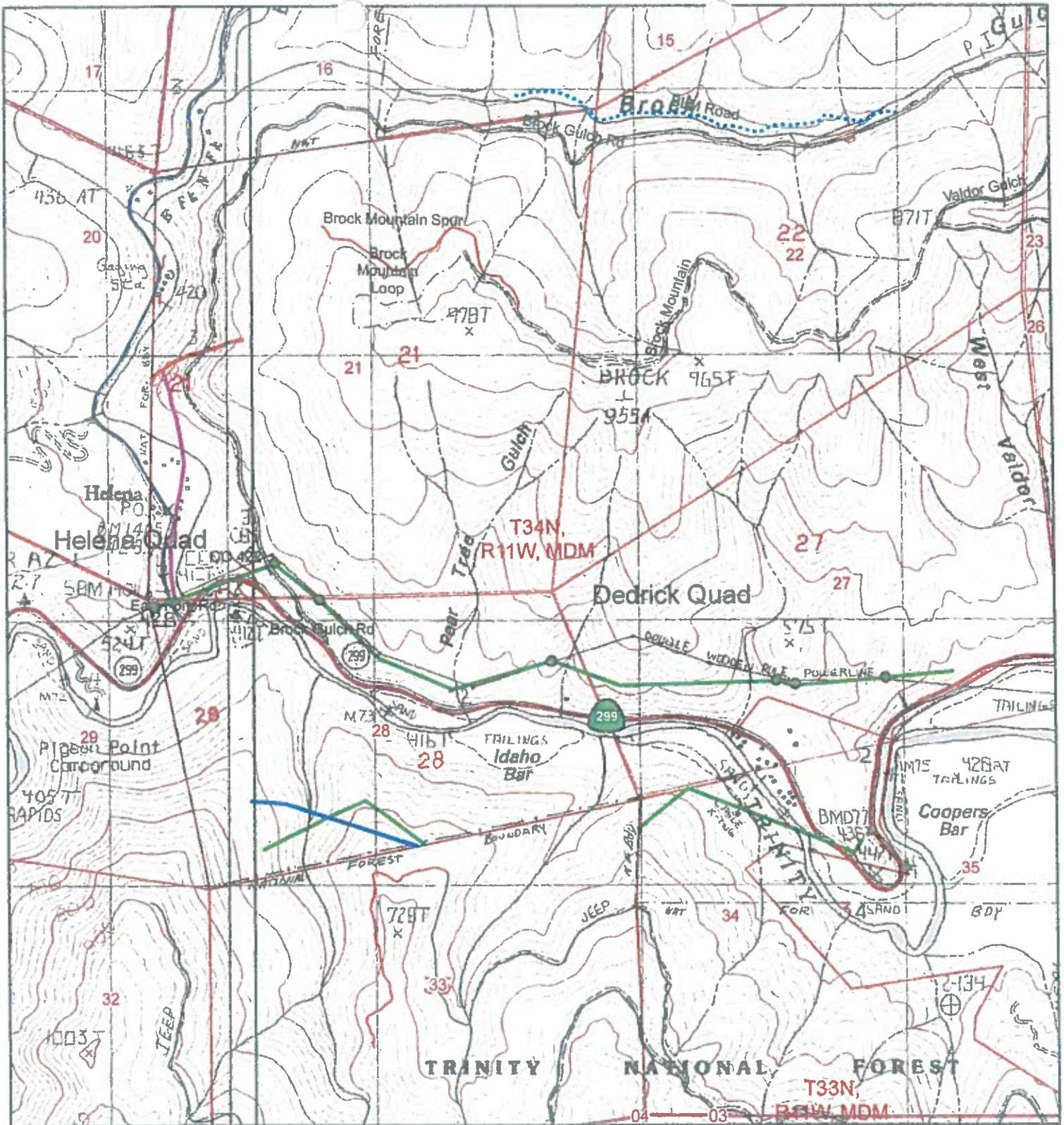








# **ATTACHMENT 10**



- PG&E 115kV pole locations
- TPUD power line, CAS 76221
- PG&E power line, CAS 40882
- TPUD power line, CAS 50594
- TPUD power line, CAS 55479
- BLM Lands (REFO)

Major Highways  
 TLECartoCategory





US Department of the Interior  
**BUREAU OF LAND MANAGEMENT**  
 Redding Field Office  
 Redding, California  
 (530) 224-2100  
[www.ca.blm.gov/redding](http://www.ca.blm.gov/redding)





Google Earth, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airphoto, US, USDA, AeroGRID, IGN, and the GIS User Community

- PG&E 115kV pole locations
- TPUD power line, CAS 76221
- PG&E power line, CAS 40882
- TPUD power line, CAS 50594
- TPUD power line, CAS 55479
- BLM Lands (REFO)

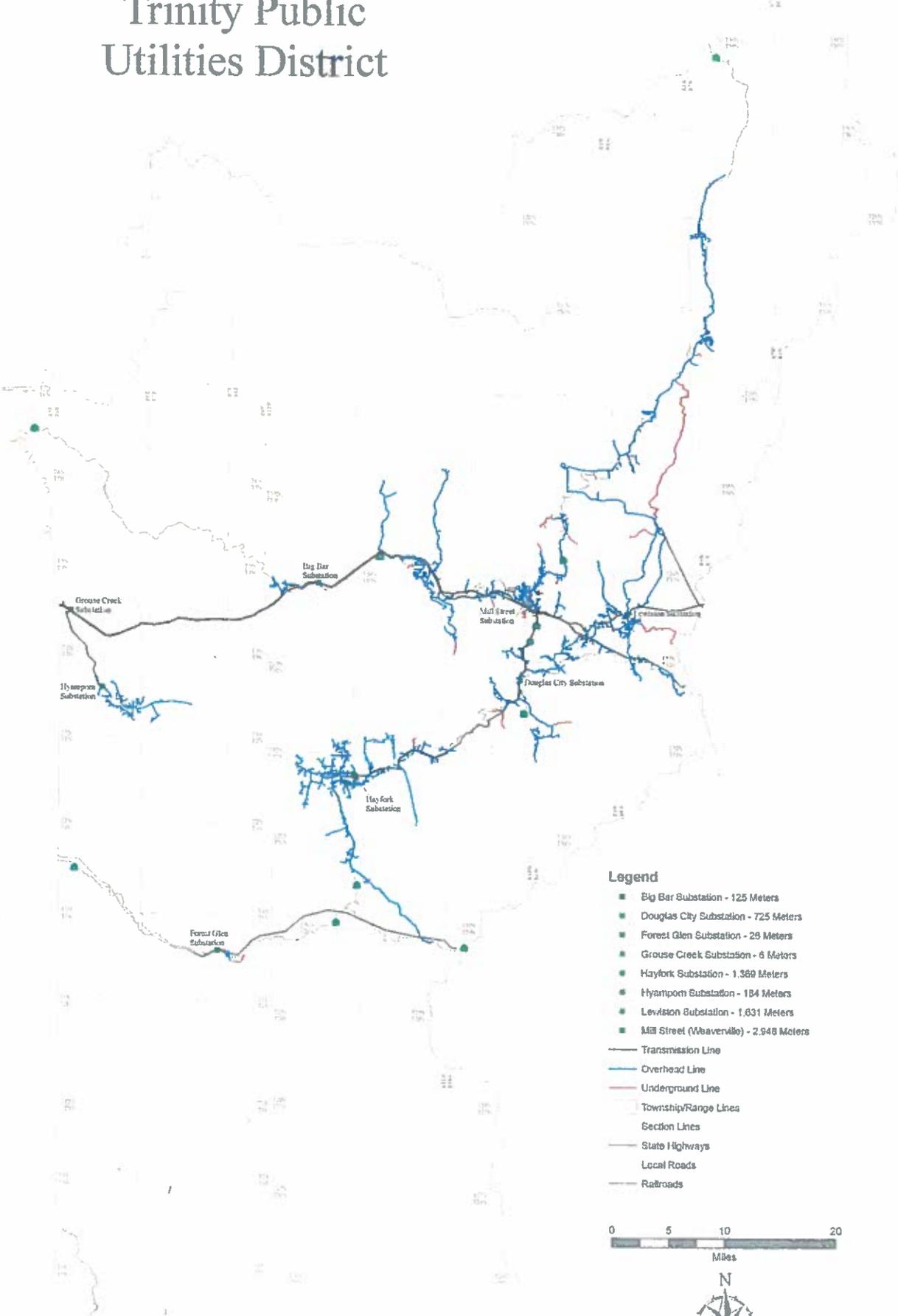
Major Highways  
TLFCartoCategory



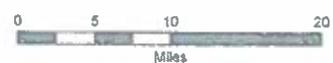
US Department of the Interior  
**BUREAU OF LAND MANAGEMENT**  
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[www.ca.blm.gov/redding](http://www.ca.blm.gov/redding)  
 Date Prepared: 9/1/2017



# Trinity Public Utilities District



- Legend**
- Big Bar Substation - 125 Meters
  - Douglas City Substation - 725 Meters
  - Forest Glen Substation - 29 Meters
  - Grouse Creek Substation - 6 Meters
  - Hayfork Substation - 1,369 Meters
  - Hyampom Substation - 184 Meters
  - Leviston Substation - 1,631 Meters
  - Mill Street (Weaverville) - 2,948 Meters
  - Transmission Line
  - Overhead Line
  - Underground Line
  - Township/Range Lines
  - Section Lines
  - State Highways
  - Local Roads
  - Railroads





# Law Enforcement and Investigations Photographic Record

(Reference FSH 5309.11, 50)



FS-5300-0056 (V.1.0)

08/31/2017

17-05-9478640

Date of Photographs

Case/Incident Number

<p><b>LOCATION</b></p> <p>Attachment to: (Incident Name or Case Number) Helena Fire</p> <p>Geographical landmarks, highways, campground, trails, etc: Hwy 299, West of Junction City, CA</p>	<p><b>PHOTOGRAPHER</b></p> <p>Name: <b>b6 &amp; b7C</b></p> <p>I.D./ Badge Number: <b>b6 &amp; b7C</b></p>
--	--

**CAMERA INFORMATION**

Type:  Digital  35 mm – Roll # \_\_\_\_\_  Video  Other (describe) \_\_\_\_\_

Instructions: Use a separate photographic record for each roll of film taken. If more than one digital memory card is used, prepare a separate sheet for each card. This form may be completed for videography. Record all tapes on one form. To continue the photographic record, click "Next" on the bottom of the page.

Photo Number	Evidence Number	View (Direction)	Description of Photograph	Other (flash, wide-angle, telephoto)
1		N	Overall: General Origin Area	8/31/17
2		NE	Overall: General Origin Area	8/31/17
3		NE	Overall: General Origin Area	8/31/17
4		E	Overall: General Origin Area	8/31/17
5		E/SE	Overall: General Origin Area	8/31/17
6		E/SE	Overall: General Origin Area	8/31/17
7		E/SE	Mid Range: Tree in Power Lines within General Origin Area	8/31/17
8		E/SE	Close Up: Tree in Power Lines within General Origin Area	8/31/17
9		E/SE	Closer Up: Tree in Power Lines within General Origin Area	8/31/17
10		S/SW	Overall: General Origin Area	8/31/17
11		S/SW	Close Up of Photo 10	8/31/17
12		S/SW	Overall: General Origin Area	8/31/17
13		S/SW	Close Up: General Origin Area	8/31/17
14		W	Overall: General Origin Area	8/31/17
15		W	Close Up: General Origin Area	8/31/17
16		W/NW	Overall: General Origin Area	8/31/17
17		NW	Overall: General Origin Area	8/31/17
18		NW	Close Up: General Origin Area	8/31/17
19		NW	Overall: General Origin Area	8/31/17
20		N	Overall: PG&E Power Poles above General Origin Area	8/31/17
21		E	Overall: PG&E Power Poles above General Origin Area	8/31/17

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# Law Enforcement and Investigations Photographic Record Continuation

(Reference FSH 5309.11, 50)



FS-5300-0056 (V.1.0)

09/01/2017

17-05-9478640

Date of Photographs

Case/Incident Number

Instructions: Use a separate photographic record for each roll of film taken. If more than one digital memory card is used, prepare a separate sheet for each card. This form may be completed for videography. Record all tapes on one form. To continue the photographic record, print additional copies of this page.

Photo Number	Evidence Number	View (Direction)	Description of Photograph	Other (flash, wide-angle, telephoto)
22		NE	View from where Witness <b>b6 &amp; b7C</b> observed the fire on 8/30/17	9/1/17
23		NW	Overall: General Origin Area	9/1/17
24		N	Overall: General Origin Area	9/1/17
25		N	Overall: General Origin Area	9/1/17
26		NW	Overall: General Origin Area	9/1/17
27		NW	Mid Range: General Origin Area	9/1/17
28		NW	Close Up: General Origin Area	9/1/17
29		W	Mid Range: General Origin Area	9/1/17
30		W	Close Up: General Origin Area	9/1/17
31		SW	Tree in Contact with Power Lines	9/1/17
32		SW	Tree in Contact with Power Lines	9/1/17
33		SW	Close Up: Cracked Tree Branch	9/1/17
34		S	Tree in Contact with Power Lines	9/1/17
35		S	Tree in Contact with Power Lines	9/1/17
36		SE	General Origin Area	9/1/17
37		SE	Close Up: Tree in Contact with Power Lines	9/1/17
38		S/SE	Grid Lane 1; Pre-Inspection	9/2/17
39	1	S/SE	Grid Lane 1; Post-Inspection	9/2/17
40		E	Grid Lane 1 proximity to Tree Contact with Power Lines	9/2/17
41		S/SE	Grid Lane 2; Pre-Inspection	9/2/17
42		S/SE	Grid Lane 2; Post-Inspection	9/2/17
43		S/SE	Grid Lane 3; Pre-Inspection	9/2/17
44		S/SE	Grid Lane 3; Post-Inspection	9/2/17
45		S/SE	Grid Lane 4; Pre-Inspection	9/2/17
46		S/SE	Grid Lane 4; Post-Inspection	9/2/17
47		S/SE	Grid Lane 5; Pre-Inspection	9/2/17
48		S/SE	Grid Lane 5; Post-Inspection	9/2/17
49		E	Metal object in Grid Lane 5	9/2/17
50		S/SE	Grid Lane 6; Pre-Inspection	9/2/17
51		S/SE	Grid Lane 6; Post-Inspection	9/2/17
52		S/SE	Grid Lane 7; Pre-Inspection	9/2/17
53		N/NW	Grid Lane 7; Pre-Inspection	9/2/17

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09/02/2017

17-05-9478640

Date of Photographs

Case/Incident Number

Photo Number	Evidence Number	View (Direction)	Description of Photograph	Other (flash, wide-angle, telephoto)
54		S/SE	Grid Lane 7; Post-Inspection	9/2/17
55		N/NW	Grid Lane 7; Post Inspection	9/2/17
56		S/SE	Grid Lane 8; Pre-Inspection	9/2/17
57		N/NW	Grid Lane 8; Pre-Inspection	9/2/17
58	2, 3	S/SE	Grid Lane 8 with Evidence #2 and #3	9/2/17
59		S/SE	Grid Lane 8; Post-Inspection	9/2/17
60		N/NW	Grid Lane 8; Post-Inspection	9/2/17
61		S/SE	Grid Lane 9; Pre-Inspection	9/2/17
62		N/NW	Grid Lane 9; Pre-Inspection	9/2/17
63		S/SE	Grid Lane 9 with Evidence #4	9/2/17
64		N/NW	Grid Lane 9 with Evidence #4	9/2/17
65		S/SE	Grid Lane 10; Pre-Inspection	9/2/17
66		N/NW	Grid Lane 10; Pre-Inspection	9/2/17
67	5	S/SE	Grid Lane 10; Post-Inspection with Evidence #5	9/2/17
68	5	N/NW	Grid Lane 10; Post-Inspection with Evidence #5	9/2/17
69		S/SE	Grid Lane 11; Pre-Inspection	9/2/17
70		N/NW	Grid Lane 11; Pre-Inspection	9/2/17
71	6	Down	Grid Lane 11 with Evidence #6 (close up)	9/2/17
72	7	Down	Grid Lane 11 with Evidence #7 (close up)	9/2/17
73	8	Down	Grid Lane 11 with Evidence #8 (close up)	9/2/17
74		S/SE	Grid Lane 11; Post-Inspection	9/2/17
75		N/NW	Grid Lane 11; Post-Inspection	9/2/17
76		S/SE	Grid Lane 12; Pre-Inspection	9/2/17
77		S/SE	Grid Lane 12; Post-Inspection	9/2/17
78		N/NW	Grid Lane 12; Post-Inspection	9/2/17
79		S/SE	Grid Lane 13; Pre-Inspection	9/2/17
80	9	S/SE	Grid Lane 13 with Evidence #9	9/2/17
81	9	Down	Grid Lane 13 with Evidence #9 (close up)	9/2/17
82		S/SE	Grid Lane 13; Post-Inspection	9/2/17
83		S/SE	Grid Lane 14; Pre-Inspection	9/2/17
84		S/SE	Grid Lane 14; Post-Inspection	9/2/17
85		S/SE	Grid Lane 15; Pre-Inspection	9/2/17
86		S/SE	Grid Lane 15; Post-Inspection	9/2/17

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# Law Enforcement and Investigations Photographic Record Continuation

(Reference FSH 5309.11, 50)



FS-5300-0056 (V.1.0)

09/02/2017

17-05-9478640

Date of Photographs

Case/Incident Number

Instructions: Use a separate photographic record for each roll of film taken. If more than one digital memory card is used, prepare a separate sheet for each card. This form may be completed for videography. Record all tapes on one form. To continue the photographic record, print additional copies of this page.

Photo Number	Evidence Number	View (Direction)	Description of Photograph	Other (flash, wide-angle, telephoto)
87		S	Overall: Specific Origin Area	9/2/17
88		SW	Overall: Specific Origin Area	9/2/17
89		W	Overall: Specific Origin Area	9/2/17
90		Up	Overall: Tree in Contact with Power Lines	9/2/17
91		Up	Closeup: Tree in Contact with West Power Line	9/2/17
92		Up	Closeup: Tree in Contact with East Power Line	9/2/17
93		S	Overall: Backing Fire Direction Indicators #1 and #2	9/2/17
94		Top	Close Up: Backing Indicator #1 (grass stems)	9/2/17
95		Top	Close Up: Backing Indicator #2 (grass stems)	9/2/17
96		E	Overall: Backing Fire Direction Indicator #3	9/2/17
97		E	Close Up: Backing Indicator #3 (curling)	9/2/17
98		W	Close Up: Backing Indicator #3 (curling)	9/2/17
99		SE	Overall: Backing Fire Direction Indicator #4	9/2/17
100		Top	Backing Indicator #4 (curling)	9/2/17
101		W	Overall: Advancing Fire Direction Indicators #1 and #2	9/2/17
102		N	Advancing Indicator #1 (angle of char, white ash)	9/2/17
103		E	Advancing Indicator #1 (angle of char, white ash)	9/2/17
104		N	Advancing Indicator #2 (angle of char, white ash)	9/2/17
105		E	Advancing Indicator #2 (angle of char, white ash)	9/2/17
106		SE	Overall: Advancing Indicator #3	9/2/17
107		Top	Advancing Indicator #3 (protection, staining)	9/2/17
108		S	Overall: Advancing Indicator #4	9/2/17
109		Top	Advancing Indicator #4 (protection, staining)	9/2/17
110		SW	Overall: Lateral Indicator #1	9/2/17
111		E/SE	Overall: Lateral Indicator #1 (showing transition zone)	9/2/17
112		N/NW	Overall: Lateral Indicator #2	9/2/17
113		Top	Lateral Indicator #2 (curling)	9/2/17
114		NW	Overall: Lateral Indicator #3	9/2/17
115		SE	Lateral Indicator #3 (white ash, protection)	9/2/17
116		W	Overall: Lateral Indicator #4	9/2/17
117		E	Lateral Indicator #4 (foliage freeze, angle of char, transition zone)	9/2/17
118		SE	Mid Range: Lateral Indicator #4 (curling)	9/2/17
119		W	Close Up of east insulator (power pole near origin)	9/3/17

Previous

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Next

09/03/2017

17-05-9478640

Date of Photographs

Case/Incident Number

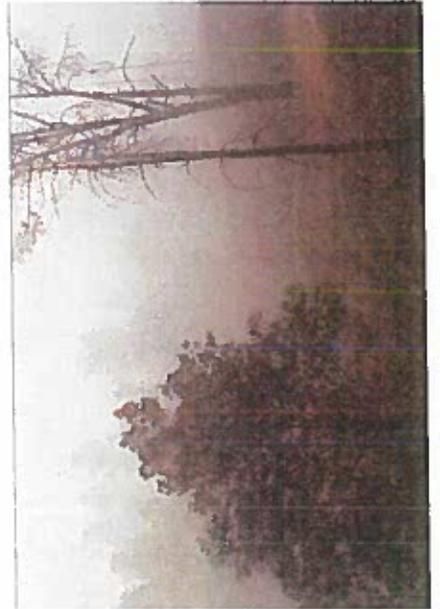
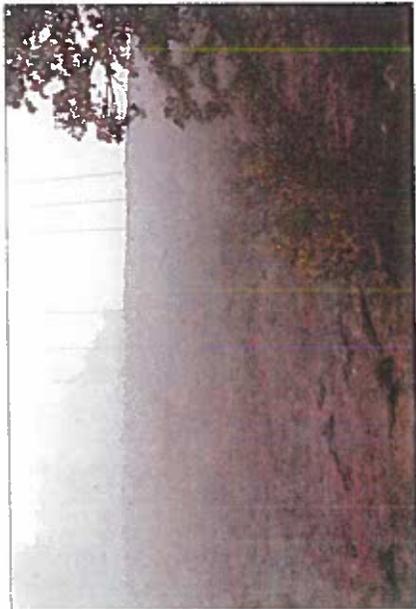
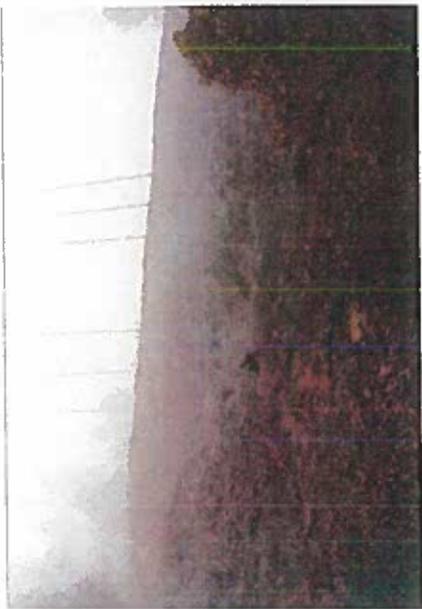
Photo Number	Evidence Number	View (Direction)	Description of Photograph	Other (flash, wide-angle, telephoto)
120		W	Close Up of west insulator (power pole near origin)	9/3/17
121		Up	Close up of east powerline in contact with tree branch	9/3/17
122		Up	Close up of west powerline in contact with tree branch	9/3/17
123		NW	Close up of powerlines after the tree branch was removed	9/3/17
124		N	Tree branch after it was removed from its position on powerlines	9/3/17
125		N	Stump of the removed tree branch	9/3/17
126		N	Tree branch after it was removed from its position on powerlines	9/3/17
127		Up	Close Up: powerlines that had been contacting the removed tree branch	9/3/17
128		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
129		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
130		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
131		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
132		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
133		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
134		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
135		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
136		NE	Close Up: tree branch that had been in contact with powerlines	9/3/17
137		NE	Close Up: unburned portion of tree branch in contact with powerlines	9/3/17
138		Up	Close Up: west powerline that had been in contact with tree branch	9/3/17
139		Up	Close Up: west powerline that had been in contact with tree branch	9/3/17
140		Up	Close Up: west powerline that had been in contact with tree branch	9/3/17
141		NW	Powerlines that had been in contact with tree branch; discoloration	9/3/17
142		NW	Powerlines that had been in contact with tree branch; discoloration	9/3/17
143		NW	Powerlines that had been in contact with tree branch; discoloration	9/3/17
144		NW	Powerlines that had been in contact with tree branch; discoloration	9/3/17
145		N	Removed tree branch that had been in contact with powerlines	9/3/17
146		S/SE	Power Pole Tag on power pole at Origin (also RP1)	9/3/17
147		S/SE	Close Up of insulators on Power Pole at Origin	9/3/17
148		S	Close Up of insulators on Power Pole at Origin	9/3/17
149		SW	Close Up of west powerline that had been in contact with tree branch	9/3/17
150		N	Overall: removed tree branch that had been in contact with powerlines	9/3/17
151		NW	Close Up: removed tree branch that had been in contact with powerlines	9/3/17
152		NW	Close Up: removed tree branch that had been in contact with powerlines	9/3/17

Previous

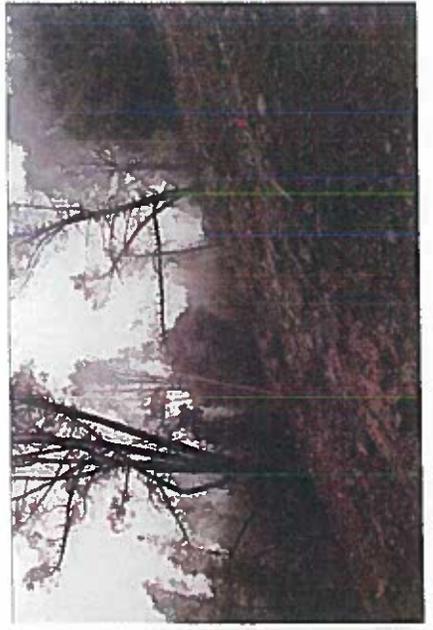
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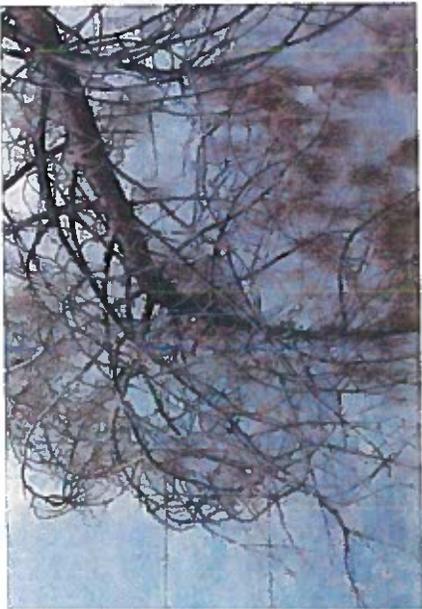
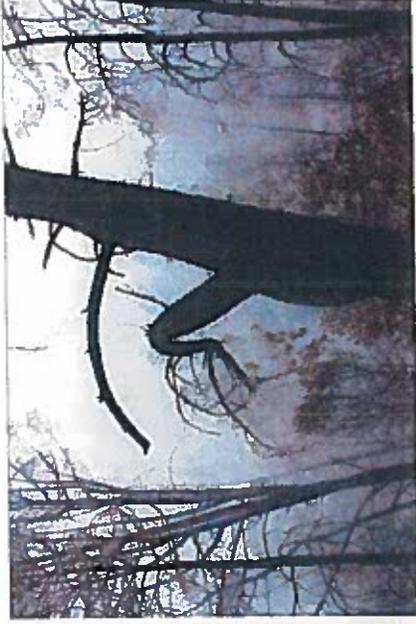
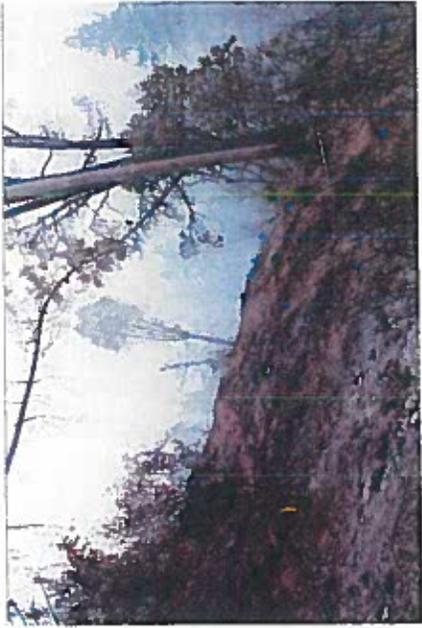
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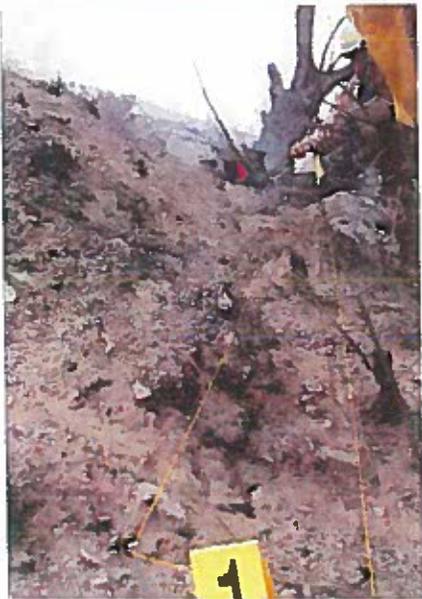
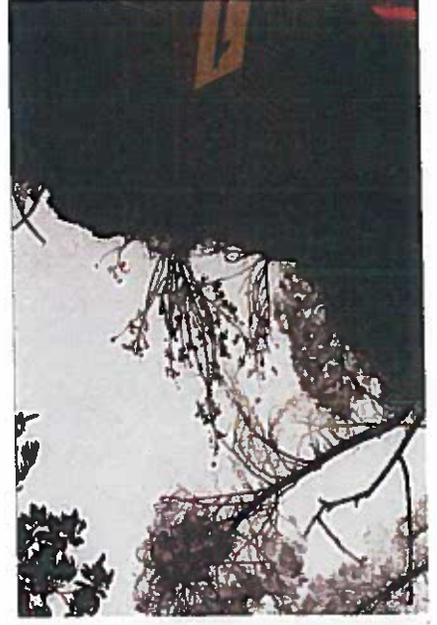
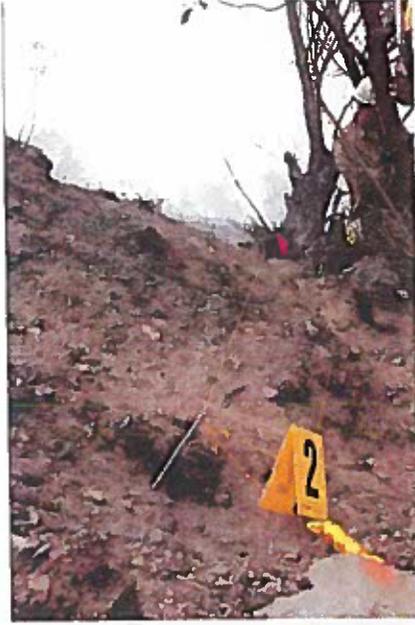
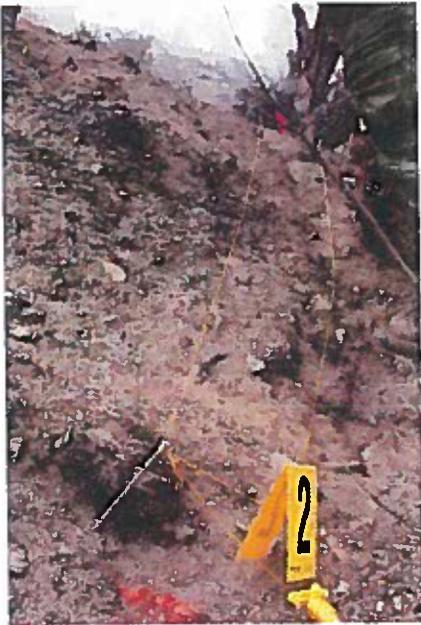
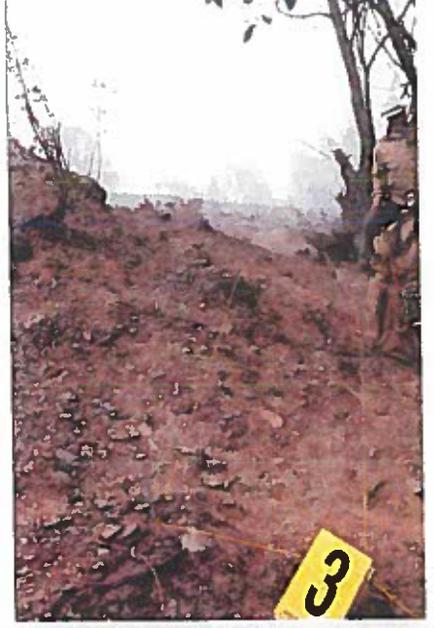
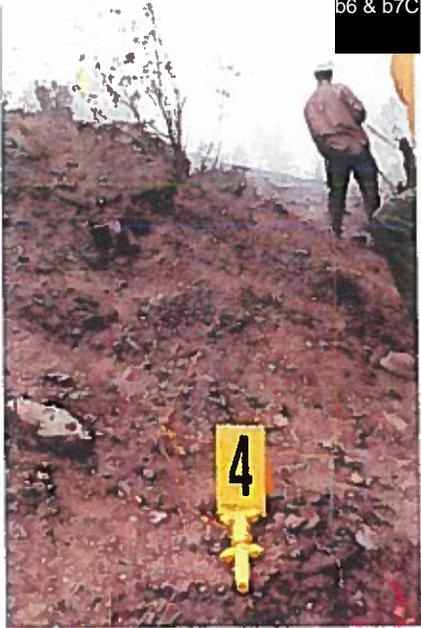


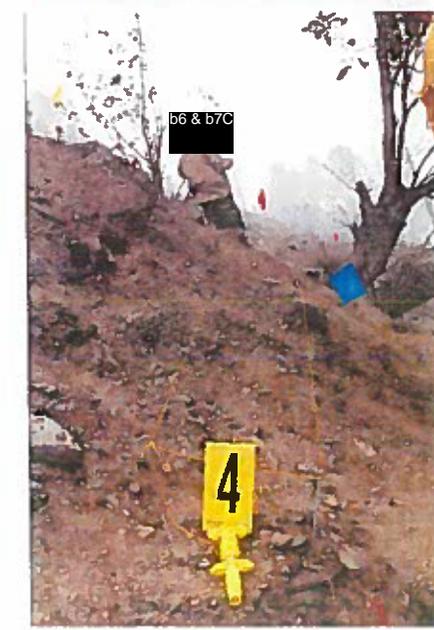
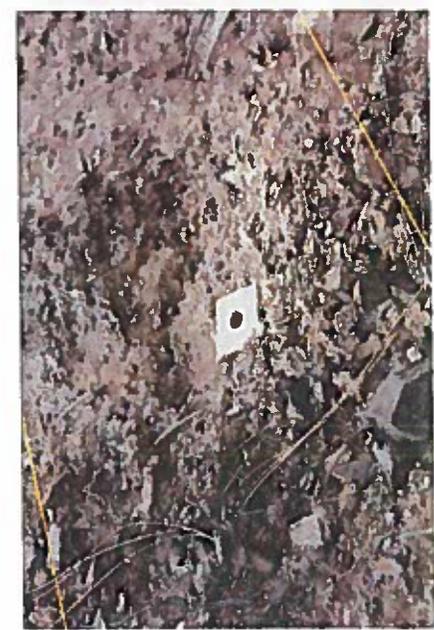


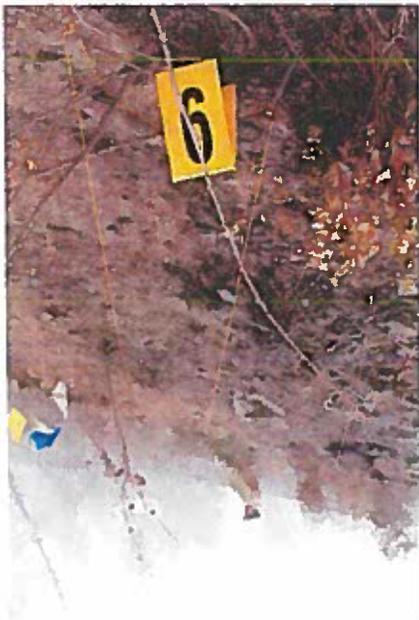
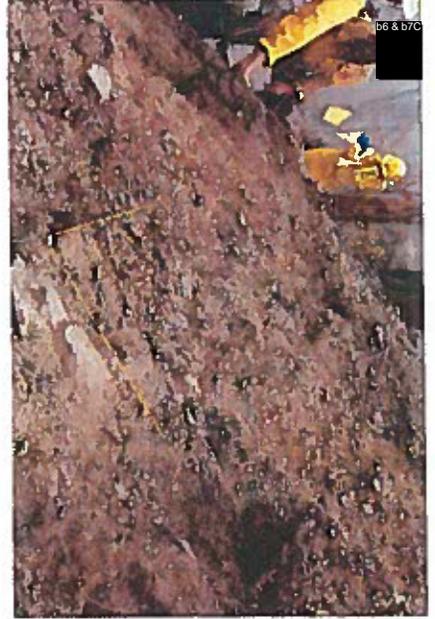
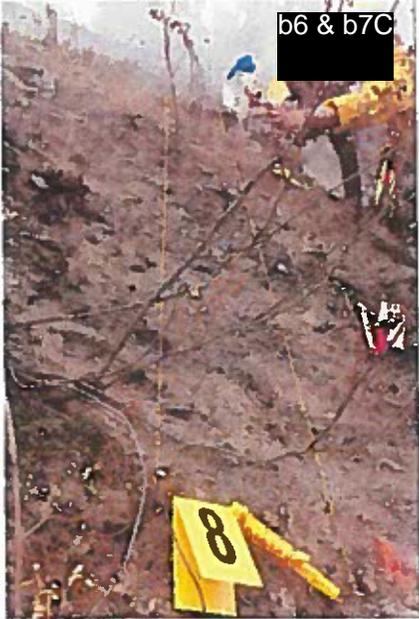
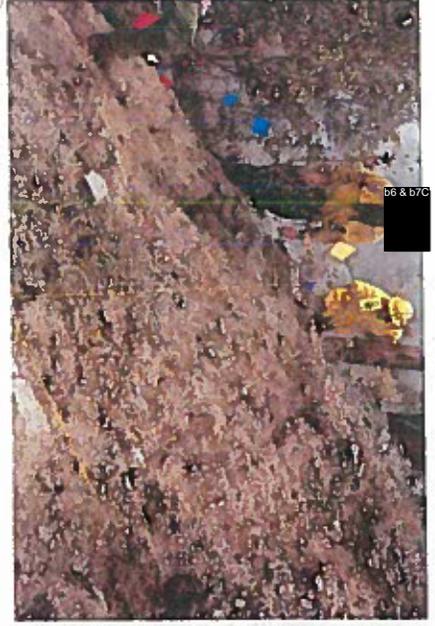


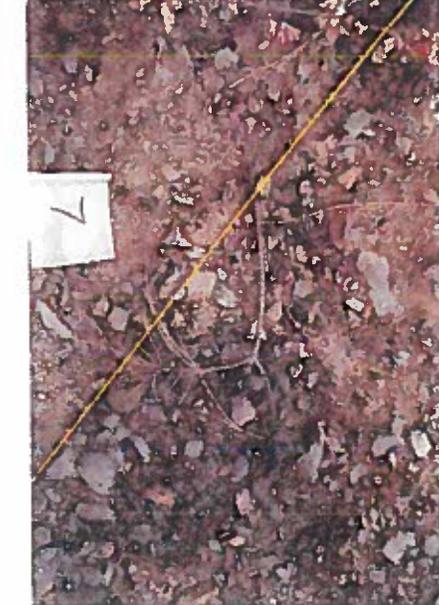
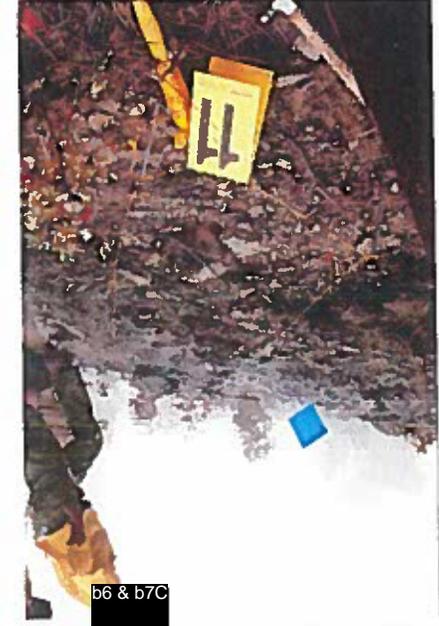
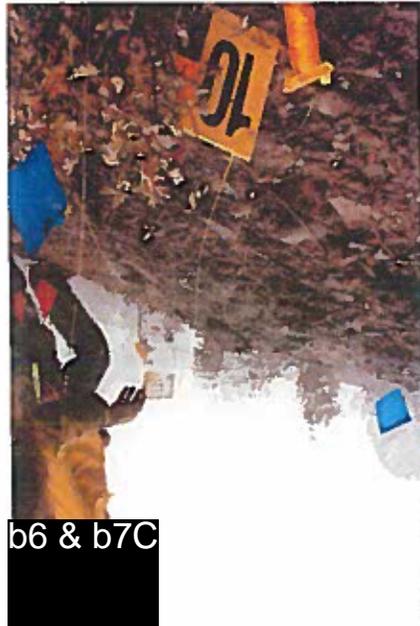
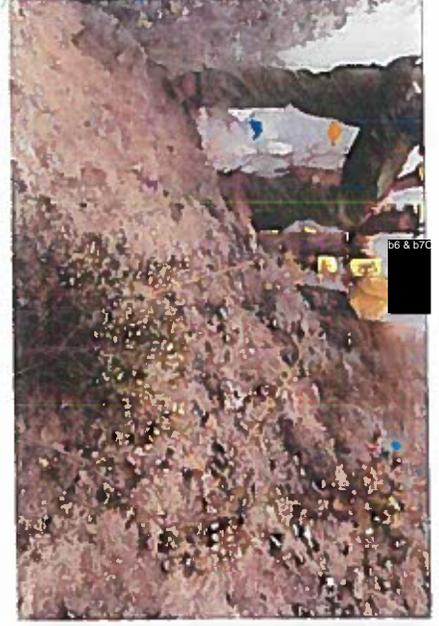
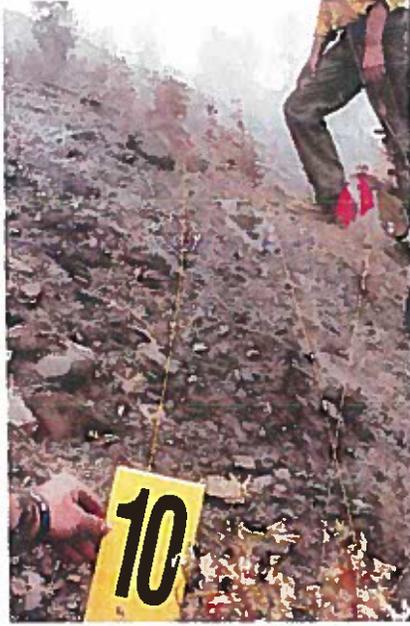
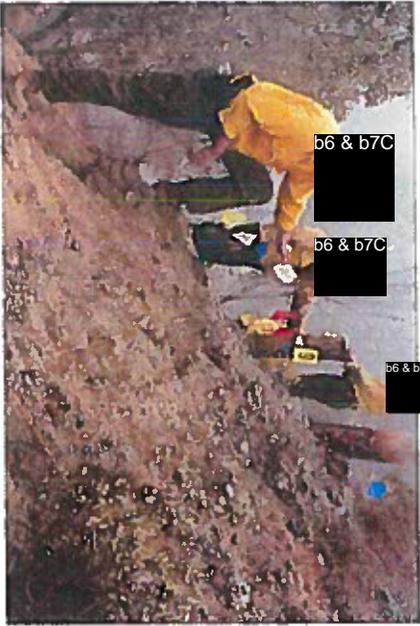


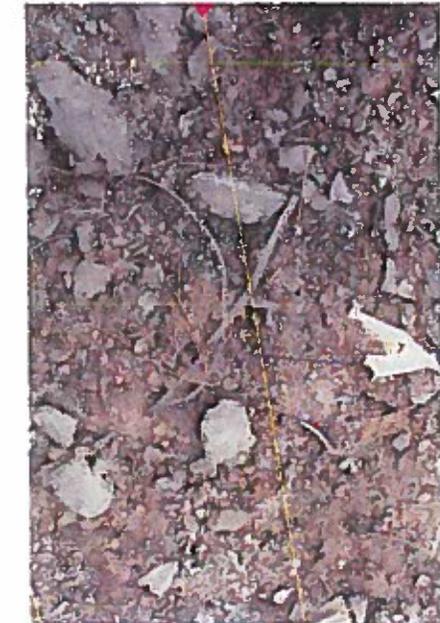
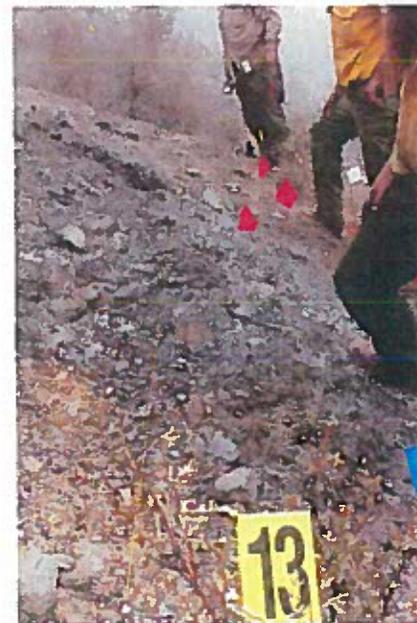
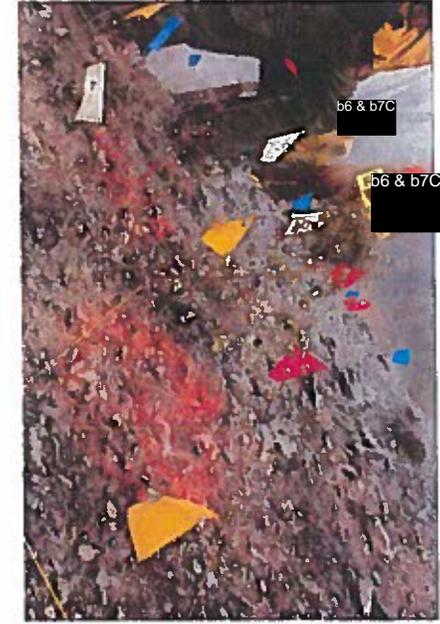
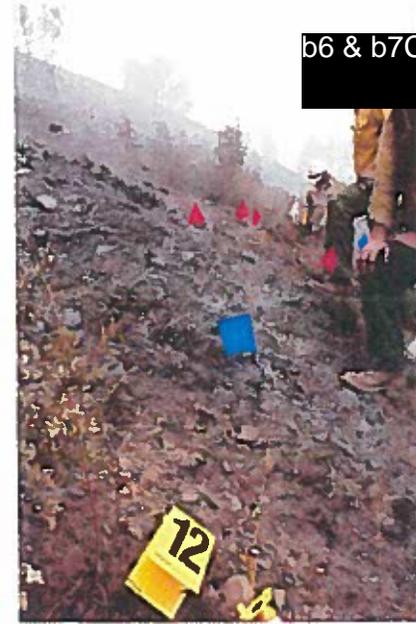
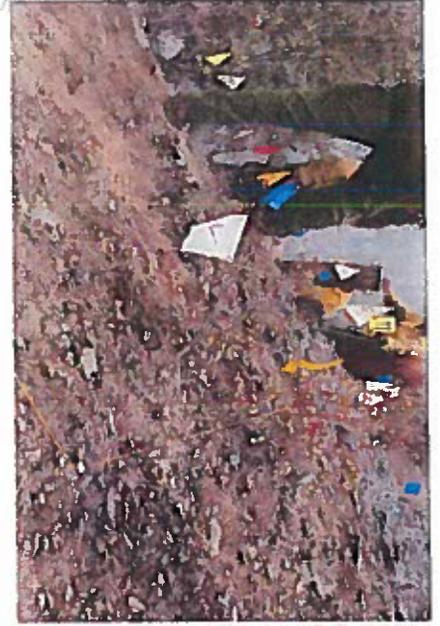
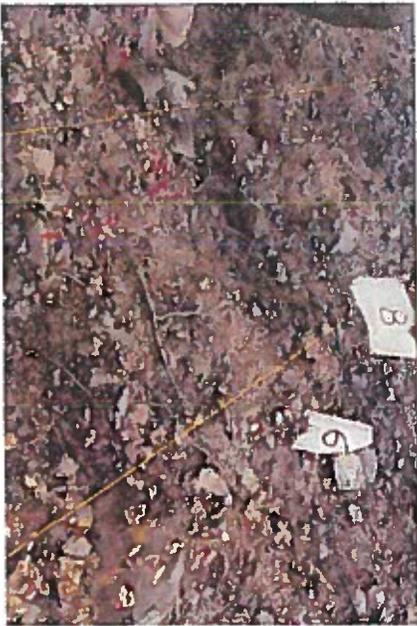
b6 & b7C

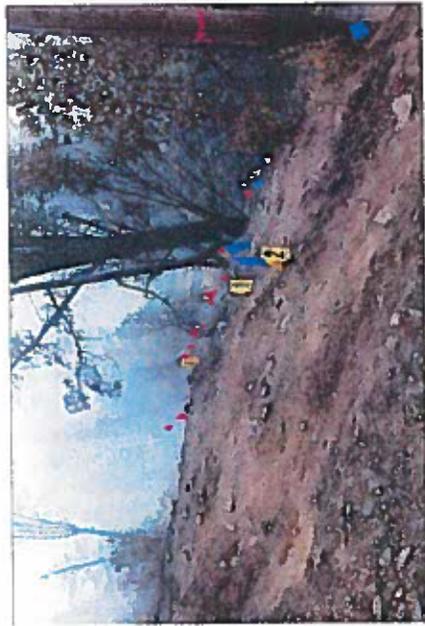
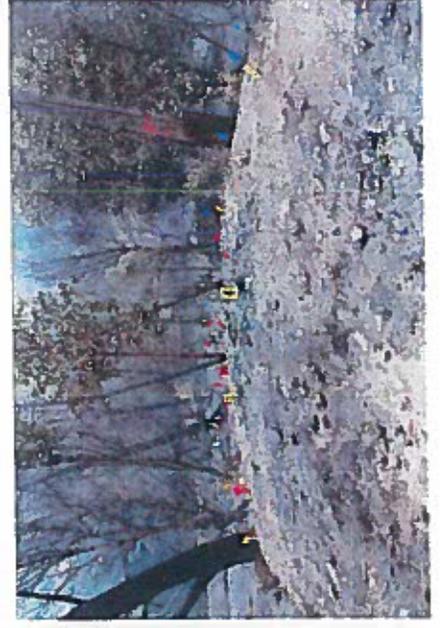
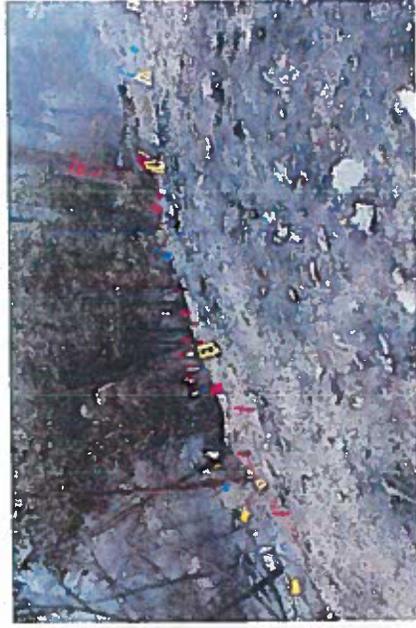




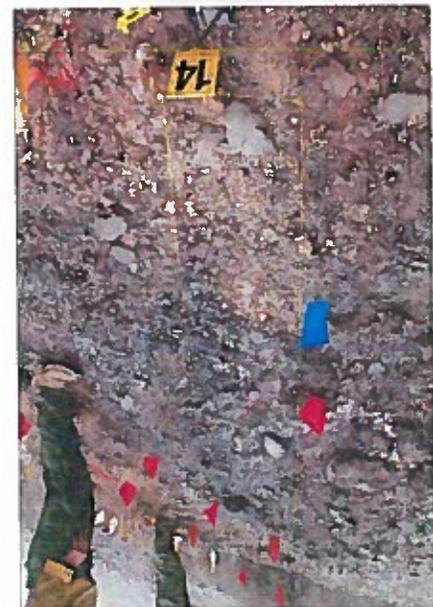




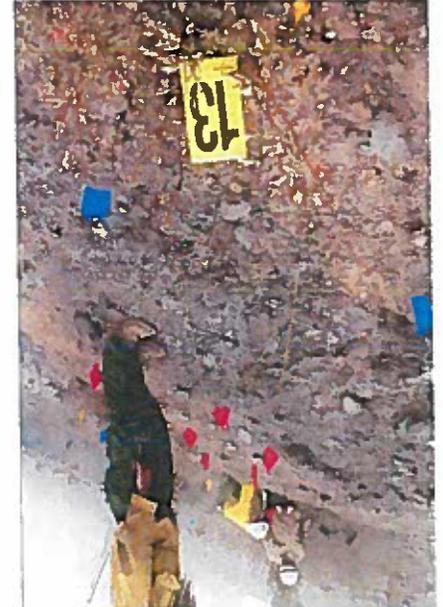


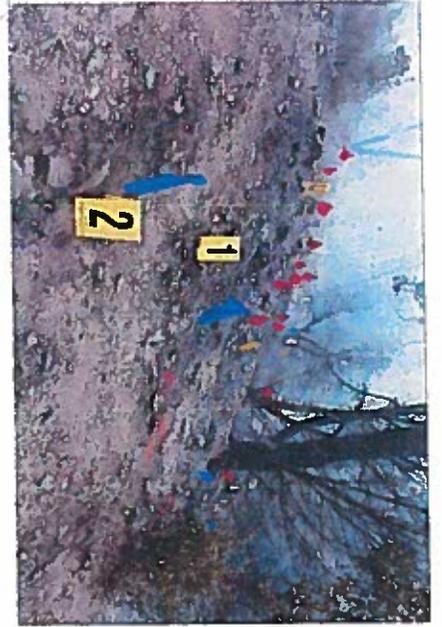


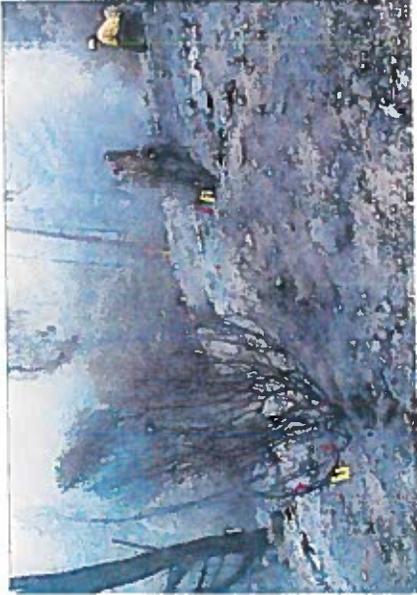
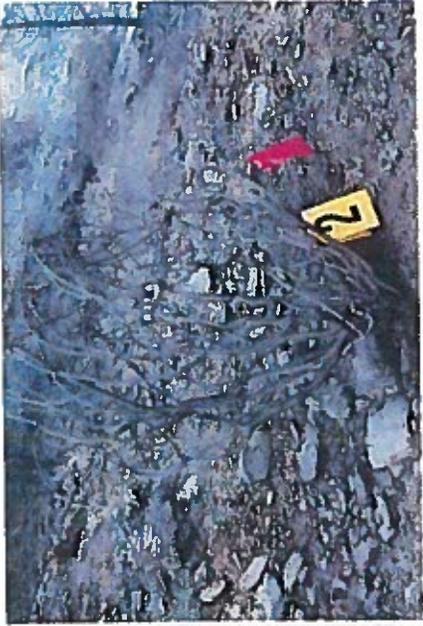
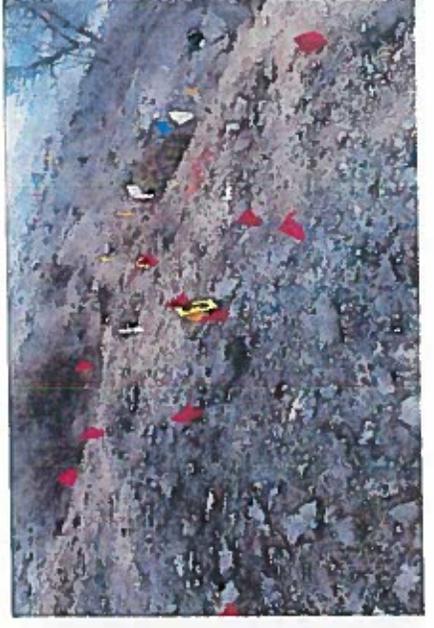
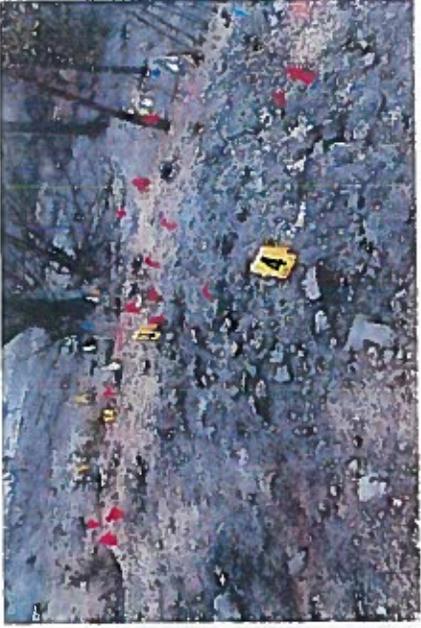
b6 & b7C

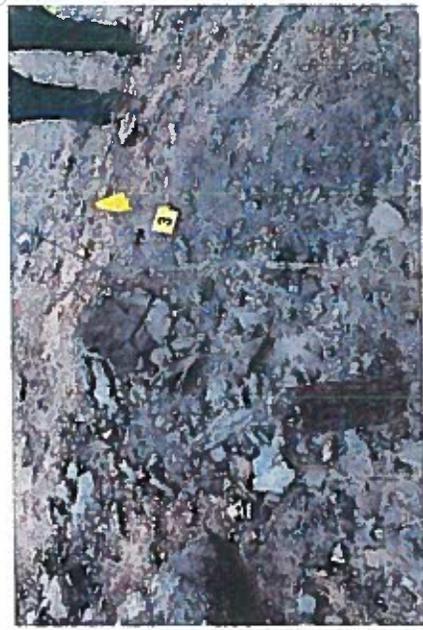
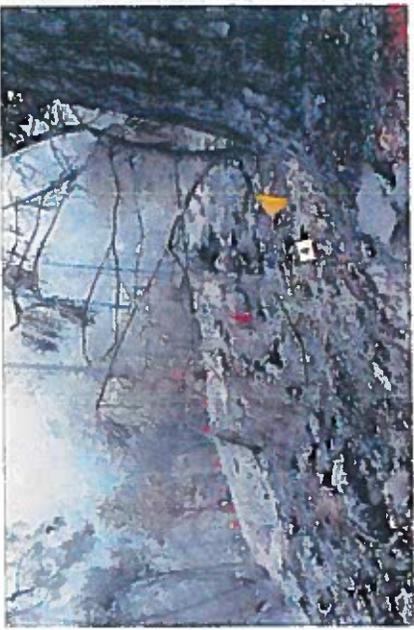
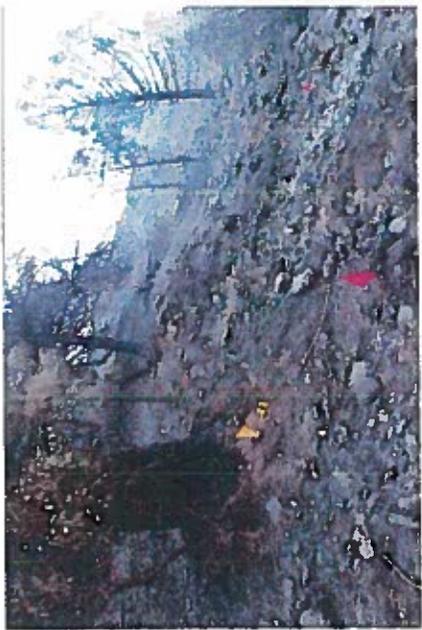


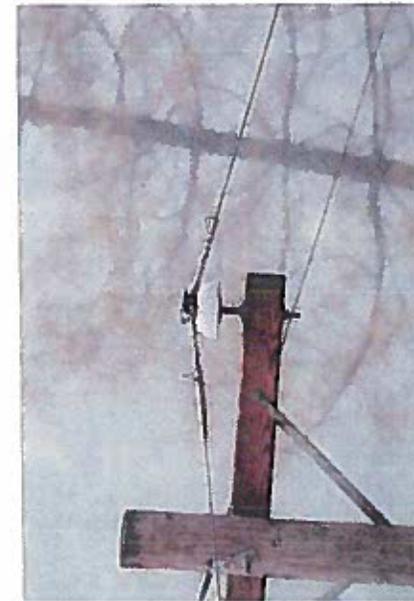
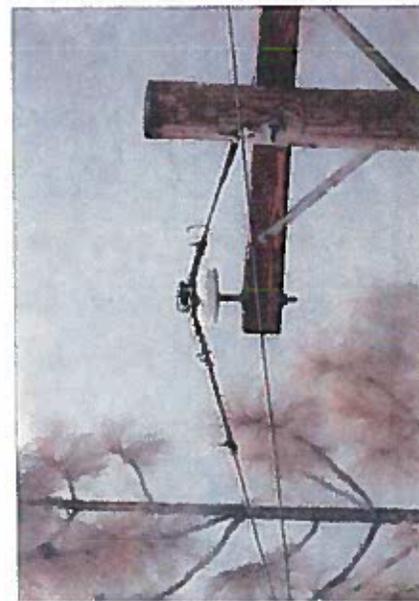
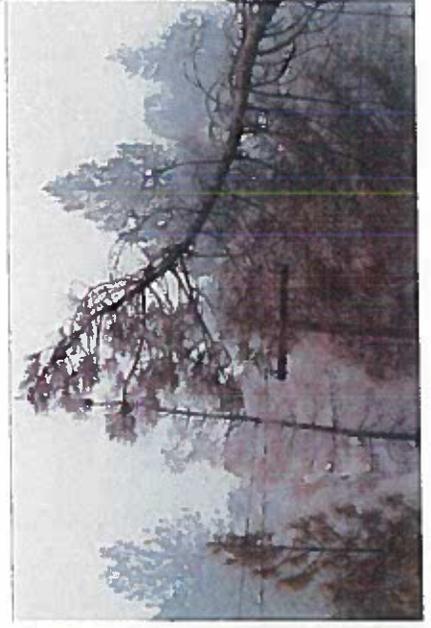
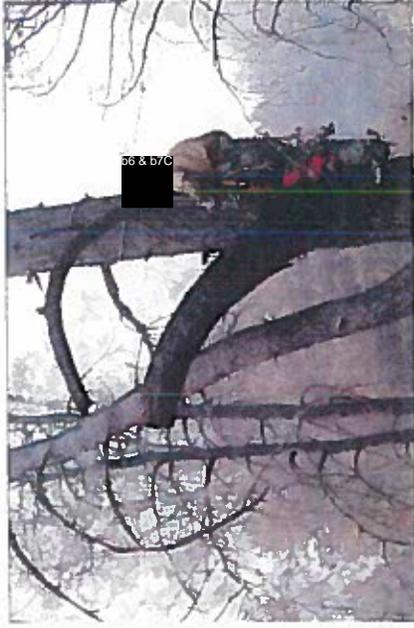
b6 & b7C

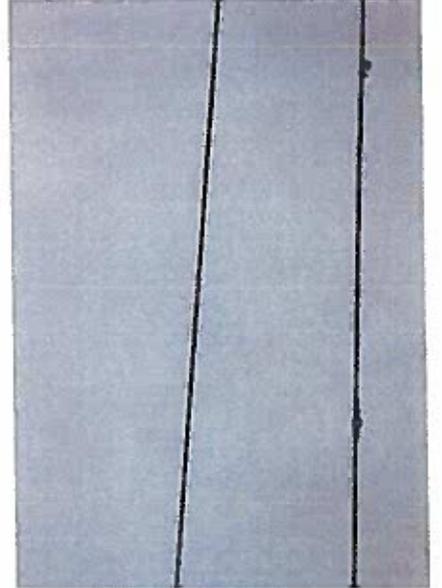
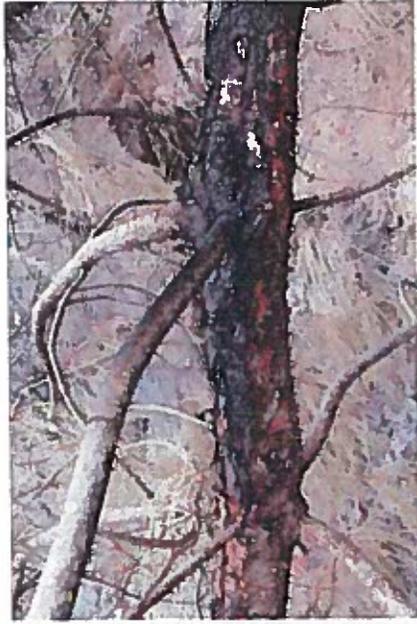
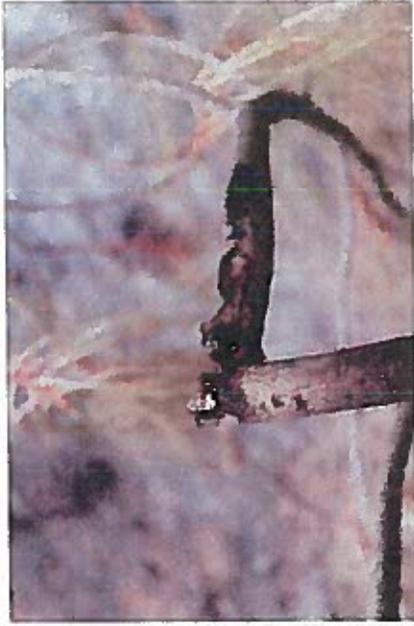


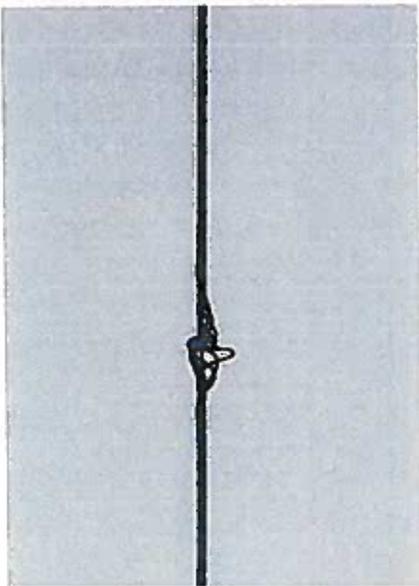
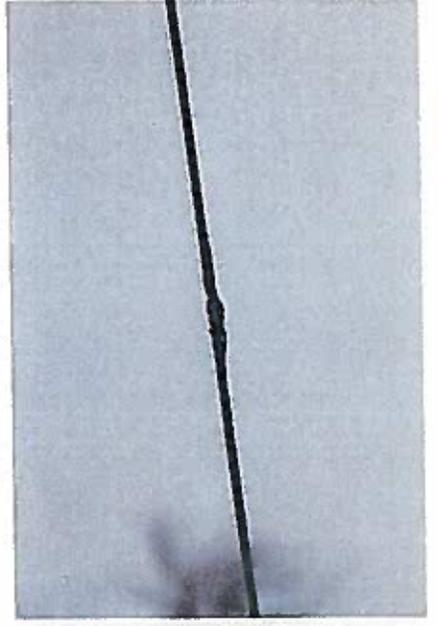
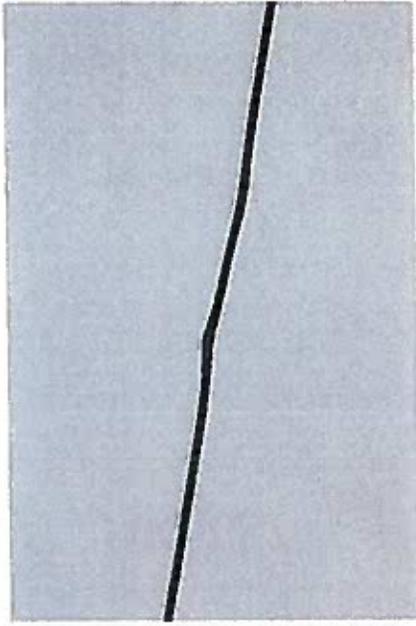
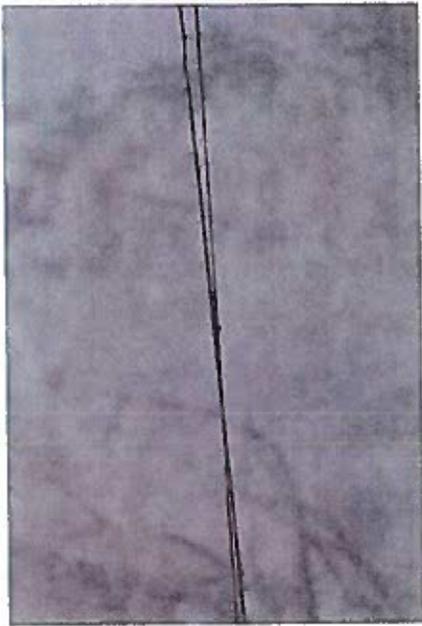
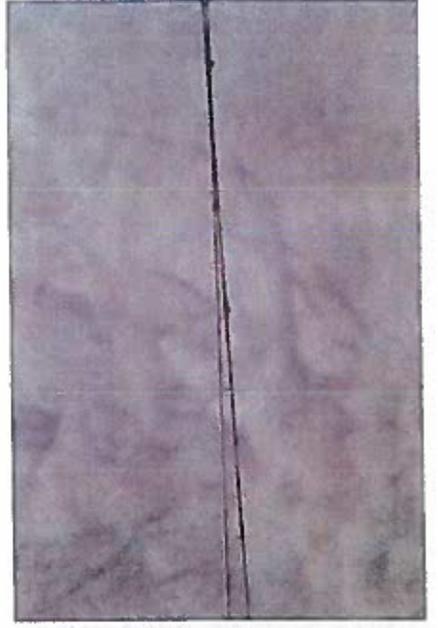
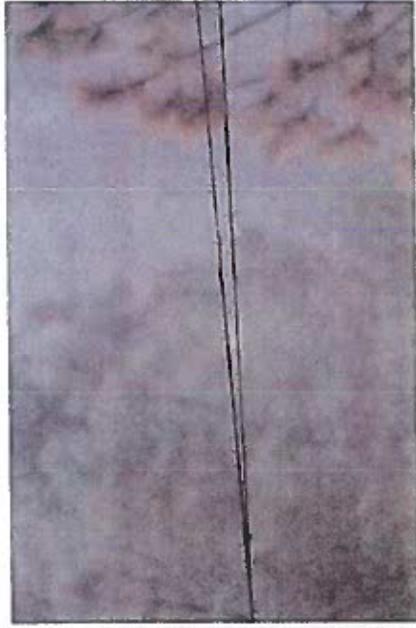


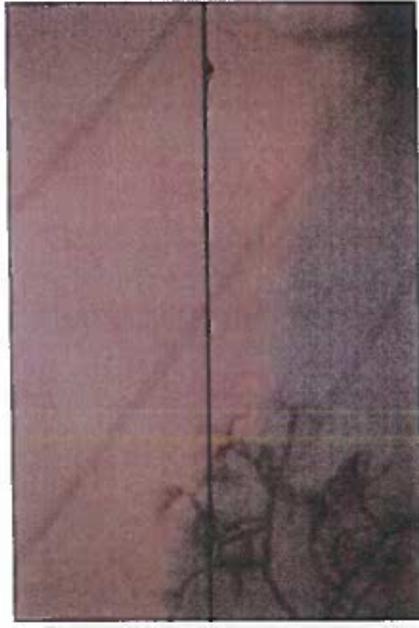
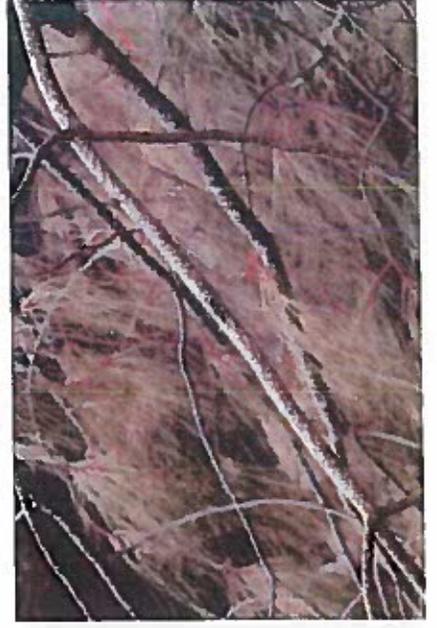












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**ATTACHMENT 12**

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## Law Enforcement and Investigations Inventory of Seized or Impounded Property

(Reference FSH 5309.11, Chapter 20)



FS-5300-0048 (V.1.1)

Incident/Case Number 9478640	Seizure Date and Time 9/2/17	Nature of Incident Helena Fire	Case Agent/Officer b6 & b7C
<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Seized From: Helena Fire	Address or Location	<input checked="" type="checkbox"/> Seized <input type="checkbox"/> Impounded <input type="checkbox"/> Unclaimed Property	<input type="checkbox"/> Other:
Item Number	Description of Property (e.g., make, model, color, weight, value, serial number, etc.)	Location Obtained	Found By
1	Tree Branch	Origin	b6 & b7C
2	Tree Branch	Origin	
3	Tree Branch	Origin	
4	Tree Branch	Origin	
5	Metal Wire	Origin	
6	Tree Branch	Specific origin area	
7	Tree Branch	Specific origin area	
Storage Location Redding			
Additional Comments			
FS-5300-0049 (Continuation Sheet) attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Copies: Original - Case Agent/LEO; Copy (yellow) - Evidence Officer/Packing List; Copy (pink) - Receipt			







## Law Enforcement and Investigations Inventory of Seized or Impounded Property

(Reference FSH 5309.11, Chapter 20)



FS-5300-0048 (V.1.1)

Incident/Case Number 9478640	Seizure Date and Time 9/3/17	Nature of Incident Helena Fire	Case Agent/Officer b6 & b7C
<input type="checkbox"/> Owner <input checked="" type="checkbox"/> Seized From: Helena Fire	Address or Location	<input checked="" type="checkbox"/> Seized <input type="checkbox"/> Impounded <input type="checkbox"/> Unclaimed Property	<input type="checkbox"/> Other:
Item Number	Description of Property (e.g., make, model, color, weight, value, serial number, etc.)	Location Obtained	Found By
10-A	Tree limb from powerlines	Area of ignition	b6 & b7C
10-B	Tree limb from powerlines	Area of ignition	
10-C	Tree limb from powerlines	Area of ignition	
10-D	Tree limb from powerlines	Area of ignition	
10-E	Tree limb from powerlines	Area of ignition	
10-F	Tree limb from powerlines	Area of ignition	
10-G	Tree limb from powerlines	Area of ignition	
Storage Location Redding			
Additional Comments			

FS-5300-0049 (Continuation Sheet) attached?  Yes  No

Copies: Original - Case Agent/LEO; Copy (yellow) - Evidence Officer/Packing List; Copy (pink) - Receipt

**U.S. FOREST SERVICE  
LAW ENFORCEMENT & INVESTIGATIONS  
EVIDENCE CUSTODY AND CONTROL FORM (CONTINUATION SHEET)**  
(Reference FSH 5309.11, Chapter 20)

Incident/Case No.: 9478640		Seizure Date and Time: 9/3/17	Nature of Incident: Helena Fire	Case Agent/Officer: b6 & b7C
Item No.	Description of Property (e.g. make, model, color, weight, value, serial number, etc.)	Location Obtained	Found By	
10-H	Tree limb from powerlines	Area of ignition	b6 & b7C	
10-I	Tree limb from powerlines	Area of ignition		
10-J	Tree limb from powerlines	Area of ignition		
10-K	Tree limb from powerlines	Area of ignition		
11	LIPAD MEMORY CARD	FARO UNIT		
12	MEMORY CARD WITH PHOTOS	CAMERA		

Copies: Original – Case Agent/LEO; Copy (yellow) – Evidence Officer/Packing List; Copy (pink) - Receipt



# Chain of Custody



FS-5300-0048 (V.1.1)

ITEM	RELINQUISHED BY	RECEIVED BY	DATE/TIME
10 A-K	<b>b6 &amp; b7C</b>		9/3/17
11			9/7/17
12			9/7/17
1. RELEASED BY	2. BADGE/ID	3. DATE	4. RELEASED TO
<b>b6 &amp; b7C</b>		11	Print Signature
5. ADDRESS	6. PHONE	7. AUSA/STATES ATTORNEY RELEASE	8. DATE
	(H) ( ) - (W) ( ) -		11

# **ATTACHMENT 13**



Weather Verification Services

## STRIKENet<sup>®</sup> Report

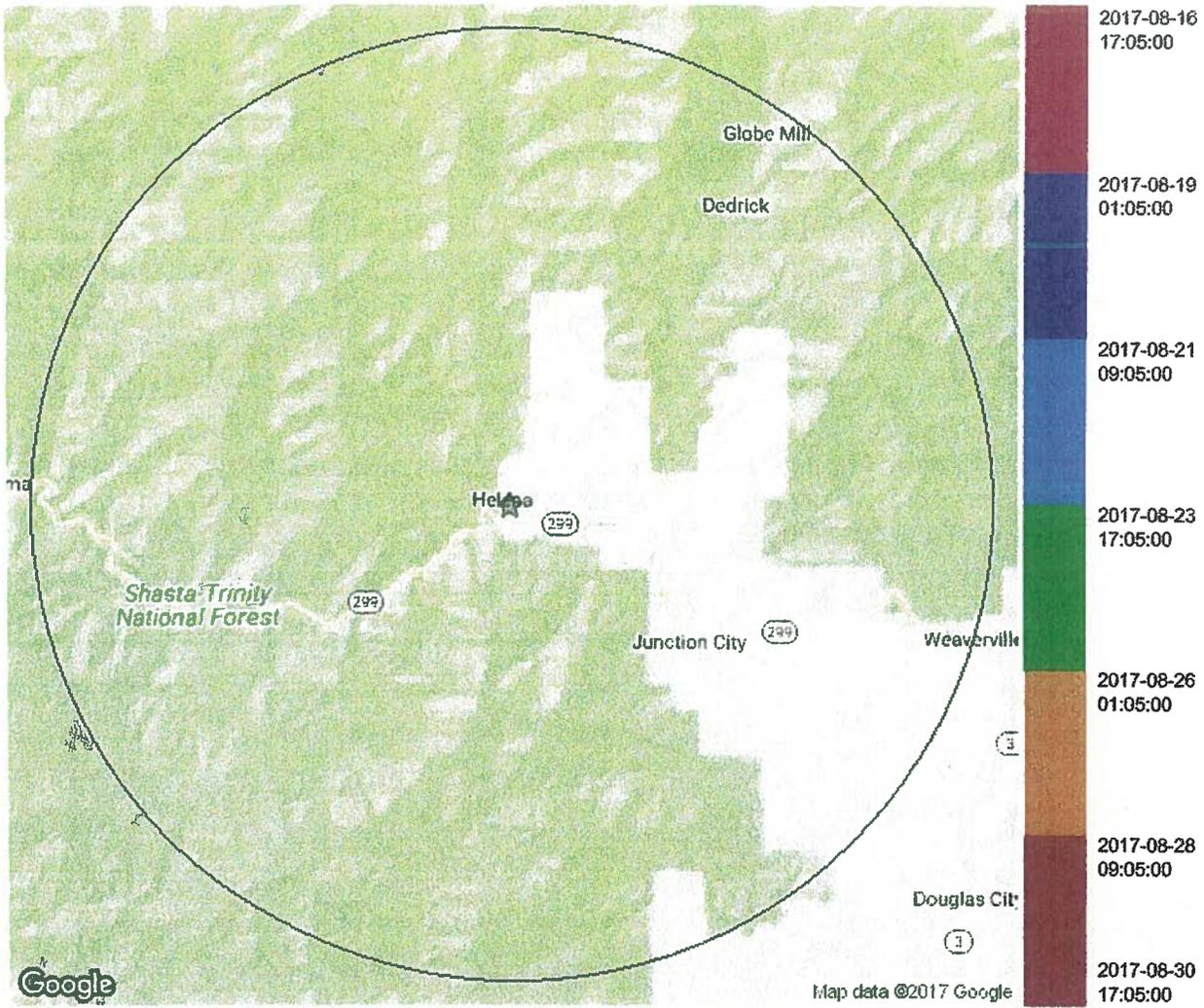
<b>Claim or Reference #</b>	Helena Fire
<b>Insured/Property Owner</b>	
<b>STRIKENet Report #</b>	3457765
<b>Coordinates</b>	Latitude 40.77167, Longitude -123.12492
<b>Search Period</b>	Wed, Aug 16, 2017 17:05 US PDT to Wed, Aug 30, 2017 17:05 US PDT
<b>Search Radius</b>	10 mi (16 km)
<b>Report Generated</b>	Sep 4, 2017 at 18:07:25 GMT

### Summary

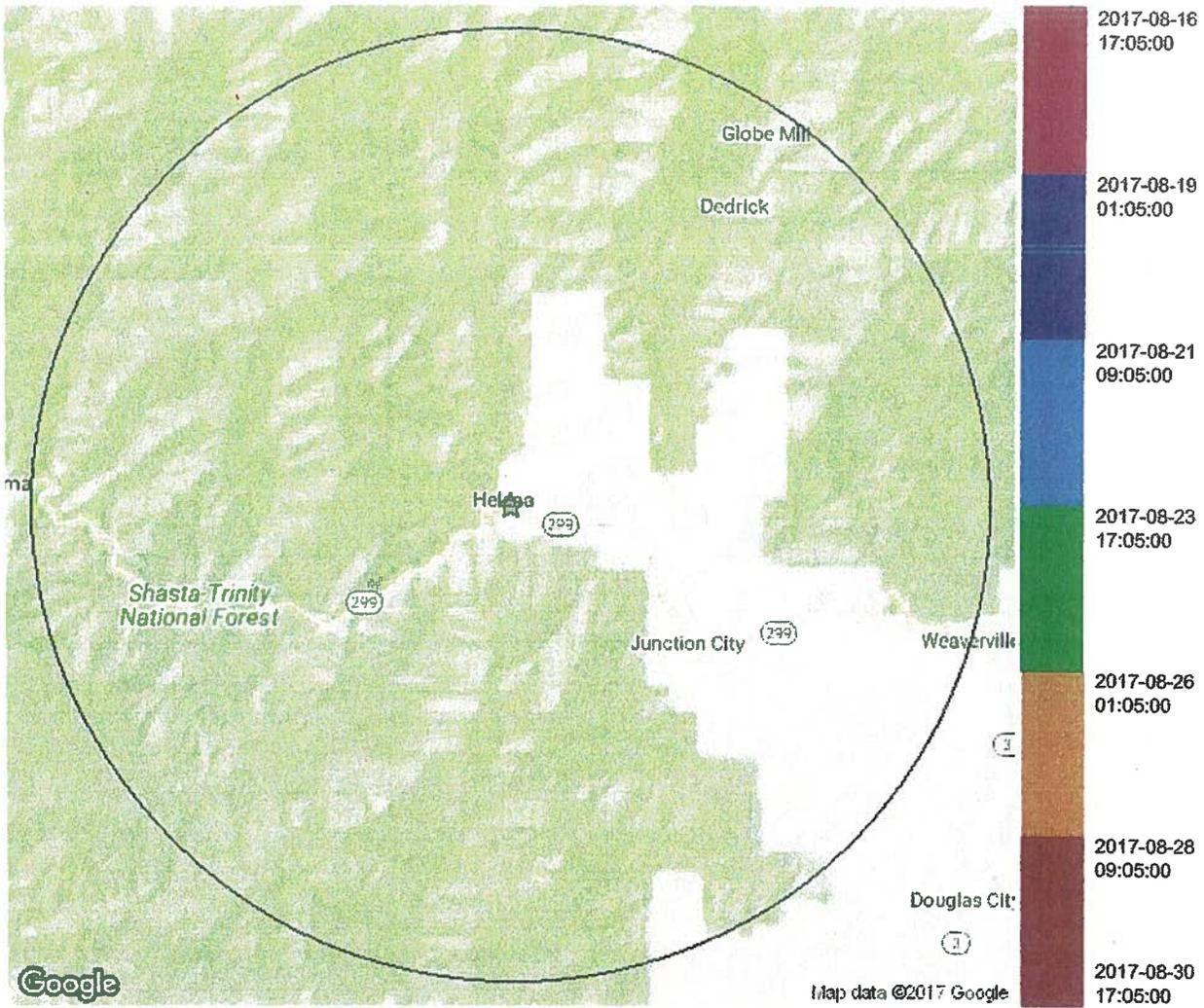
**STRIKENet verified there were ZERO cloud-to-ground lightning strokes detected within 10 miles of the property for the dates inquired.**

Thank you for using STRIKENet to validate lightning. Your report was generated by CoreLogic using data from Vaisala's National Lightning Detection Network<sup>®</sup> (NLDN), the most comprehensive lightning strike archive database in North America.

# Lightning Stroke Map



## Confidence Ellipses For Lightning Strokes



Lightning Confidence Ellipse Map indicates with 99% certainty that the recorded lightning event contacted the ground within the bounds of the ellipse.

## Key Results

<b>Lightning Strokes Detected within 10 mi (16 km)</b>	0
--	---

### Number of Strokes Detected by Time Period

Period	# of Strokes
Wed, Aug 16, 2017 17:05 US PDT to Sat, Aug 19, 2017 01:05 US PDT	0
Sat, Aug 19, 2017 01:05 US PDT to Mon, Aug 21, 2017 09:05 US PDT	0
Mon, Aug 21, 2017 09:05 US PDT to Wed, Aug 23, 2017 17:05 US PDT	0
Wed, Aug 23, 2017 17:05 US PDT to Sat, Aug 26, 2017 01:05 US PDT	0
Sat, Aug 26, 2017 01:05 US PDT to Mon, Aug 28, 2017 09:05 US PDT	0
Mon, Aug 28, 2017 09:05 US PDT to Wed, Aug 30, 2017 17:05 US PDT	0

## Lightning Strokes

Date	Time (PDT)	Peak Current (N/A)	Distance from Center (mi/km)	Latitude	Longitude
No lightning detected within requested parameters.					

## About STRIKEnet®

Unlike other lightning verification methodologies, The STRIKEnet Report uses 25-plus years of lightning data acquired from the U.S. National Lightning Detection Network® (NLDN) and the Canadian Lightning Detection Network (CLDN). First introduced by Vaisala, Inc. in 1989 and later enhanced by the 2014 CoreLogic acquisition of Weather Fusion—a value-added reseller of Vaisala's STRIKEnet® Report—the lightning verification data that powers the STRIKEnet Reports is industry-recognized as the standard for accuracy based on thousands of peer-reviewed citations.

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# **ATTACHMENT 14**

## Big Bar California

Daily Summary for

August 30, 2017

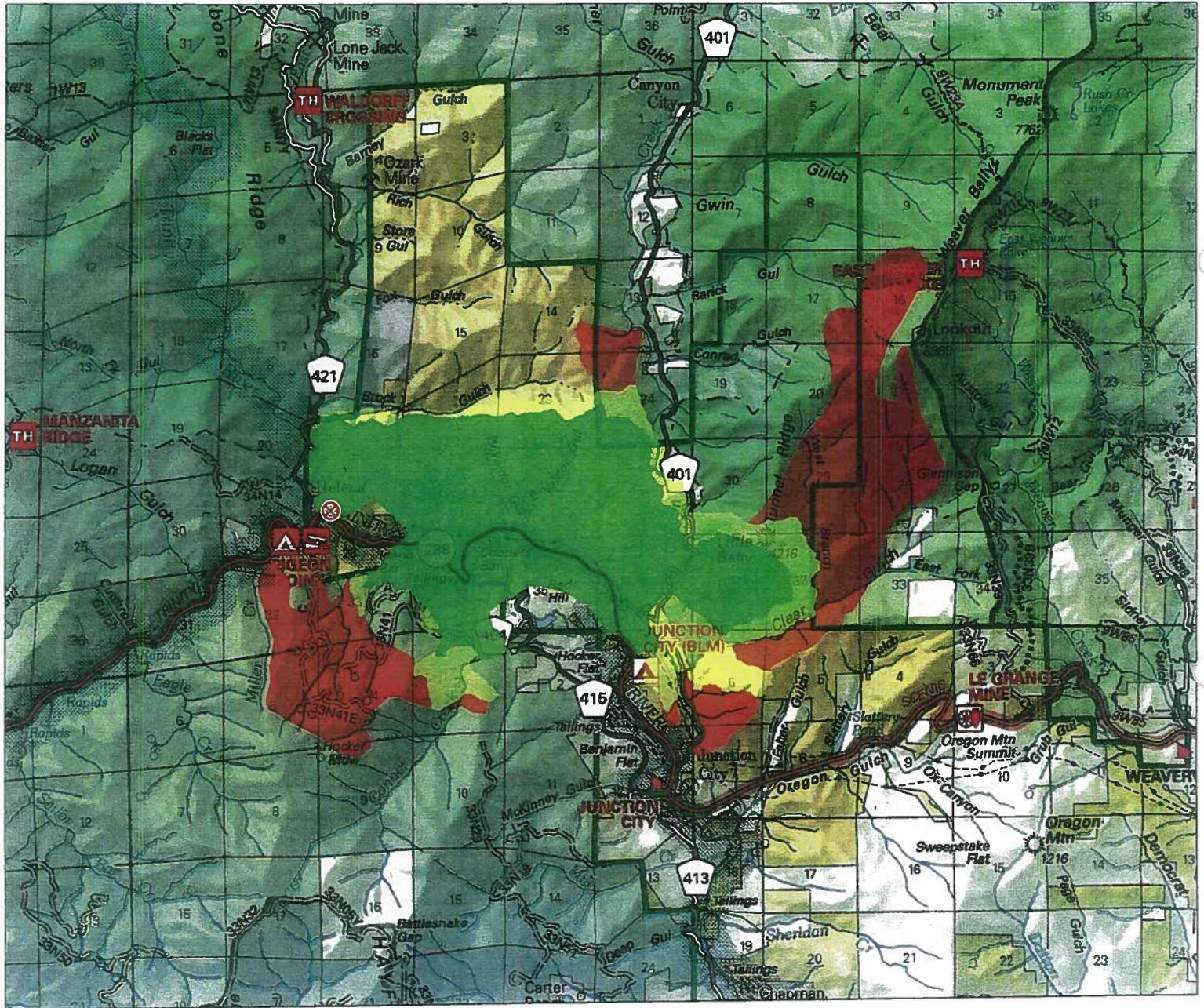
Hour of Day	Total Solar Rad.	Ave. Wind	Wind Dir	Wind Max	Air Temperature Mean	Fuel Temperature Mean	Fuel Moisture Mean	Relative Humidity Mean	Dew Point	Wet Bulb	Total Precip.
L.S.T.	° hr.	mph	Deg	mph	Deg. F.	Deg. F.	Percent	Percent	Deg. F.	inches	
1 am	0.0	1.0	288	4.0	64.0	61.0	3.4	39	39	50	0.00
2 am	0.0	1.0	231	6.0	63.0	58.0	3.4	40	38	49	0.00
3 am	0.0	0.0	193	4.0	61.0	57.0	3.5	43	38	49	0.00
4 am	0.0	0.0	238	4.0	58.0	54.0	3.5	49	39	48	0.00
5 am	0.0	0.0	279	2.0	57.0	53.0	3.6	51	39	47	0.00
6 am	0.7	0.0	338	3.0	56.0	53.0	3.6	54	40	47	0.00
7 am	3.4	0.0	248	2.0	57.0	56.0	3.8	54	41	48	0.00
8 am	6.9	0.0	240	2.0	62.0	62.0	3.9	50	43	51	0.00
9 am	49.2	0.0	323	3.0	72.0	89.0	4.1	36	44	55	0.00
10 am	64.8	2.0	251	8.0	82.0	101.0	4.2	22	39	57	0.00
11 am	75.6	5.0	297	13.0	85.0	103.0	4.1	16	34	56	0.00
12 pm	81.5	2.0	281	16.0	90.0	109.0	3.9	14	34	58	0.00
1 pm	81.1	2.0	284	12.0	94.0	113.0	3.8	12	34	59	0.00
2 pm	73.9	5.0	301	20.0	93.0	110.0	3.5	12	33	59	0.00
3 pm	61.8	5.0	282	20.0	92.0	107.0	3.5	12	32	58	0.00
4 pm	46.5	5.0	288	19.0	90.0	102.0	3.4	16	38	59	0.00
5 pm	25.3	4.0	284	17.0	85.0	87.0	3.3	23	43	59	0.00
6 pm	8.4	5.0	290	17.0	79.0	78.0	3.4	26	41	57	0.00
7 pm	0.7	4.0	299	17.0	75.0	73.0	3.4	31	42	56	0.00
8 pm	0.0	5.0	328	17.0	73.0	70.0	3.4	35	44	55	0.00
9 pm	0.0	3.0	237	9.0	69.0	66.0	3.4	40	44	54	0.00
10 pm	0.0	1.0	306	6.0	66.0	63.0	3.5	43	44	53	0.00
11 pm	0.0	0.0	342	4.0	63.0	61.0	3.5	50	44	52	0.00
12 am	0.0	0.0	278	4.0	62.0	58.0	3.6	53	45	52	0.00

DAILY STATISTICS

# **ATTACHMENT 15**

# Helena Fire Progression

- ⊗ Fire Origin
- Fire Progression
- Sept. 1
- Sept. 2
- Sept. 3
- Sept. 4



# **ATTACHMENT 16**



USDA Forest Service

# Wildland Fire Origin and Cause Supplemental Incident Report

(Reference FSH 5309.11, Chapter 20)

Incident Number

17-05-9478640

Incident Date

8/30/2017

Fire Name

CA-SHF-1770-HELENA INCIDENT – Sketch: Overview of Incident Location

Latitude

N 40°

46'

18.00"

Longitude

W 123°

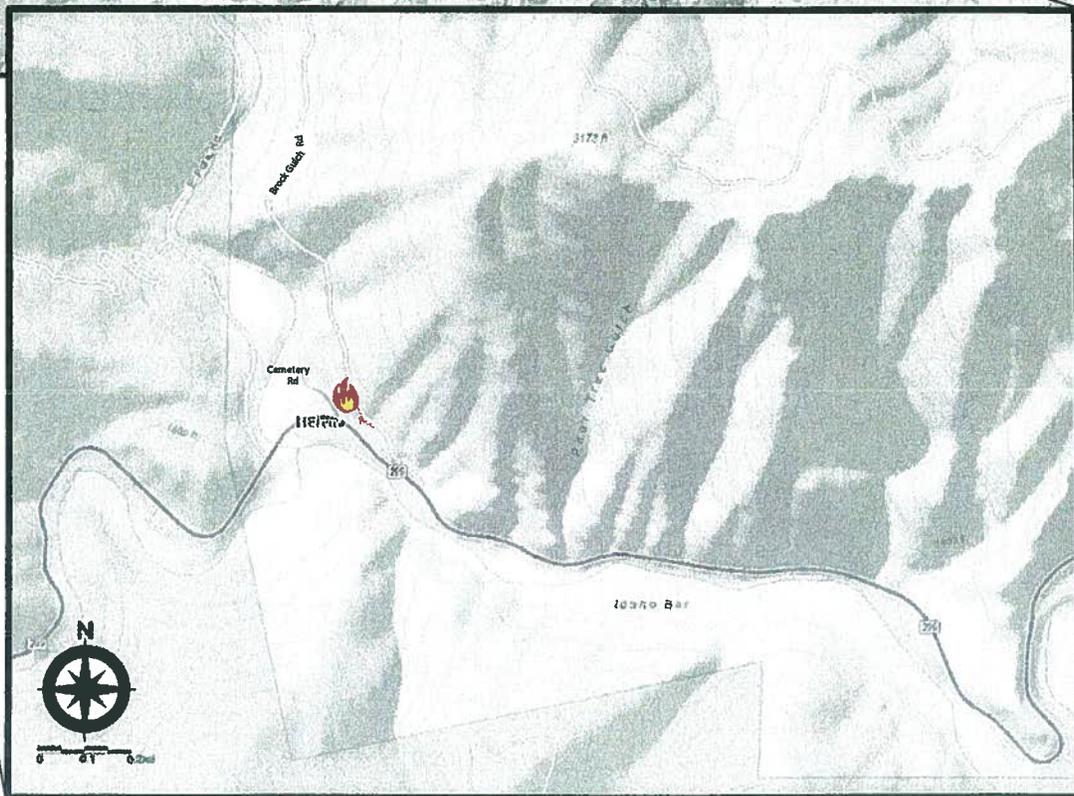
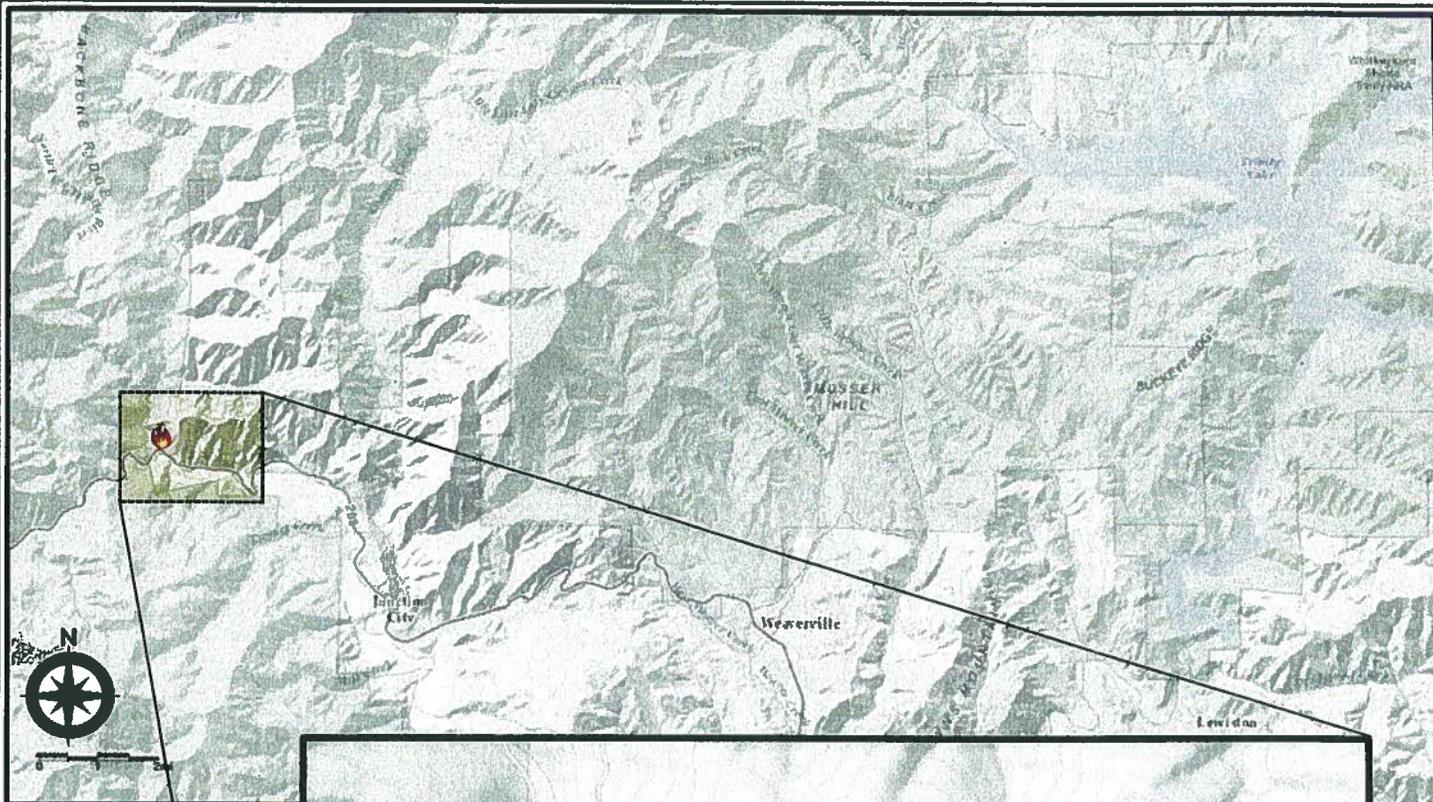
7'

29.70"

Datum

WGS84

FIRE SCENE SKETCH (INCLUDE SCALE, TITLE, AUTHOR, NORTH ARROW, DATE AND TIME)



SCALE

NOT TO SCALE

AUTHOR

b6 & b7C

DATE

9/4/2017

TIME

1500



USDA Forest Service

# Wildland Fire Origin and Cause Supplemental Incident Report

(Reference FSH 5309.11, Chapter 20)

Incident Number

17-05-9478640

Incident Date

8/30/2017

Fire Name

CA-SHF-1770-HELENA INCIDENT - Sketch: Overview of Power Line / Communication Line Infrastructures

Latitude

N 40°

46'

18.00"

Longitude

W 123°

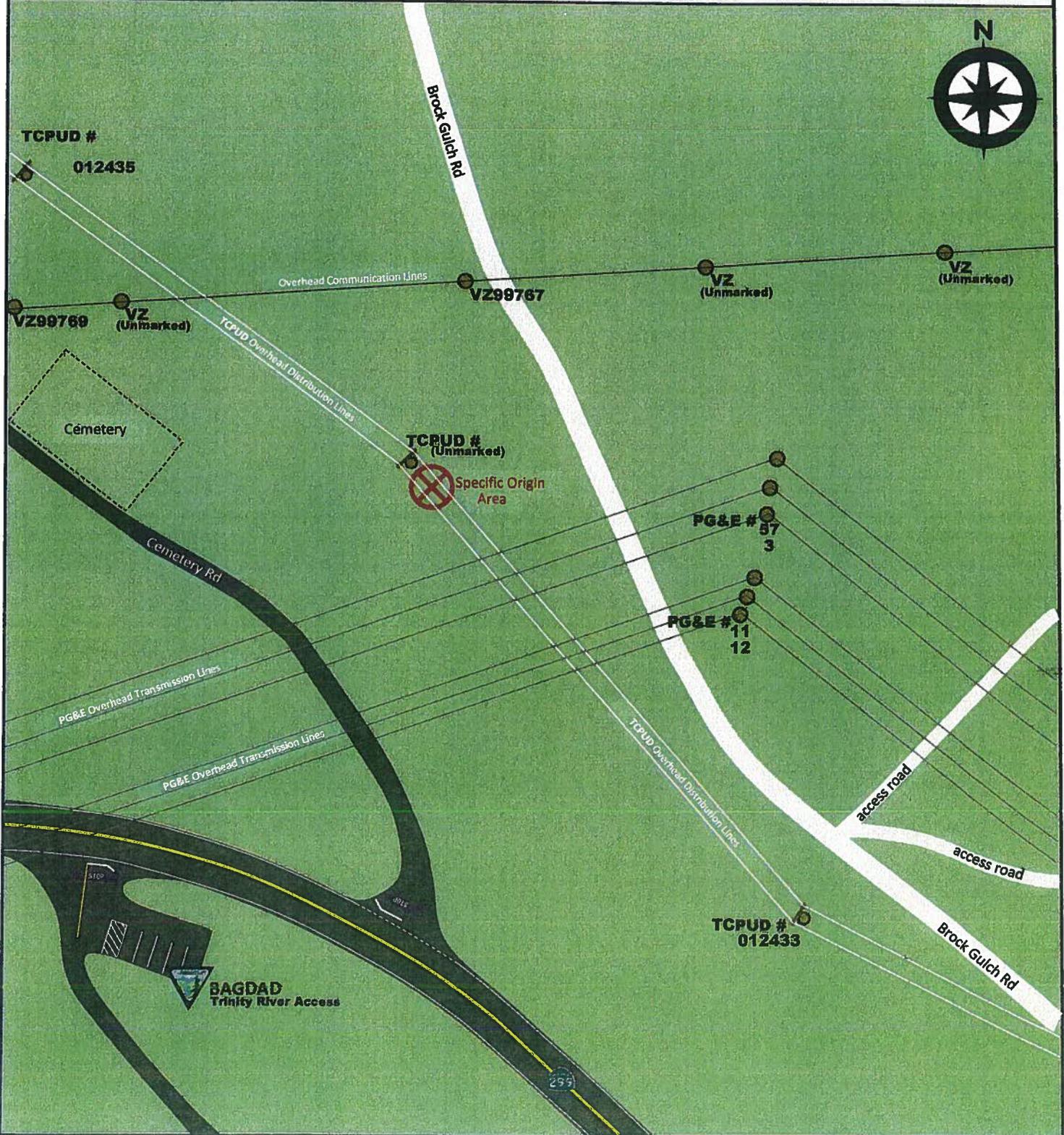
7'

29.70"

Datum

WGS84

FIRE SCENE SKETCH (INCLUDE SCALE, TITLE, AUTHOR, NORTH ARROW, DATE AND TIME)



SCALE

NOT TO SCALE

AUTHOR

b6 & b7C

DATE

9/4/2017

TIME

1800



USDA Forest Service

# Wildland Fire Origin and Cause Supplemental Incident Report

(Reference FSH 5309.11, Chapter 20)

Incident Number

17-05-9478640

Incident Date

8/30/2017

Fire Name

CA-SHF-1770-HELENA INCIDENT - Sketch: Overview of General Origin Area

Latitude

N 40°

46'

18.00"

Longitude

W 123°

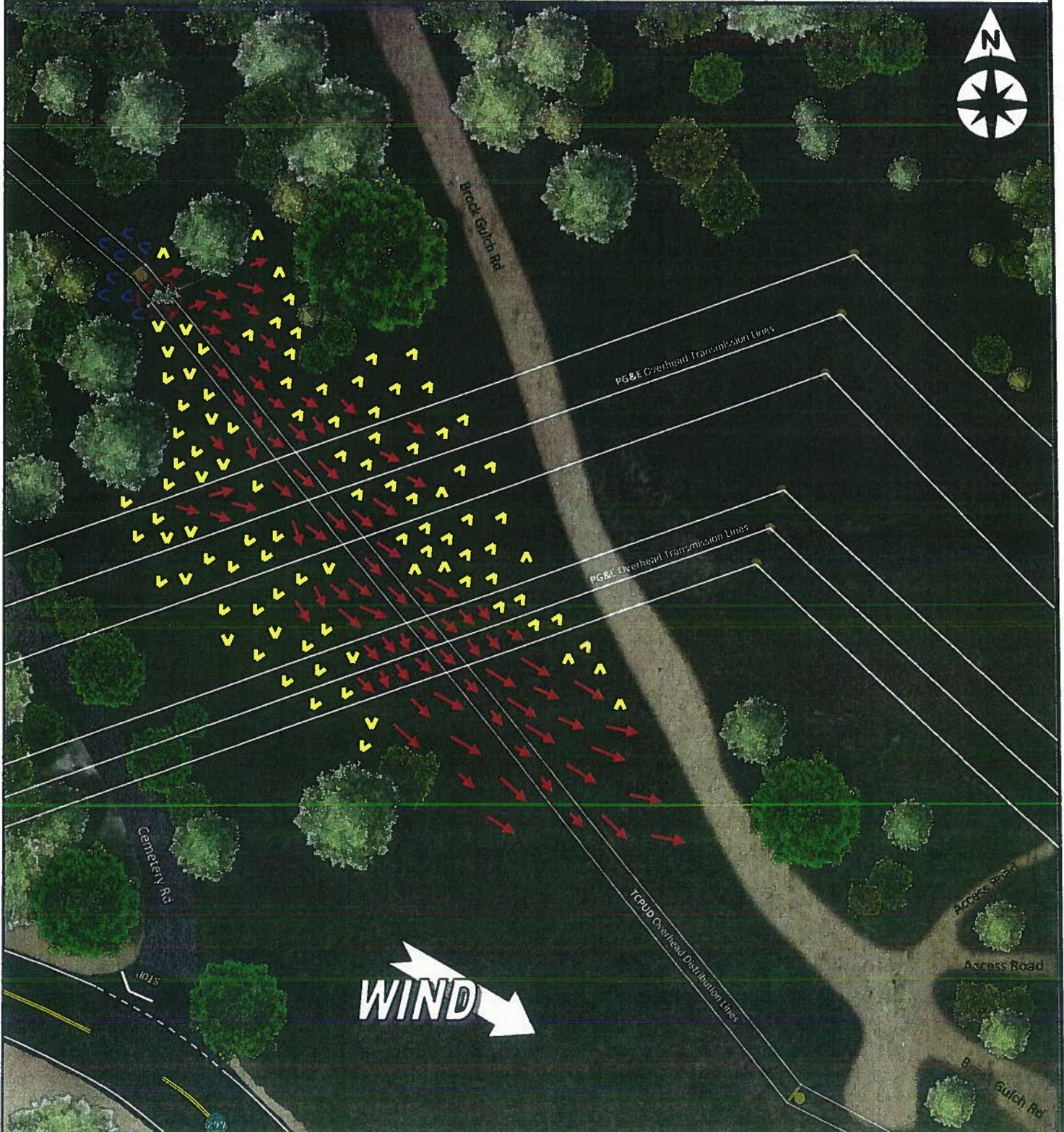
7'

29.70"

Datum

WGS84

FIRE SCENE SKETCH (INCLUDE SCALE, TITLE, AUTHOR, NORTH ARROW, DATE AND TIME)



SCALE

NOT TO SCALE

AUTHOR

b6 & b7C

DATE

9/5/2017

TIME

1800



USDA Forest Service

# Wildland Fire Origin and Cause Supplemental Incident Report

(Reference FSH 5309.11, Chapter 20)

Incident Number

17-05-9478640

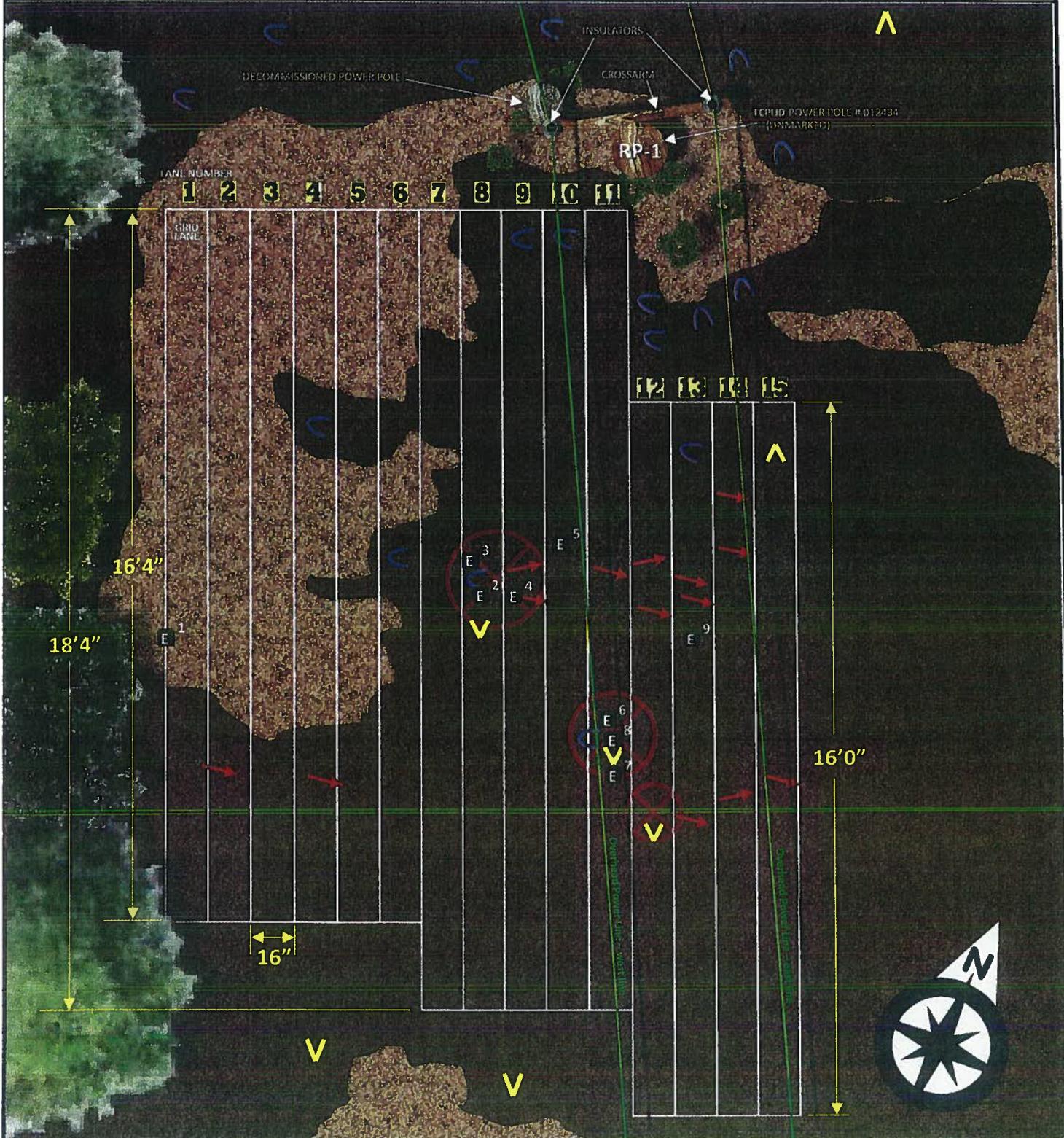
Incident Date

8/30/2017

Fire Name CA-SHF-1770-HELENA INCIDENT - Sketch: Overview of Specific Origin Area & Grid Lanes

Latitude N 40° 46' 18.00" Longitude W 123° 7' 29.70" Datum WGS84

FIRE SCENE SKETCH (INCLUDE SCALE, TITLE, AUTHOR, NORTH ARROW, DATE AND TIME)



SCALE

NOT TO SCALE

AUTHOR

b6 & b7C

DATE

9/6/2017

TIME

1930



USDA Forest Service

# Wildland Fire Origin and Cause Supplemental Incident Report

(Reference FSH 5309.11, Chapter 20)

Incident Number

17-05-9478640

Incident Date

8/30/2017

Fire Name

CA-SHF-1770-HELENA INCIDENT – Sketch: Legend

Latitude

N 40°

46'

18.00"

Longitude

W 123°

7'

29.70"

Datum

WGS84

FIRE SCENE SKETCH (INCLUDE SCALE, TITLE, AUTHOR, NORTH ARROW, DATE AND TIME)

## LEGEND

### Overview of Fire Location



General Location of Helena Incident: Ignition Area



Zoom Area: General Origin Area

### Overview of Power Line / Communication Line Infrastructures



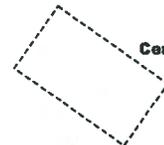
**TCPUD Power Pole**  
- INCLUDES CORRESPONDING POLE #



**PG&E Power Pole**  
- INCLUDES CORRESPONDING POLE #



**Other Communication Pole**  
- INCLUDES CORRESPONDING POLE #



Cemetery



Specific Origin Area

### Overview of General Origin Area



Specific Origin Area



Advancing Fire Progression



Lateral Fire Progression



Backing Fire Progression



Gray Pine Tree



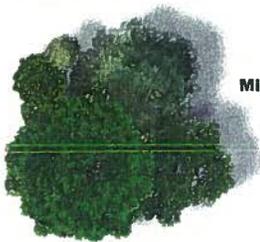
Gray Pine Limb  
- MAKING CONTACT WITH POWER LINES



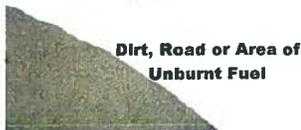
**TCPUD Power Pole**  
- INCLUDES CORRESPONDING POLE #



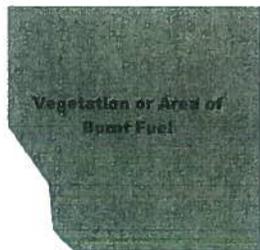
**PG&E Power Pole**  
- INCLUDES CORRESPONDING POLE #



Miscellaneous Tree, Shrub,  
or Other Vegetation



Dirt, Road or Area of  
Unburnt Fuel



Vegetation or Area of  
Burnt Fuel

### Overview of Specific Origin Area & Grid Lanes



Ignition Area



Advancing Fire Progression



Lateral Fire Progression



Backing Fire Progression



**E<sup>1</sup>** Location / Item of Evidence  
- INCLUDES CORRESPONDING ITEM #



Miscellaneous Shrub, or  
Other Vegetation



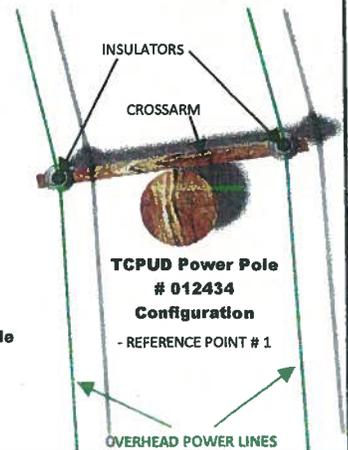
**Decommissioned Power Pole**  
- CUT OFF ABOVE GROUND LEVEL



Area of Burnt Fuel



Area of Dirt or  
Unburnt Fuel



INSULATORS

CROSSARM

**TCPUD Power Pole  
# 012434  
Configuration**

- REFERENCE POINT # 1

OVERHEAD POWER LINES

SCALE

NOT TO SCALE

AUTHOR

b6 & b7C

DATE

9/7/2017

TIME

1400



**USDA**  
**Forest Service**

**MEMORANDUM OF INTERVIEW**  
*(Reference FSH 5309.11)*

1. CASE NUMBER  
**17-05-9478640**

2. NATURE OF INVESTIGATION

Vegetation Fire "HELENA"

3. NAME OF PERSON INTERVIEWED *(Last, First, Middle)*

**b6 & b7C**

4. SOCIAL SEC. NO.

- - N/A

5. DOB

**b6 & b7C**

6. SEX

F

7. HOME ADDRESS *(St., City, State, ZIP Code)*

**b6 & b7C**

8. DRIVER'S LIC. NO.

**b6 & b7C**

9. PHONE (H) *(Area Code)*

**b6 & b7C**

10. EMPLOYMENT *(Occupation and Location)*

Highway Specialties

11. PHONE (W) *(Area Code)*

( ) -

12. LOCATION OF INTERVIEW

Highway Specialties office

13. NAME OF OFFICER CONDUCTING INTERVIEW

SA **b6 & b7C** and SA **b6 & b7C**

14. OTHERS PRESENT

15. STARTED

Date

Time

ENDED

Date

Time

8-31-17

4:15 pm

8-31-17

4:45 pm

16. REMARKS

1. On August 31, 2017, at approximately 4:15 pm, Special Agents **b6 & b7C** and **b6 & b7C** conducted an interview with **b6 & b7C** at Highway Specialties office in Redding, California. **b6 & b7C** was working in the area of Helena on August 30, 2017, when a fire broke out and she reported it to the Weaverville Volunteer Fire Department.

2. On August 30, 2017, **b6 & b7C** was working as a flagger on Highway 299 approximately one mile west of Helena in Trinity County. **b6 & b7C** and her partner **b6 & b7C** began putting construction signs and cones out on Highway 299 at approximately 6:30 am. A Changeable Message Sign (CMS) was placed at the west side of the bridge near Helena, on a large pullout near the eastbound lane south of Highway 299. The Changeable Message Sign is a large sign that is towed behind a truck on its own trailer. At 7:00 am the road signs and cones had all been placed and **b6 & b7C** and **b6 & b7C** began directing traffic.

3. Special Agent **b6 & b7C** asked **b6 & b7C** about the weather on August 30, 2017. **b6 & b7C** said the sky was blue with no clouds. It was a hot day and she did not hear any thunder and did not see any lightning. Special Agent **b6 & b7C** asked **b6 & b7C** if she had heard any 'white noise' throughout the day and she did not



recall hearing any gun shots or chainsaws running in the distance.

4. b6 & b7C said she stopped directing traffic at 3:30 pm and transitioned to sitting inside her truck and filling out paperwork. Around 4:30 pm b6 & b7C and b6 & b7C began picking up the road signs and cones. They began picking up the road signs and cones in the westbound lane first. Once all the westbound road signs and cones were picked up they transitioned to the eastbound road signs and cones. The last sign to be picked up was the Changeable Message Sign located south of the eastbound lane of Highway 299, just west of the bridge near Helena.

5. At approximately 4:58 pm all the road signs and cones had been pick up and b6 & b7C and b6 & b7C began traveling east on Highway 299 towards Weaverville, California. As b6 & b7C and b6 & b7C began traveling east she witnessed a fire burning on the middle of the hillside, north of Highway 299. b6 & b7C pulled over to call in the fire. She parked near the entrance to the Bagdad river access which is south of Highway 299. In addition, b6 & b7C witnessed a four door car that was dark in color parked north of Highway 299 near the westbound lane. The car was across the highway from the Bagdad river access and the single occupant of the vehicle appeared to be female, had her hair in a ponytail and was on her phone.

6. At 5:02 pm b6 & b7C called the Weaverville Volunteer Fire Department (530) 623-6156. Special Agent b6 & b7C asked b6 & b7C how long she had waited after noticing the fire before she called the Fire Department and b6 & b7C said maybe one minute. b6 & b7C said about one minute after calling in the fire a 'Ranger' came by her location and she flagged him down. b6 & b7C described the 'Ranger's' vehicle as a white truck with striping down the side and said he stopped in the pullout where her Changeable Message Sign had previously been. The 'Ranger' was facing east and b6 & b7C believed he could see the fire because he activated his overhead lights. Approximately two minutes after the 'Ranger' arrived b6 & b7C witnessed a large green fire engine arrive at the fire. b6 & b7C believed the firefighters would catch the fire because of how small the fire was and how quickly the firefighters responded.

7. Special Agent b6 & b7C asked b6 & b7C to describe the fire to us when she first saw the fire.



b6 & b7C described the fire to be about 20 by 15 feet in size, small flames approximately three feet in length and felt the fire had just started. b6 & b7C went on to say that the fire was not near a road and it was in the middle of a hillside.

8. Special Agent b6 & b7C asked b6 & b7C how long she stayed at the fire after the firefighters arrived and she said maybe ten minutes. b6 & b7C said she left the area believing the firefighters would catch the fire because it was so small and their response was so quick.

9. Special Agent b6 & b7C and b6 & b7C concluded the interview with b6 & b7C at approximately 4:45 pm, on August 31, 2017.

(End)

17. OFFICER'S SIGNATURE

/s/ b6 & b7C

18. WITNESS' SIGNATURE (If Applicable)

NOTE: This document is for OFFICIAL USE ONLY. It and its contents are not to be distributed outside your agency, nor duplicated, without prior approval of the USDA, Forest Service, Law Enforcement and Investigations.

Previous Editions are Obsolete

Verizon LTE

4:24 PM



← Recents



+1 (530) 623-6156

Weaverville, CA



message



call



Yesterday

5:02 PM

**Outgoing Call**

18 seconds

Share Contact

Share My Location

Create New Contact

Add to Existing Contact

Block this Caller



**USDA  
Forest Service**

**MEMORANDUM OF INTERVIEW**  
(Reference FSH 5309.11)

1. CASE NUMBER

17-05-9478640

2. NATURE OF INVESTIGATION

Vegetation Fire "HELENA"

3. NAME OF PERSON INTERVIEWED (Last, First, Middle)

b6 & b7C

4. SOCIAL SEC. NO.

- - N/A

5. DOB

b6 & b7C

6. SEX

M

7. HOME ADDRESS (St., City, State, ZIP Code)

b6 & b7C

8. DRIVER'S LIC. NO.

b6 & b7C

9. PHONE (H) (Area Code)

b6 & b7C

10. EMPLOYMENT (Occupation and Location)

Highway Specialties

11. PHONE (W) (Area Code)

( ) -

12. LOCATION OF INTERVIEW

Starbucks, Red Bluff

13. NAME OF OFFICER CONDUCTING INTERVIEW

SA b6 & b7C and SA b6 & b7C

14. OTHERS PRESENT

15. STARTED

Date

Time

ENDED

Date

Time

9-1-17

10:00 am

9-1-17

10:30 am

16. REMARKS

1. On September 1, 2017, at approximately 10:00 am, Special Agents b6 & b7C and b6 & b7C conducted an interview with b6 & b7C at Starbucks in Red Bluff, California. b6 & b7C was working in the area of Helena on August 30, 2017, when a fire broke out and he reported it by calling 911.

2. On August 30, 2017, b6 & b7C was working as a flagger on Highway 299 approximately one mile west of Helena in Trinity County. b6 & b7C and his partner b6 & b7C began putting construction signs and cones out on Highway 299 at approximately 6:30 am. A Changeable Message Sign (CMS) was placed at the west side of the bridge near Helena, on a large pullout near the eastbound lane south of Highway 299. The Changeable Message Sign is a large sign that is towed behind a truck on its own trailer. At 7:00 am the road signs and cones had all been placed and b6 & b7C and b6 & b7C began directing traffic.

3. Special Agent b6 & b7C asked b6 & b7C about the weather on August 30, 2017. b6 & b7C said the sky was blue with no clouds and he did not hear thunder and did not see any lightning. b6 & b7C went on to say there was no wind in the morning but a breeze picked up in the afternoon when they were picking up road signs and cones.

Special Agent b6 & b7C asked b6 & b7C if he had heard any 'white noise' throughout the day and b6 & b7C recalled hearing



a loud pop around noon but was unsure where the noise had come from and said they were working at least a mile away from where the fire had been.

4. Around 4:30 pm, [b6 & b7C] and [b6 & b7C] began picking up the road signs and cones. They began picking up the road signs and cones in the westbound lane first. Once all the westbound road signs and cones were picked up they transitioned to the eastbound road signs and cones. The last sign to be picked up was the Changeable Message Sign located south of the eastbound lane of Highway 299, just west of the bridge near Helena.

5. At approximately 4:58 pm all the road signs and cones had been pick up and [b6 & b7C] and [b6 & b7C] began traveling east on Highway 299 towards Weaverville, California. While [b6 & b7C] and [b6 & b7C] began traveling east he witnessed a four door car that was dark in color pulled over north of Highway 299, across from the Bagdad river access. [b6 & b7C] said the car was occupied by a single female. After seeing the car parked [b6 & b7C] immediately noticed a fire burning on the middle of the hillside, north of Highway 299, east of where the car was parked. [b6 & b7C] pulled their vehicle off Highway 299, near the entrance to Bagdad river access and [b6 & b7C] immediately called 911. The time stamp on [b6 & b7C] cellphone to 911 was 5:00 pm and the call lasted one minute.

6. Approximately one to two minutes after calling 911, [b6 & b7C] witnessed a truck traveling west past the bridge and park where their Changeable Message Board had been. The truck was facing east and [b6 & b7C] described it as being for 'official use' or 'emergency response'. The time was approximately 5:02 pm.

7. Approximately two minutes after the 'official use' or emergency response' vehicle arrived, [b6 & b7C] witnessed a big green fire engine arrive. [b6 & b7C] said the fire was approximately 20 feet by 20 feet in size, with three foot tall flame lengths when the fire truck arrived on seen. [b6 & b7C] went on to say the fire appeared to have started up slope below the upper road. [b6 & b7C] described the sound of the fire to be a big chainsaw that was being operated at full rotation per minute (RPM.) [b6 & b7C] further described the sound of the fire as being multiple Christmas trees being lite on fire.

8. [b6 & b7C] said that he did not see any people or vehicles near the fire and believed it started right by the



pine trees in the picture he had taken. [redacted] believed the firefighters would catch the fire because of how small the fire was and how quickly the firefighters responded.

9. Special Agent [redacted] asked [redacted] how long he stayed at the fire after the firefighters arrived and he said about ten minutes. [redacted] went on to say the fire had doubled in size in that ten minute's and the wind appeared to be pushing the fire east and up the pine tree.

10. Special Agent [redacted] and [redacted] concluded the interview with [redacted] at approximately 10:30 am, on September 1, 2017.

(End)

17. OFFICER'S SIGNATURE

/s/ [redacted] b6 & b7C

18. WITNESS' SIGNATURE (If Applicable)

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Previous Editions are Obsolete

Recents



911



message



call

August 30, 2017

5:00 PM Outgoing Call 1 minute

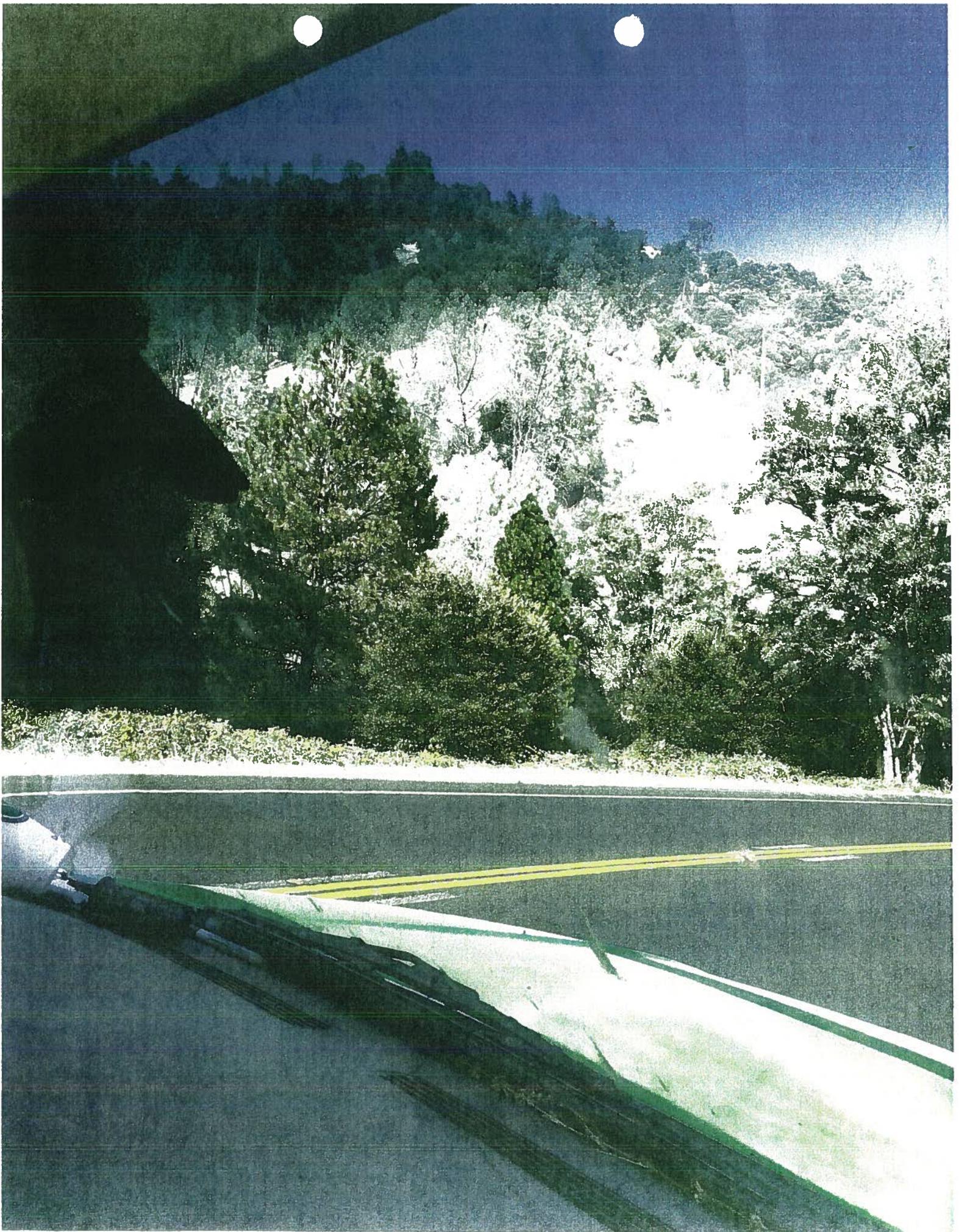
Share Contact

Share My Location

Create New Contact

Add to Existing Contact





## Helena Fire Report

Created by: b6 & b7C 5 September 2017

### Introduction

Gray pines, (*Pinus sabiniana*), are also known as California foothills pine, ghost pine, foothills pine, bull pine, or Digger pine which is no longer politically correct. These trees have a low commercial value due to the high resin content, poor form, and high proportions of compression wood. Gray pines are typically found in blue oak – gray pine communities with grasses and shrubs in the understory which creates a very active fire regime. The typical fire reoccurrence in these blue oak – gray pine communities is between 15 – 30 years and generally has high mortality rates among gray pines (Howard). Gray pines are susceptible to a variety of damaging agents including mistletoe canker (*Arceuthobium occidentale*), western gall rust (*Peridermium harknessii*), *Heterobasidion annosum*, fires, and wind damage (Powers). It is common for gray pines to have multiple forks towards the base of the tree either from damage and/or genetics.

### Pertinent Hazard Tree Guidelines

Every tree has a certain amount of risk in a populated area but hazard trees are trees with symptoms and signs that indicate a higher level of risk that should be addressed. A symptom is the reaction from the tree whereas a sign is a presence of an outside force affecting the tree such as an insect, disease, damage, etc. In order to quantify the hazard of a specific tree and to create a uniform system the US Forest Service adopted the “Pacific Southwest Region – Hazard Tree Guidelines for Forest Service,” that has been in use since April 2012 and is also used by the National Park Service and the Provincial Park System in British Columbia. One of the most important statements in the document is as follows,

“Simply put, we are limited in our ability to reasonably foresee all tree failures all the time. However, by exercising good professional judgment and using a systematic approach such as the one suggested in these guidelines, it is possible to significantly reduce (but not totally eliminate) the risk of injury to people and damage to property.”

### Verbally Obtained PG&E Guidelines for Assessing Hazard Trees

PG&E conducts routine line inspections to assess and remove any tree that could come within 10’ of the line if the tree sways with the wind, falls over, dominos into other trees, loses branches, or the line sags. During and/or immediately after fires, PG&E identifies anything that could damage a line, pole, or guyed wires for removal. This information was learned during the REAF assignment on 1 September 2017 while following Davey Tree utility foresters down the PG&E powerlines.

### Observations from the Field

The gray pine in question of 2 September 2017 had a large branch, Branch A, hanging across the Trinity PUD powerlines (Picture 1). The specific tree was 28.1” at DBH and 74” tall. The diameter was taken with the diameter side of a 100’ Spencer Logger tape and the height was

taken with a TruPulse 200 laser. The base of the tree was at a horizontal distance of approximately 37' from the powerlines. Branch A was estimated to be around 50' long and 14" in diameter just above the branch collar and angled towards the powerline. Branch A was attached to the bole of the tree with a strong "U" -shaped union 8.5' above the high side of the base of the tree (Picture 2). However, the curved Branch A grew out at an abnormal angle and then leveled out between 5-25 degrees (Pictures 1, 3, 4, 5, 8, 9, and 29). The direction and angle of the branch was determined based on the apical dominance evident at the leader of the branch. There were 3 large cracks in Branch A (Pictures 2-5) where the branch twisted clockwise. The majority of the cracks were very charred inside but there were spots that charring did not occur which suggests the limb continued to crack after the fire was out on that branch. Multiple small branches ranging in diameter from approximately ¼" to 1½" were found directly under Branch A while it was still hanging on the powerlines. It was confirmed that all the small branches found on the ground were gray pine branches. The size, burn pattern, and locations of the small branches in Pictures 30 (31 was the same branch as 30), 32 & 33 (33 was the same branch as 32) and 34 were found indicated that they had fallen from the Branch A after Branch A caught fire. While Branch A was still on the powerlines, a branch stub, shown in Picture 16, that matches the size of the small branch in Picture 30 was adjacent to the most northern powerline. The bole of the tree and portions of Branch A were charred from the fire coming up from the ground. The charring stopped and then continued again further up on Branch A around the powerlines and stopped again as the branch moved away from the lines. The needles on the limb did not seem to have burned but did wither from the heat. Approximately 60% of the total crown was either scorched or withered from the fire.

Pictures 6 and 7 show a similar tree with a branch at a shallow angle somewhat similar to the hypothesized angle of Branch A. The branches in Pictures 6 & 7 are not as shallow of an angle (they were less horizontal than Branch A) as Branch A would have been.

### **Observations at the Evidence Locker**

Branch A and the small branches were examined closely on 5 September 2017.

Branch A was determined to be 42.1" in circumference using a Spencer Logging tape. Since diameter tapes are accurate with a perfect circle, the oval shape of Branch A does not allow for an accurate diameter which is why a circumference was used. The branch was pieced together and measured to be 58' long and had 3 large gray pine cones at the end.

The 3 cracks can be seen in Pictures 11, 12, and 13. The largest crack was approximately 6" deep and 4.4' long. The second largest crack was approximately 4" deep and 3.6' long. The smallest crack was 2" deep and 2.2' long. The wood inside the cracks did not appear to be rotten.

The crosscut section of the branch shows the compression wood of the limb caused by the peculiar angle (Pictures 14 & 15). For trees growing vertically, the pith would be at the center of the cross section. The pith on this section is seen in the upper right portion of Branch A, in picture 14, at the center of the 3 cracks (not all the same cracks mentioned above). Since compression wood is used to help prevent branches from drooping, this amount of compression

wood proves that this branch was under a great deal of stress due to the weight and the angle of the branch.

Picture 16, 17, & 18 show where and how the small branches burned and fell off Branch A. The branches that fell off were easily confirmed that they fell from the burning Branch A near the powerline and not from the burn at the base of Branch A.

The field observation that the not all of Branch A burned, and that the burn from the bole to the branch stopped before the burn around the powerline was confirmed and can be seen in pictures 24, 25, & 26.

A large scar that was sealing over (see the callus roll on the edges) was found on the branch that was 3.5' long and 0.4' wide.

### **Forest Service Hazard Rating of Tree**

The target, the powerline, is a stationary target that has a high exposure time. Moderate to extensive damage would be expected when the branch would eventually fail. The exposure time, damage level expected, and the imminent failure of the branch would allow this tree to have a target level of up to 3 points, but to be conservative, a target level of 2 points would be applied.

The poor architecture from the poor angle and unbalanced branch automatically gives this a tree defect of 2 points.

The presence of the open wound that is sealing properly is a concern but there is no way to quantify that using these guidelines. Had there been a way to quantify that with these guidelines, an additional point would be applied for multiple interactions.

Using the conservative target level of 2 points and the tree defect level of 2 points, this tree would have been given a Hazard Rating of 4 points had it been on USFS or NPS lands in a recreation site or along a road. According to the guidelines, appropriate actions would be to tag/record & map the tree, monitor it or mitigate the hazard, such as removing this branch.

### **Analysis**

The length of the branch combined with the abnormal angle created a unbalanced branch with very poor architecture. The poor architecture was doomed to fail at some point with the right amount of wind in the right direction. Every additional year of growth only added to the weight of the branch and continued to strain the branch at the point where it cracked out. When the limb finally succumbed to the weight and the wind, it twisted clockwise creating the 3 large cracks. Even though dry wood is a good insulator, green wood does conduct electricity. The branch connected the two lines and caused a spark which ignited the highly flammable resin and started burning the branch. The base of the branches, where the resin tends to collect, started burned and eventually burned the smaller branches to the point where the small branches dropped to the understory which was presumably grass and brush based on the forest community type gray

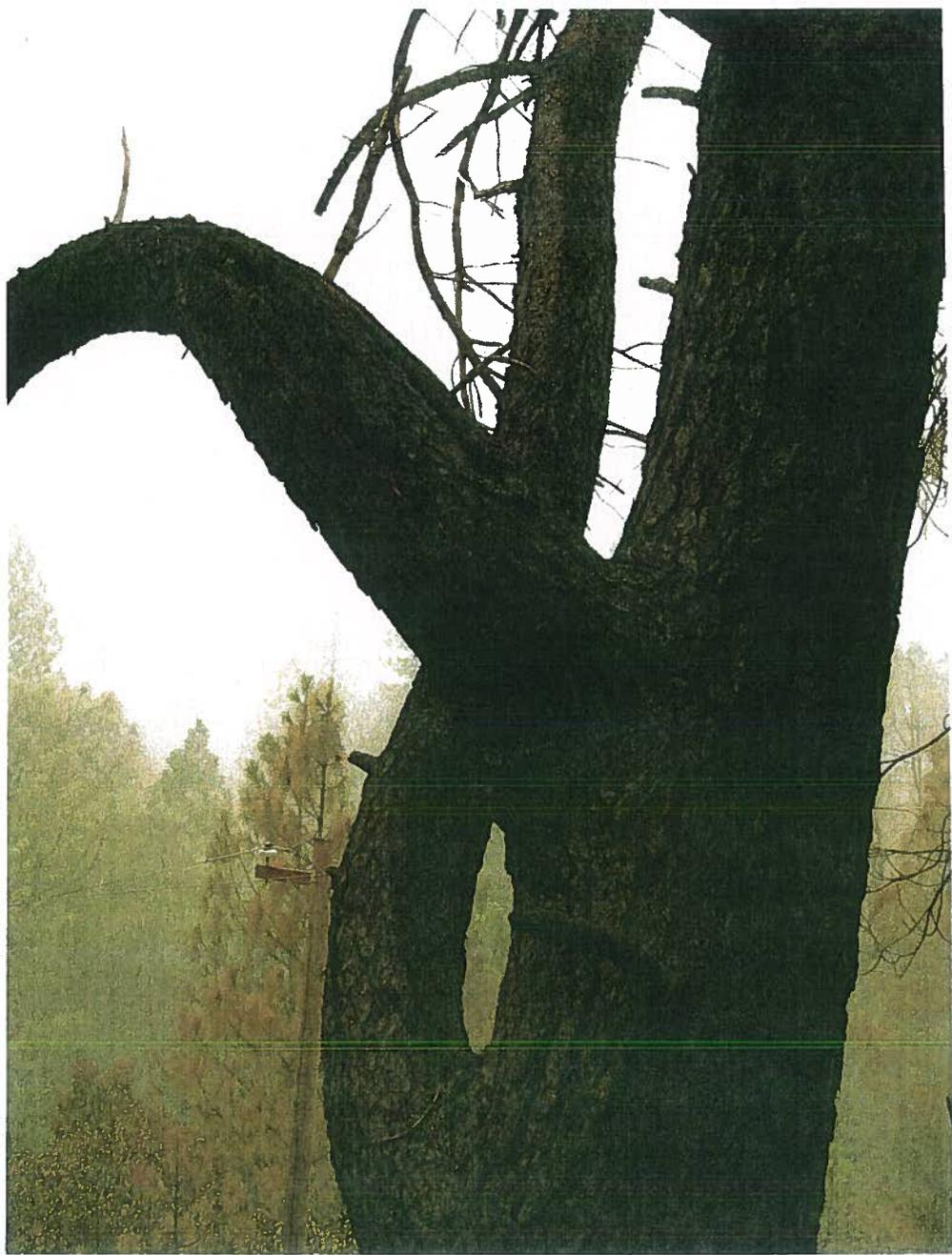
pinus grow. The grass ignited from the still hot, and likely burned butts of the small branches and eventually burned the bole of the tree and partially up Branch A .

Other utility companies like PG&E conduct routine inspections on their powerlines to ensure the lines are not damaged. PG&E still has limbs and trees that come in contact with the lines, however, it is not reasonable to assume that every potential failure can be foreseen beforehand. This tree with the close proximity to the lines, the reputation gray pines have for having poor form and being susceptible to wind damage, and the angle combined with the weight from such an abnormally long branch should have been identified as a hazard and properly mitigated. In addition, this was in close proximity to a road and had easy access to check this portion of the line for hazards.

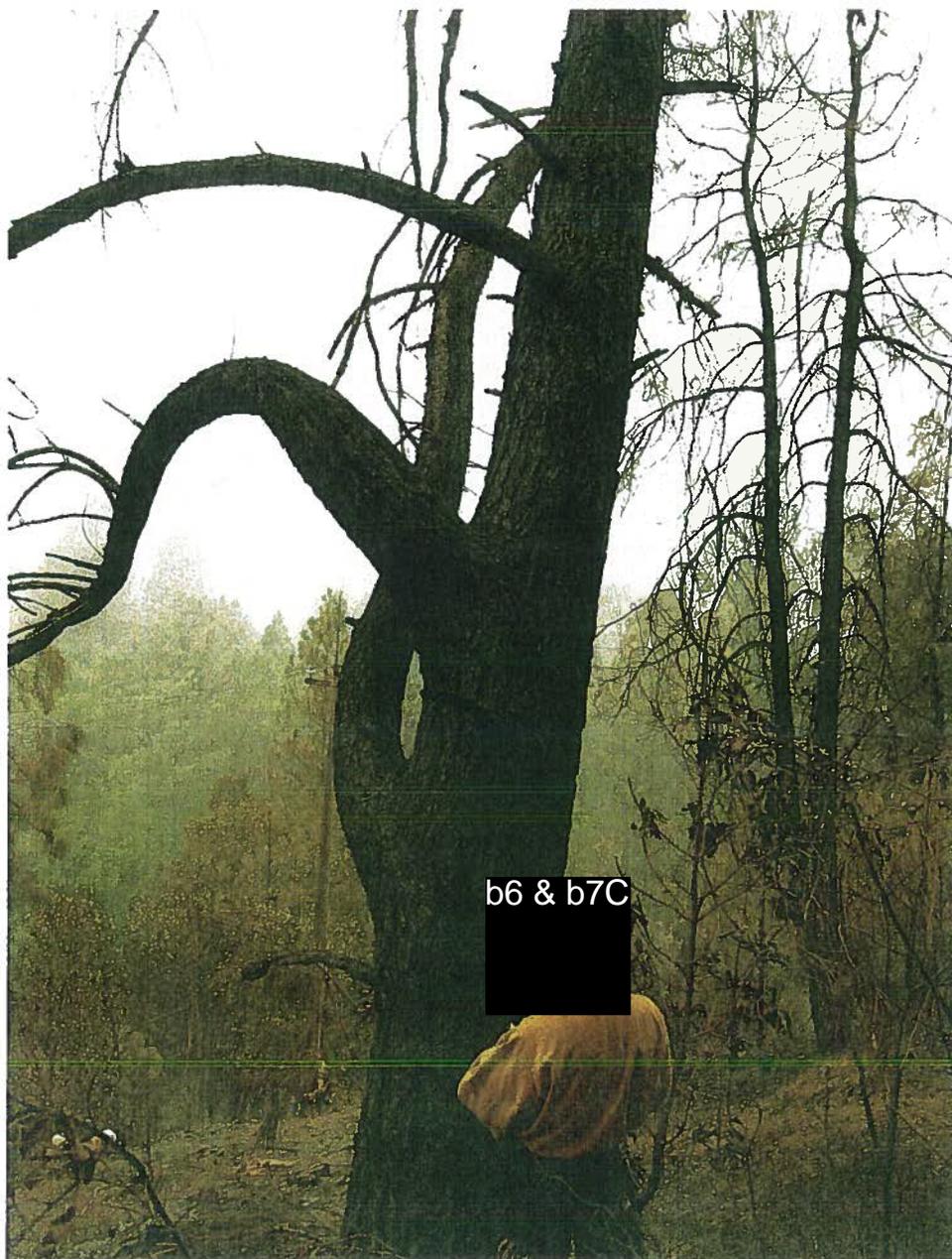
Picture 1.



Picture 2.



Picture 3.



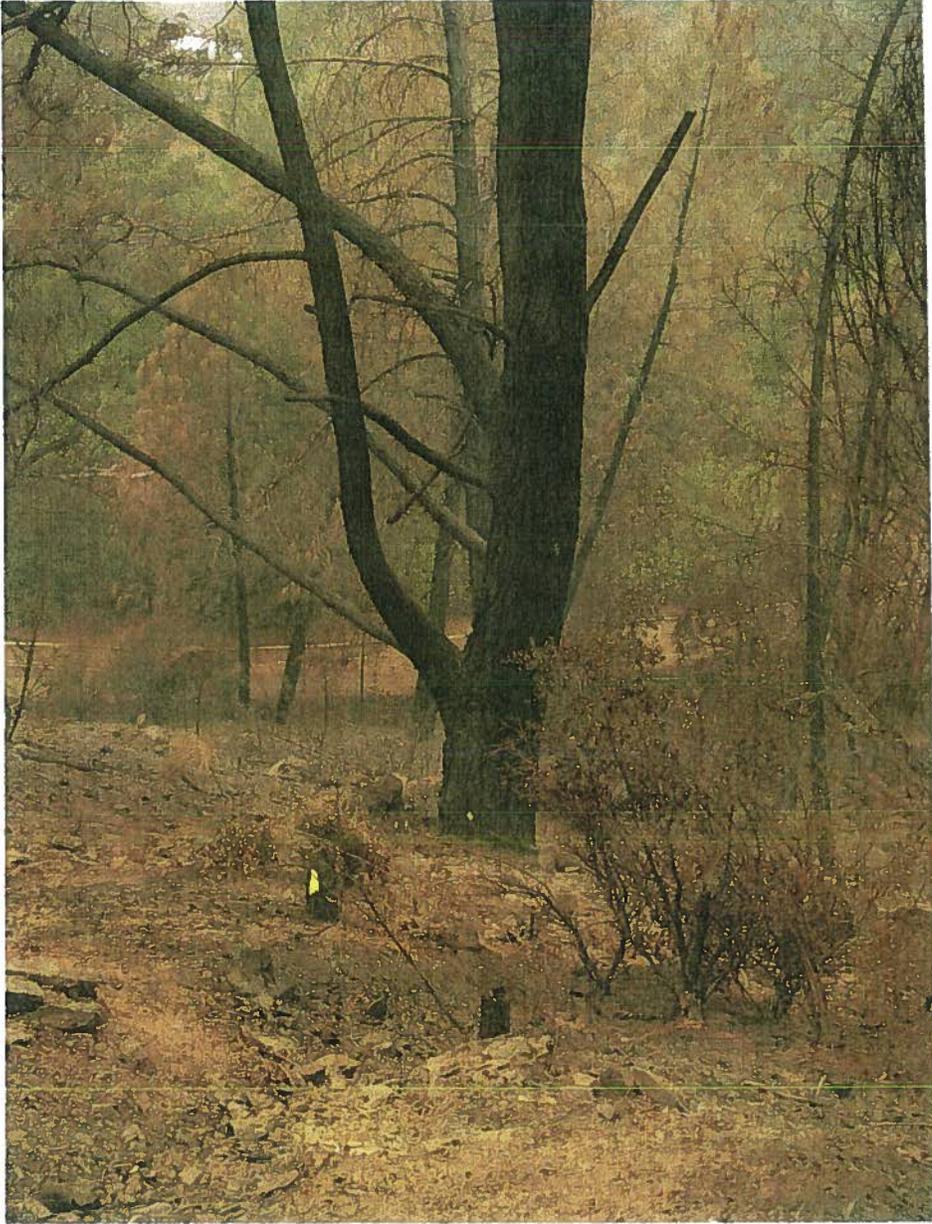
Picture 4.



Picture 5.



Picture 6.



Picture 7.



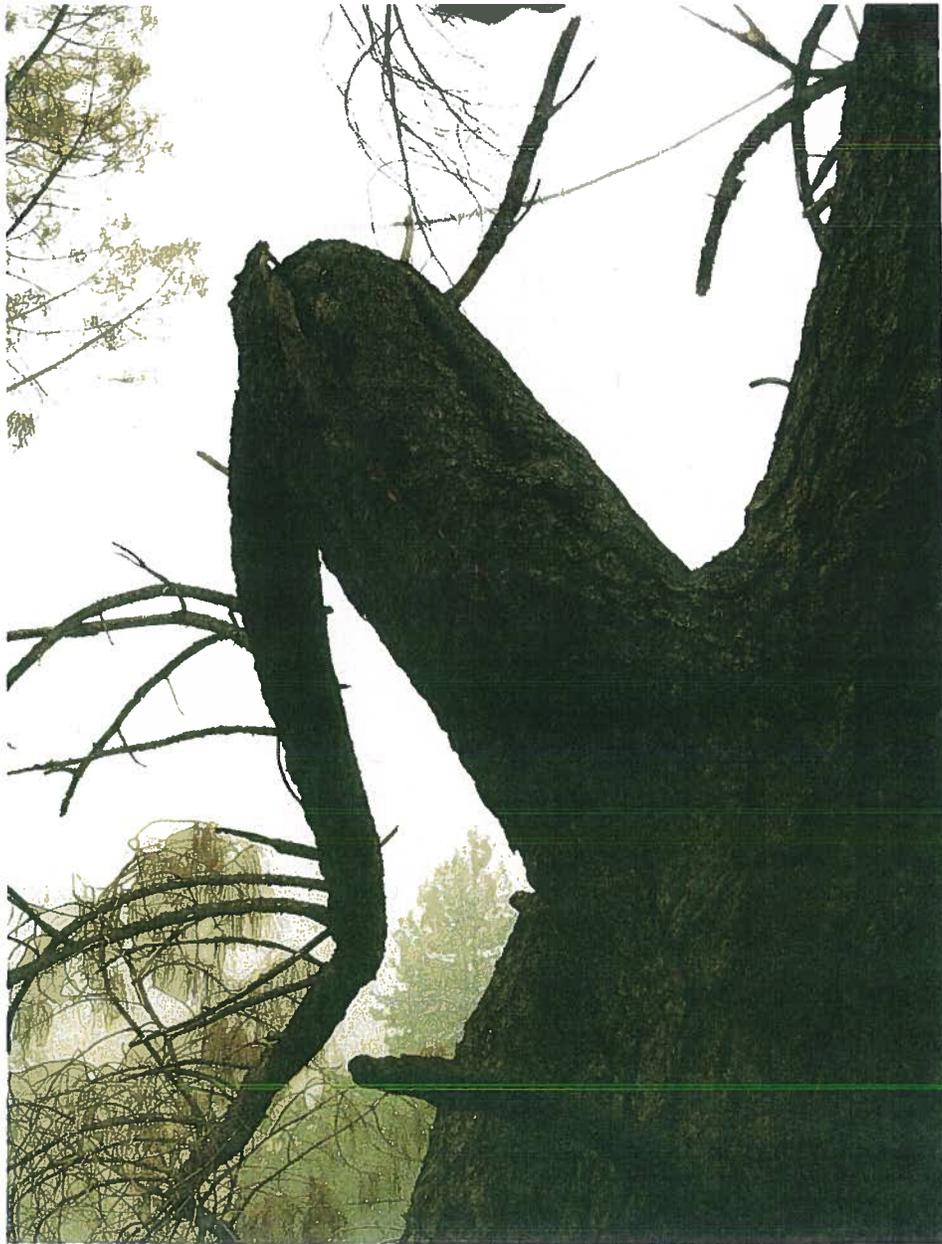
Picture 8



Picture 9.



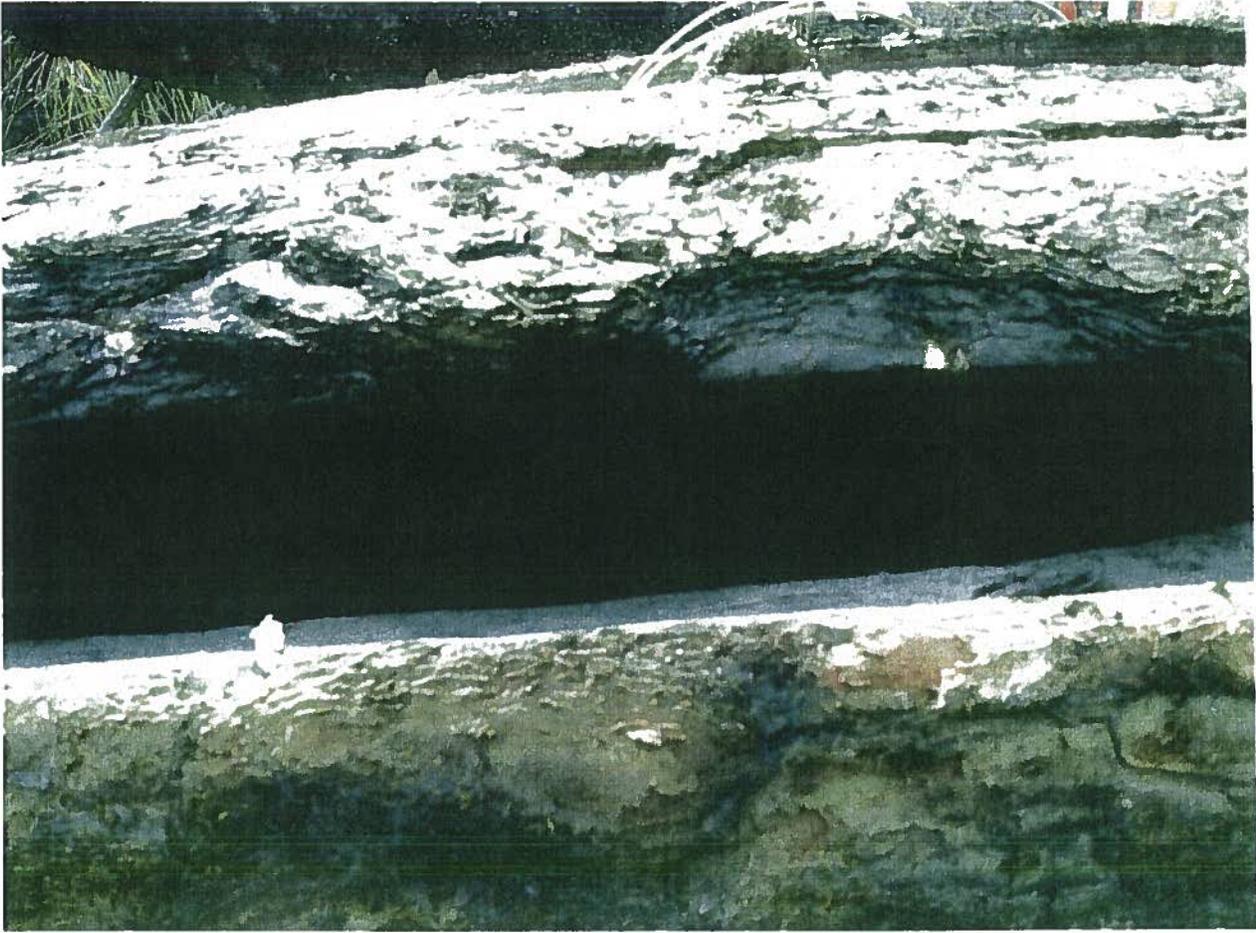
Picture 10.



Picture 11.



Picture 12



Picture 13.



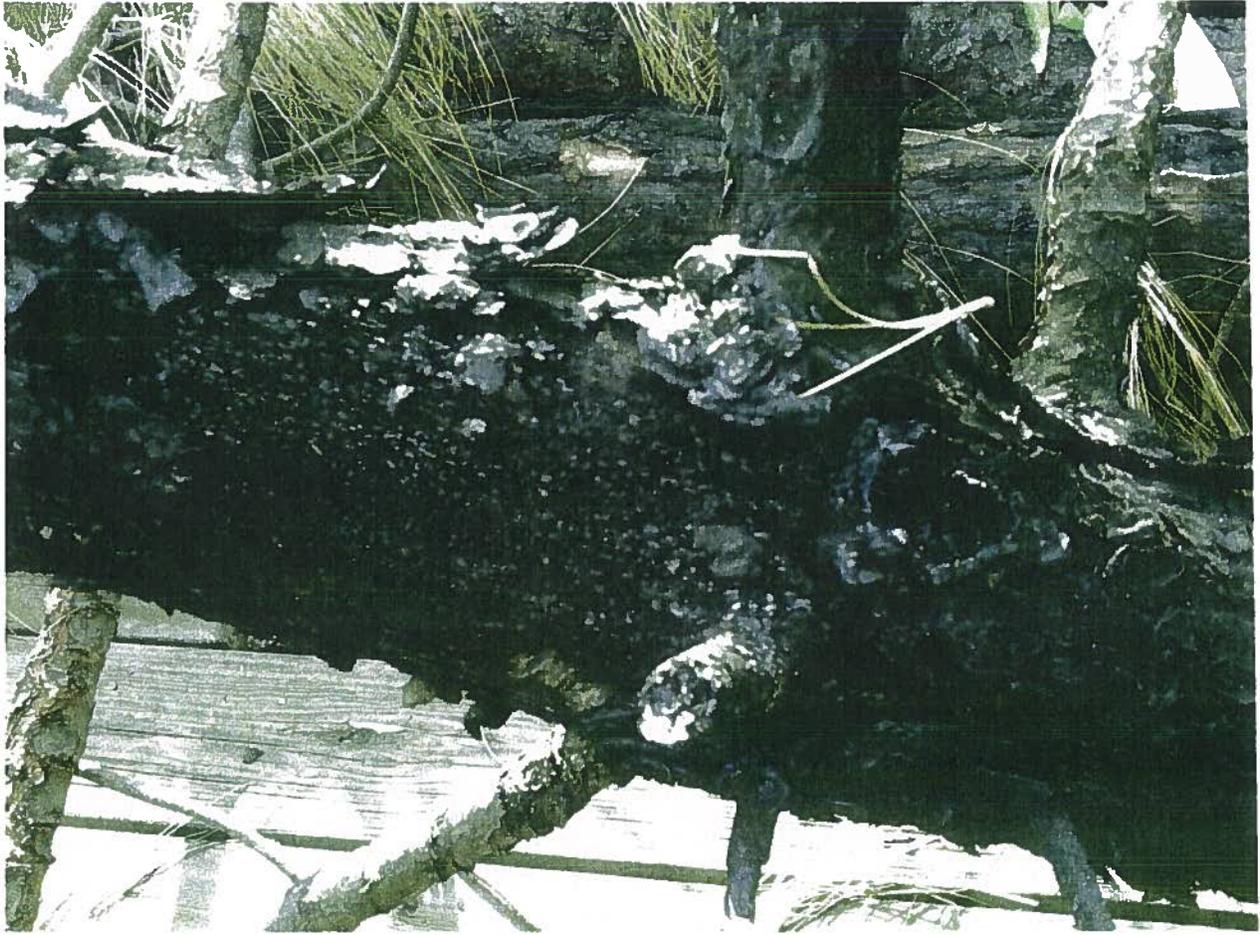
Picture 14.



Picture 15.



Picture 16.



Picture 17.



Picture 18.



Picture 19.



Picture 20.



Picture 21.



Picture 22.



Picture 23.



Picture 24.



Picture 25.



Picture 26.



Picture 27.



Picture 28.



Picture 29.



Picture 30.



Picture 31.



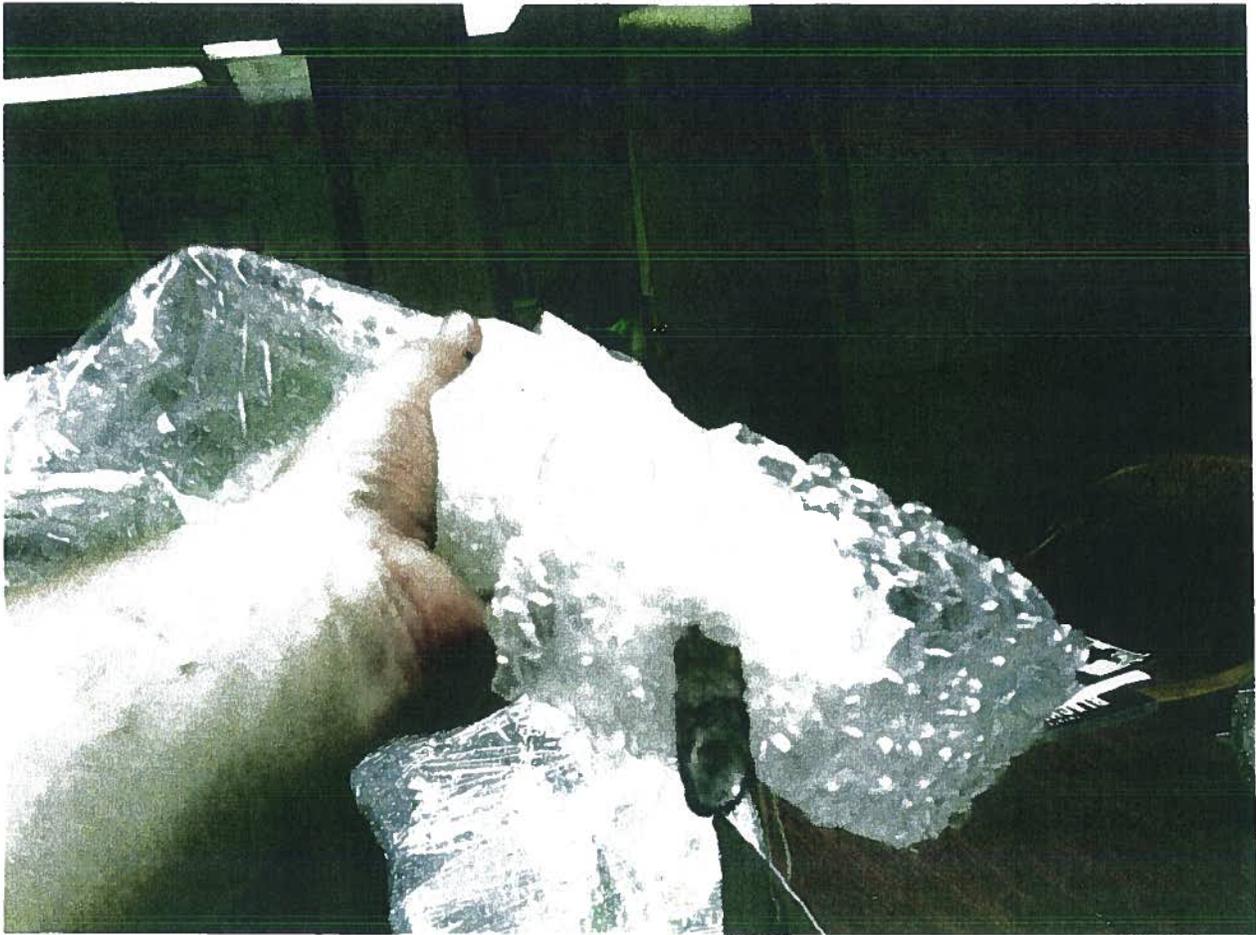
Picture 32.



Picture 33.



Picture 34.



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<[https://www.na.fs.fed.us/spfo/pubs/silvics\\_manual/Volume\\_1/pinus/sabiniana.htm](https://www.na.fs.fed.us/spfo/pubs/silvics_manual/Volume_1/pinus/sabiniana.htm)>.

## PURVEYOR TO EXCELLENCE

Project Status Memorandum	
<b>To:</b> b6 & b7C US Forest Service 3644 Avtech Pkwy Redding, CA 96002	<b>Subject:</b> Status to date Re: Investigation of Helena Fire # CA-SHF-001770 USFS Wildland fire near Junction City, CA DOL 8/30/2017 at 17:10
<b>From:</b> b6 & b7C	<b>Date:</b> September 12, 2017

**1 When:**

- 1.01 Date of Loss: 8/30/2017  
1.02 Date of Exam: 9/3/2017

**2 Where:**

- 2.01 Loss address: Helena, CA near CA Hwy 299 & Cemetery Rd  
2.02 Exam address: same as loss address

**3 Abstract:** A very large branch off of a grey pine tree located near a Trinity Co Public Utility District (TCPUD) overhead line had fallen onto both of the two overhead power lines. The tree branch falling on to the utility lines shorted them together causing a "phase to phase fault". This shortening provided a conductive path between utility conductors allowing electrical arc tracking to occur on the surface of the incident branch. The resultant high voltage arc tracking was most likely the source of ignition for vegetative material on the branch itself.

**4 What's There:**

- 4.01 I was asked to assist with the examination of the subject fire scene.  
4.02 The primary area of interest is just North of CA Hwy 299 near Helena, CA. See photos 2 and the 3 as typical. The horizontal tree branch seen at the center of photos 3, 4 and 6 is the incident branch.  
4.03 A very large branch off of a grey pine tree located near a Trinity Co Public Utility District (TCPUD) overhead line had fallen onto both of the two overhead power lines. See photos 3, 4 and 6 - 9 as typical. The utility pole photographed in photos 6 and 10 did not have a utility company serial number tag on it. The next pole upstream was numbered 012433. See photo 5 as typical.  
4.04 Part of the process of removing the branch from the utility conductors is depicted in photos 11 and 13 as typical.  
4.05 After the branch had fallen free of the two conductors, the southmost conductor exhibited three areas of minor damage. See photos, 12 and 14 through 17 as typical.  
4.06 I was told that later the utility had replaced the damaged section of conductor. The damaged section of conductor was retained as evidence by the USFS.  
4.07 The section of the broken branch closest to that tree trunk is depicted in the photo 18 as typical.  
4.08 The damage to that tree branch from the flow of high voltage current can be seen in photos 19 through 25 as typical.  
4.09 The southmost conductor touched the tree branch in the area depicted at the center of photo 21 as typical. The northmost conductor touched the tree branch in the area depicted at the center of photo 22 as typical.

- 4.10 The electric arc tracking damage to the tree bark between those two points can be seen in photos 23 and 24 as typical. This arc tracking damage is the typical result of high voltage current flowing along the surface and near surface of combustible and/or noncombustible materials.
- 4.11 Per 2014 NFPA 921: "**14-9.4.4.\* Arc Tracking.** Arcs may occur on surfaces of nonconductive materials if they become contaminated with salts, conductive dusts, or liquids. It is thought that small leakage currents through such contamination causes degradation of the base material leading to the arc discharge, charring or igniting combustible materials around the arc. Arc tracking is a known phenomenon at high voltages. It has also been reported in experimental studies in 120/240-V ac systems.  
Electrical current will flow through water or moisture only when that water or moisture contains contaminants such as dirt, dusts, salts, or mineral deposits. This stray current may promote electrochemical changes that can lead to electrical arcing. Most of the time the stray currents through a contaminated wet path cause enough warming that the path will dry. Then little or no current flows and the heating stops. If the moisture is continuously replenished so that the currents are sustained, deposits of metals or corrosion products can form along the electrical pathway. That effect is more pronounced in direct current situations. A more energetic arc through the deposits might cause a fire under the right conditions. More study is needed to more clearly define the conditions needed for causing a fire."
- 4.12 In this particular case, the utility overhead line voltage combined with conductivity of the moist cambium layer under the branch bark and the very dry heat stressed tree needles and twigs provided ample fuel to be ignited by the arc tracking.
- 4.13 The primary arc tracking and area of first ignition was on the branch surface (or near surface) between the two horizontal utility conductors. The branch was providing what is known as a "phase to phase fault".
- 4.14 Secondary arc damage was between a two utility conductors and the ground via the remainder of the branch and the tree trunk down to the earth. The branch and tree trunk was providing what is known as a "ground fault". A possible example of the ground fault current damage on the incident tree branch can be seen in photo 25 as typical.
- 4.15 One or both of these fault types will typically trip a circuit breaker that will deenergize the faulted lines. It is unknown at this time whether or not the utility had such monitoring capability for the incident overhead lines.
- 4.16 The area of interest and the incident overhead lines are depicted in the TCPUD distribution map shown in attachments 1 and 2.

## 5 What's Not There:

- 5.01 I was unable to observe any physical damage to overhead line insulators on the incident pole crossarm that might provide a ground fault and resultant source of ignition. See photo 10 as typical.

## 6 Why?/How?/Who?/Explain:

- 6.01 The most probable source of ignition was a phase to phase fault and resultant arc tracking caused by the incident branch shortening together the two conductors of the overhead utility line.

## 7 Evidence and Photos Taken:

- 7.01 Items taken as evidence and stored in a secure facility by b6

7.01.01 none

- 7.02 During my examination I took a total of 91 color digital photographs of which 25 are included in this memorandum as printed images.
- 7.03 Colored lens filters were not used. These photographs were taken to provide demonstrative evidence. Photos included in this document or that have been provided otherwise have had their file size electronically reduced from the range of 5MB to 6MB each to an average of 95KB each for processing convenience. All photo files have been preserved outside this document in their original size and resolution.

## 8 Recommended Next Step(s):

- 8.01 It may assist the confirmation of the ignition timeline to obtain from the electric utility information from their automatic monitoring and recording equipment regarding whether and when a circuit breaker opened on the date of loss in response to a phase to phase fault and/or a ground fault.
- 8.02 This memorandum, its observations, conclusions and recommendations may be only one part of the multi-disciplinary investigations and examinations that are often necessary. It is rare that data from one particular discipline, when viewed selectively or in isolation, can encompass or provide understanding about the entirety of an event or issue. Therefore, it is recommended that the necessary actions and/or meetings among experts be conducted so that the material in this memorandum can be integrated with material from other disciplines so as to create a more complete picture and understanding of this event.

## 9 Other:

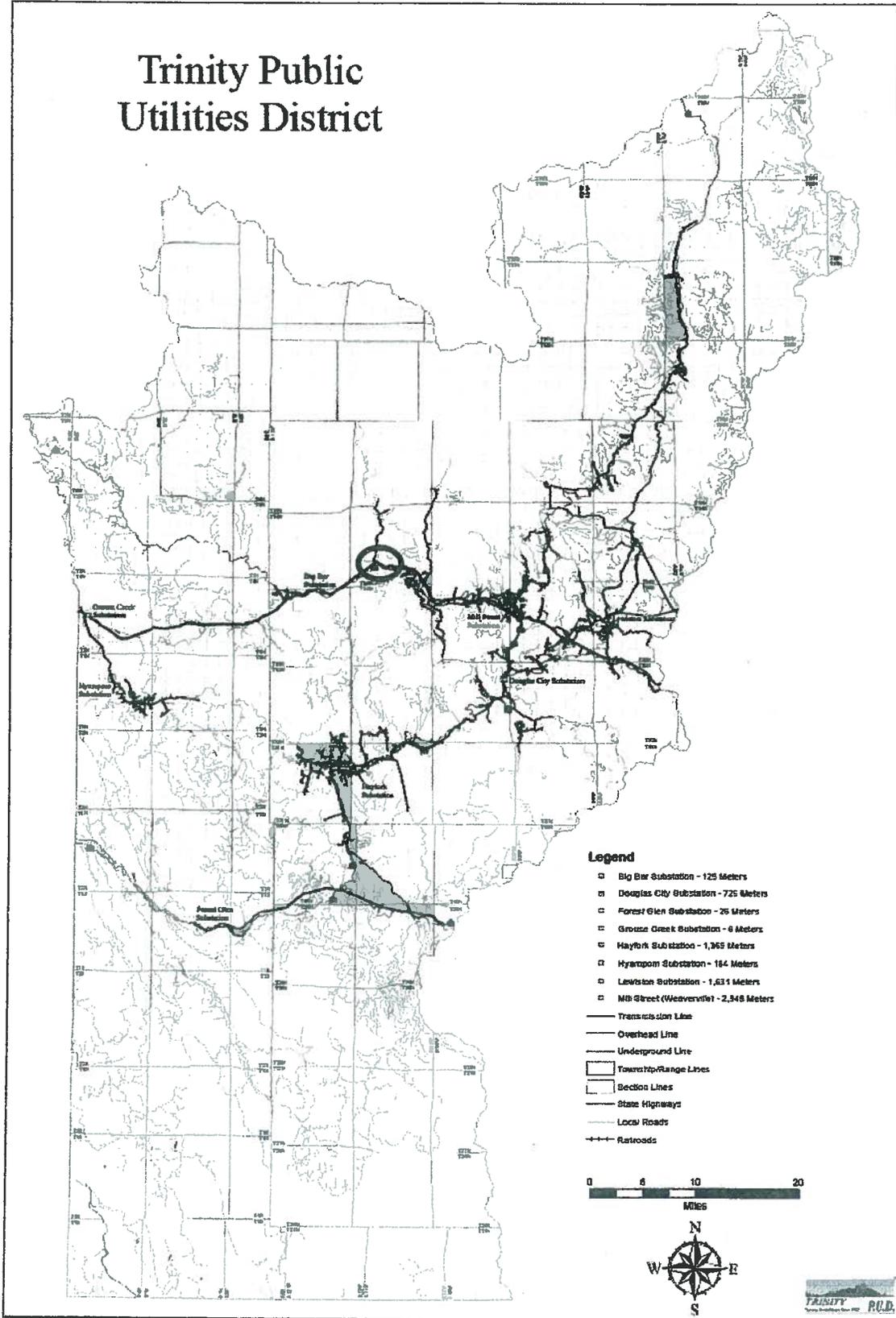
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- 9.02 Reservations - This completes my project status memorandum based on the tasks I have completed to date and/or been asked to complete to date. This work, its observations, its analysis, its conclusions and its recommendations are part of a very context sensitive and iterative process which may include critical information that may have been destroyed, obscured, missed or not yet understood within the context of the incident. Therefore, I reserve the right to amend or augment these opinions and/or this memorandum if new pertinent information or data is provided to me or is discovered by me at a later date.
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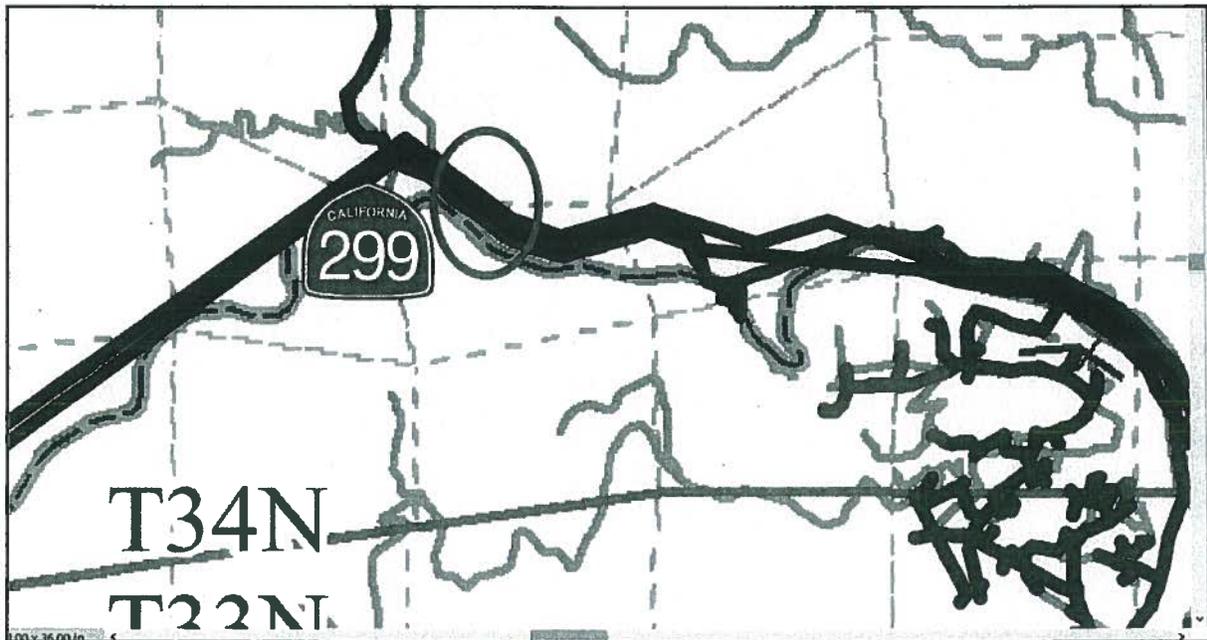
# Attachment 1

## Trinity Public Utilities District



## Attachment 2

Location detail from Attachment 1 above  
The blue line represents the overhead line of interest.



# Photos

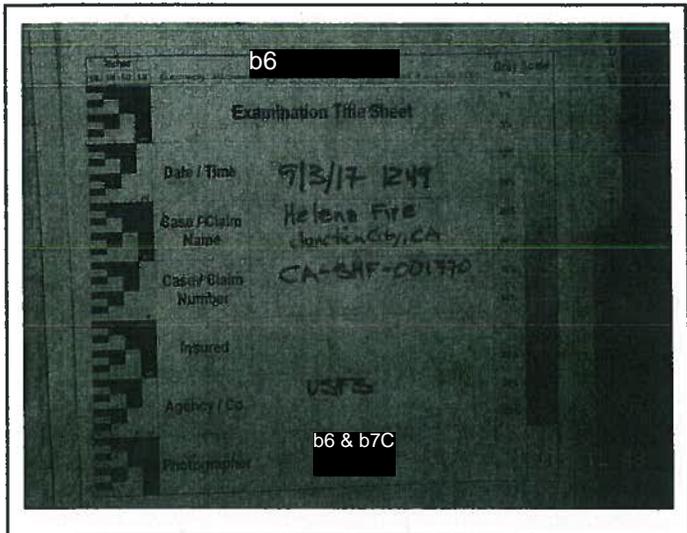


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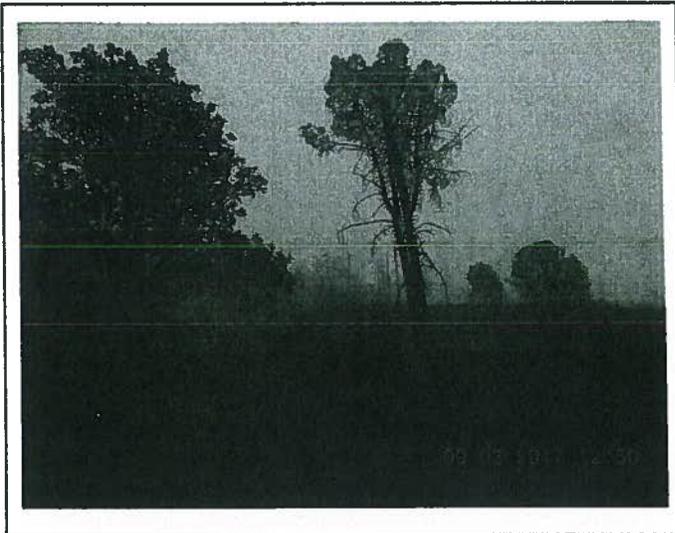


Photo 2



Photo 3

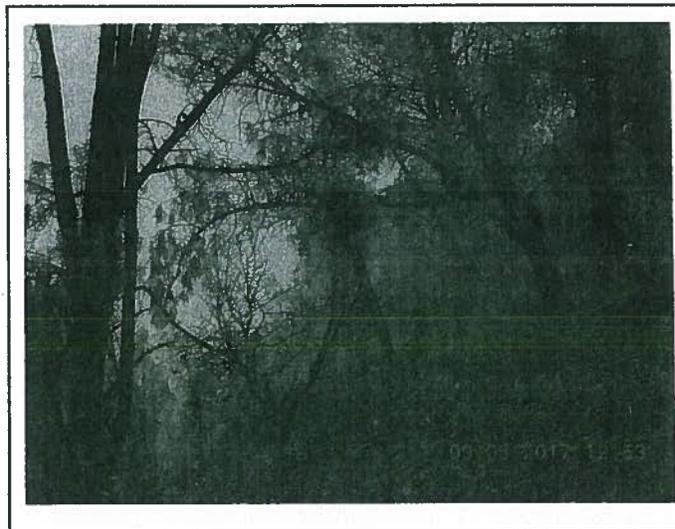


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Photo 5

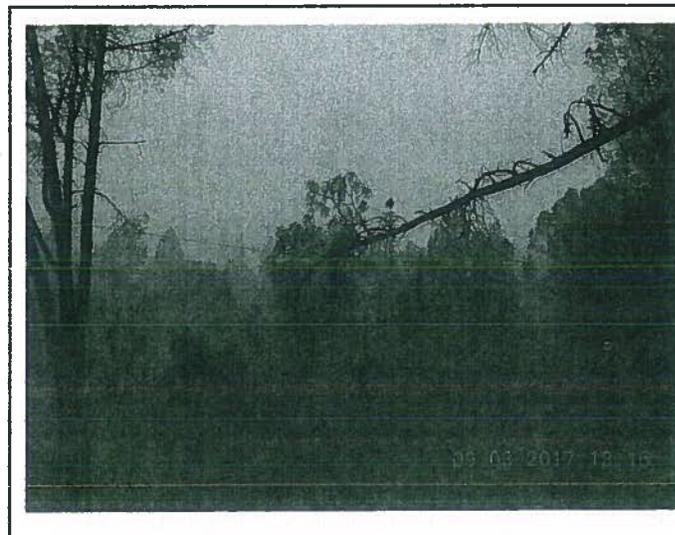


Photo 6

Photos

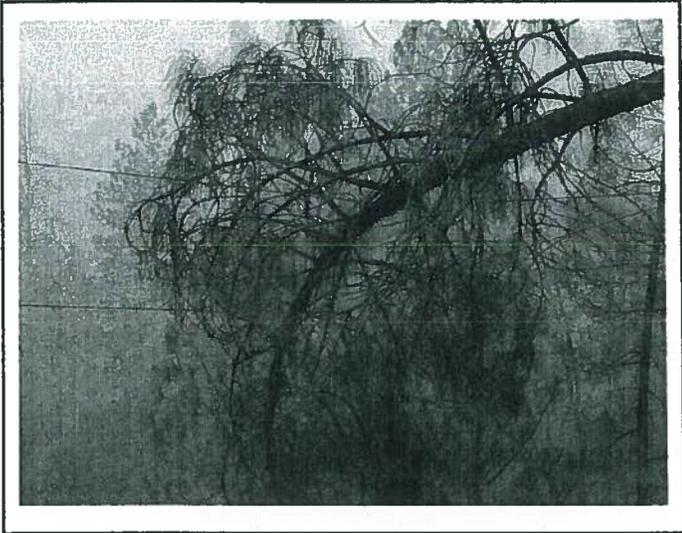


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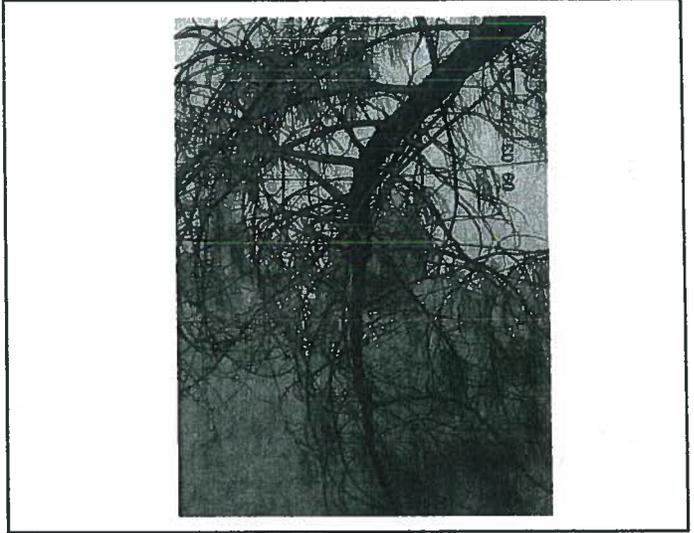


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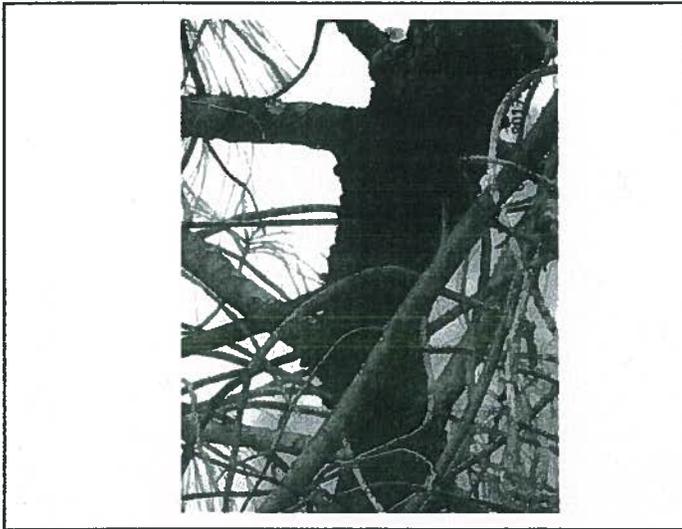


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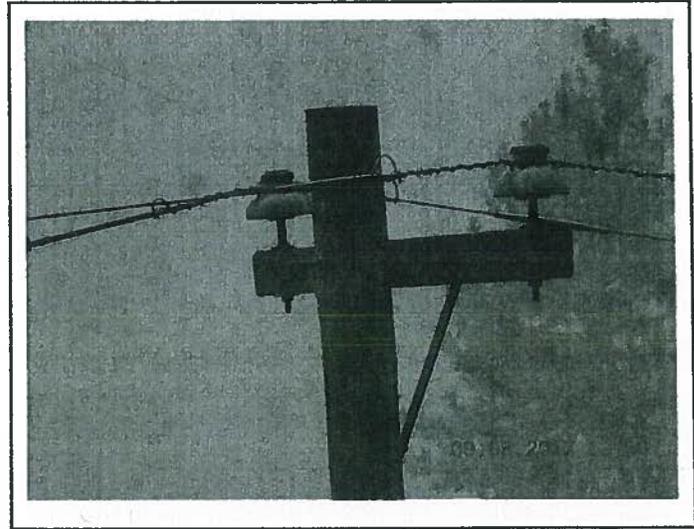


Photo 10



Photo 11

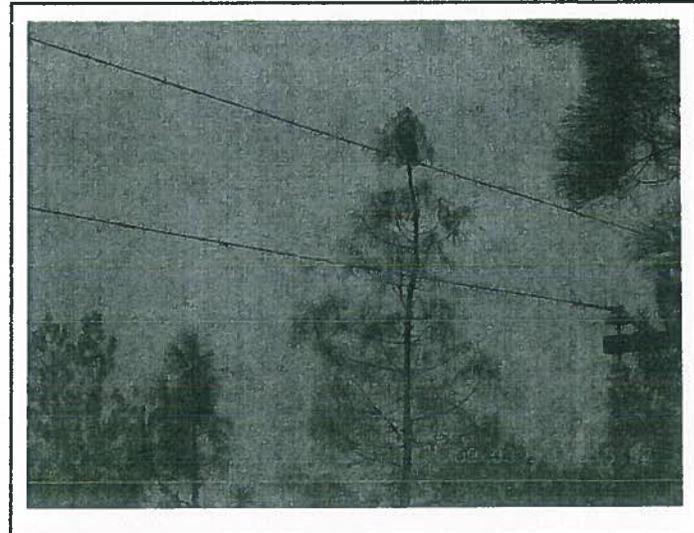


Photo 12

Photos



Photo 13

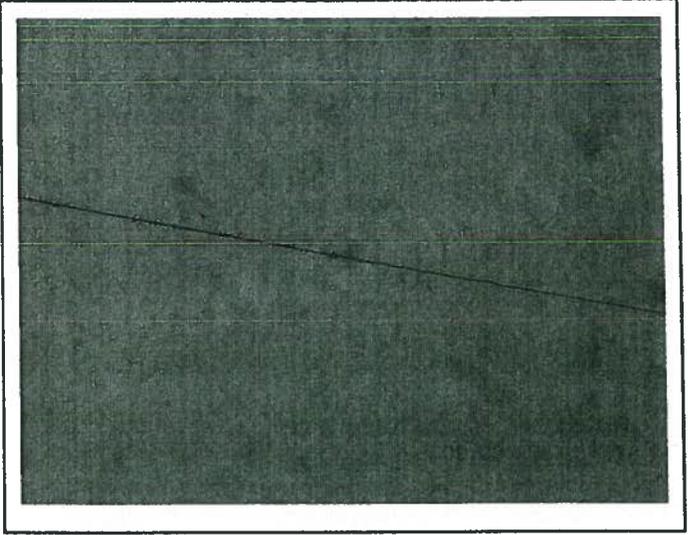


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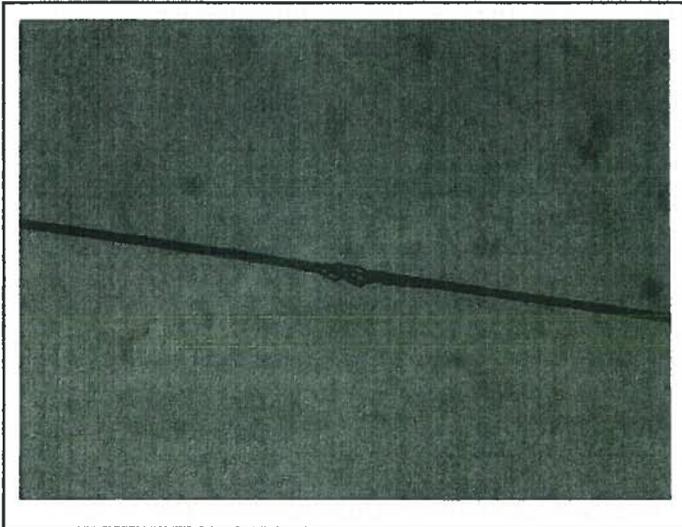


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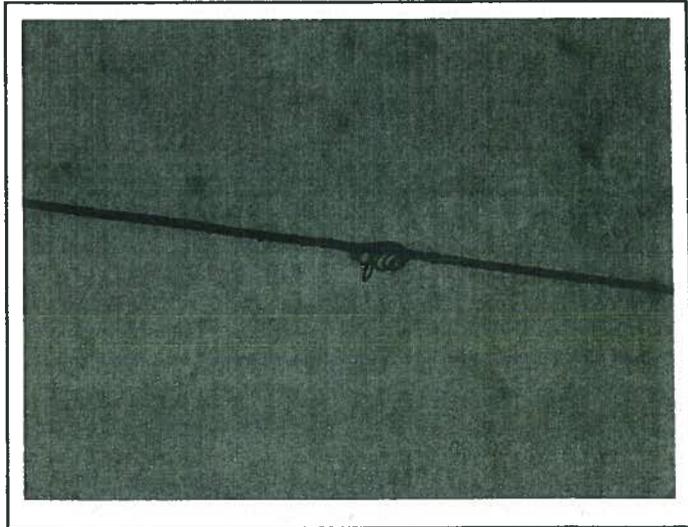


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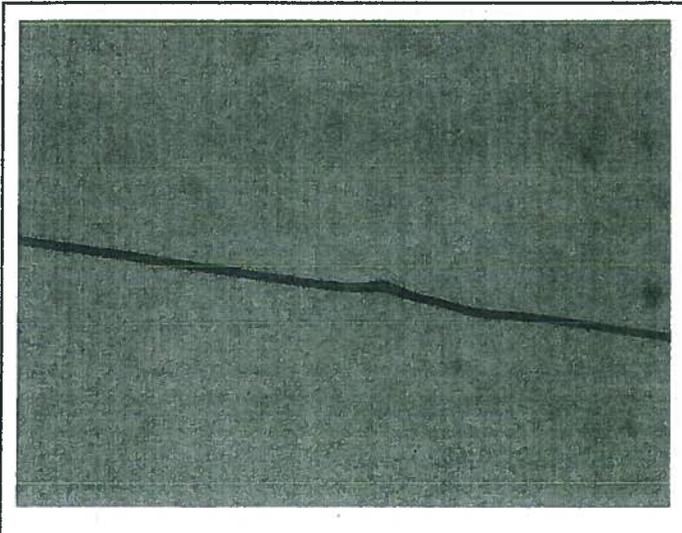


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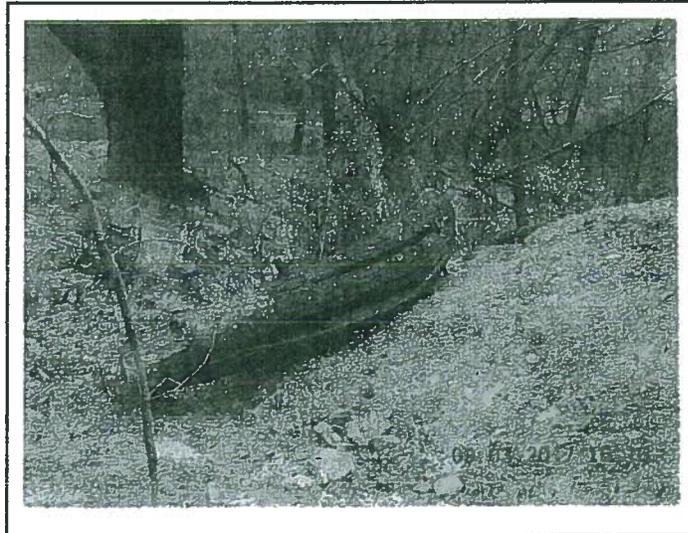


Photo 18

Photos

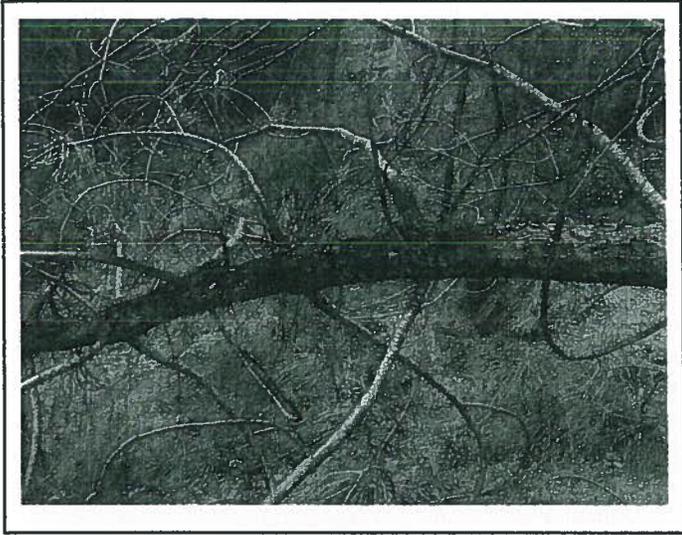


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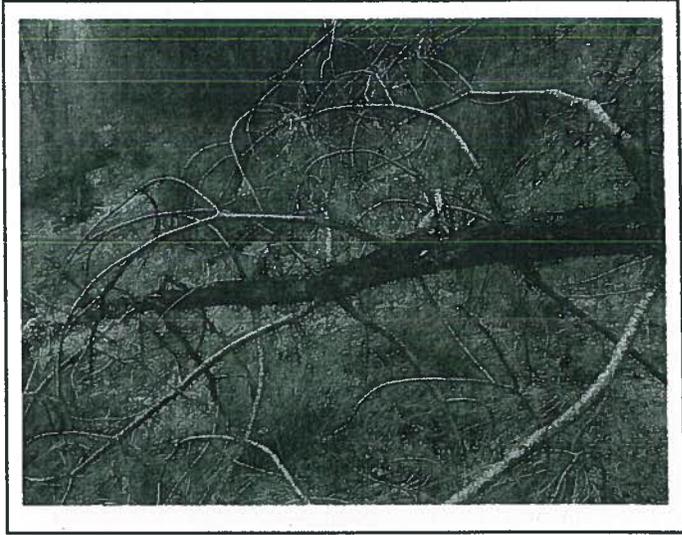


Photo 20



Photo 21



Photo 22

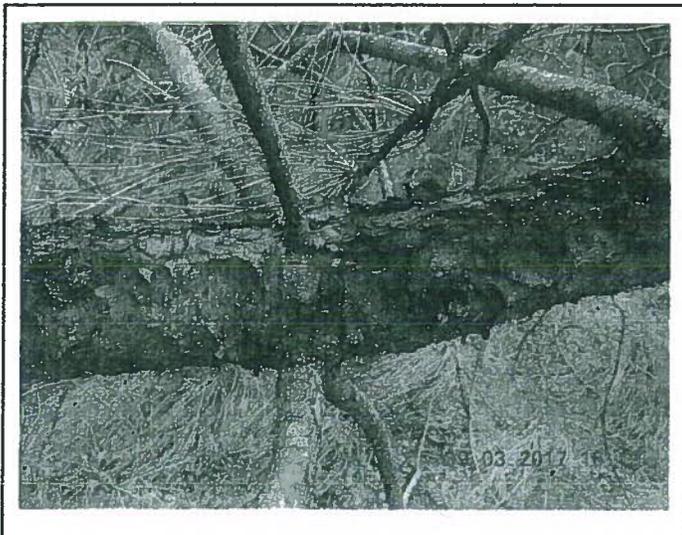


Photo 23



Photo 24

Photos



Photo 25

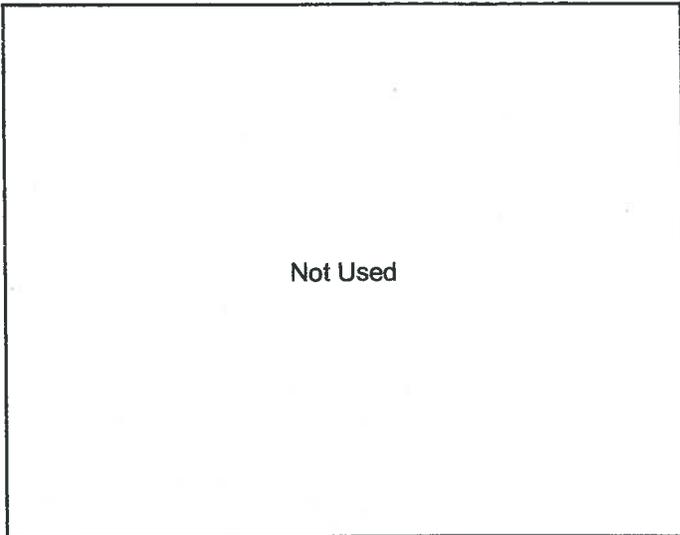


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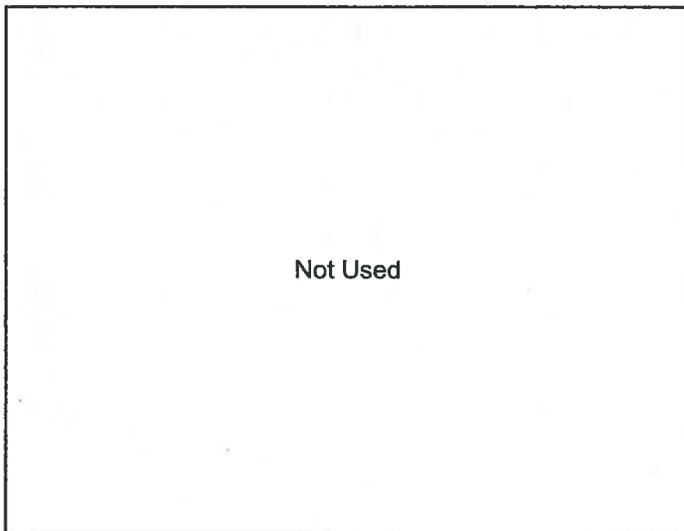


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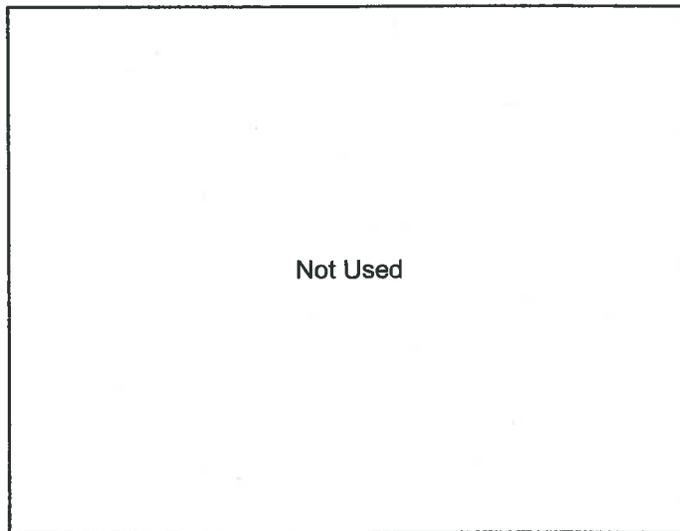


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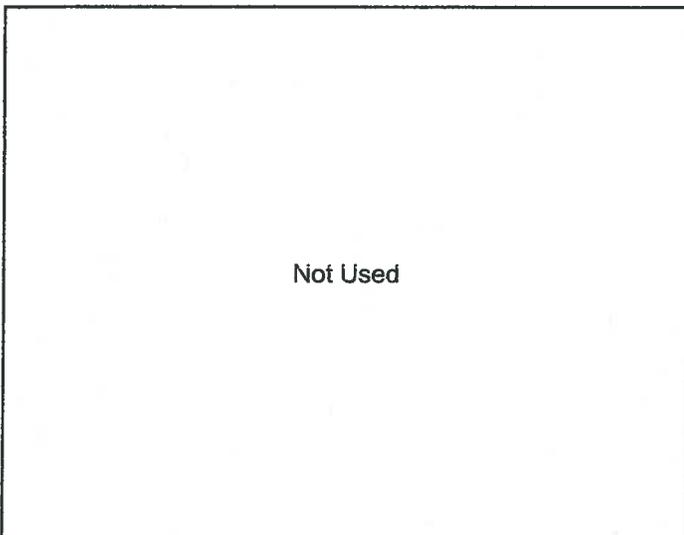


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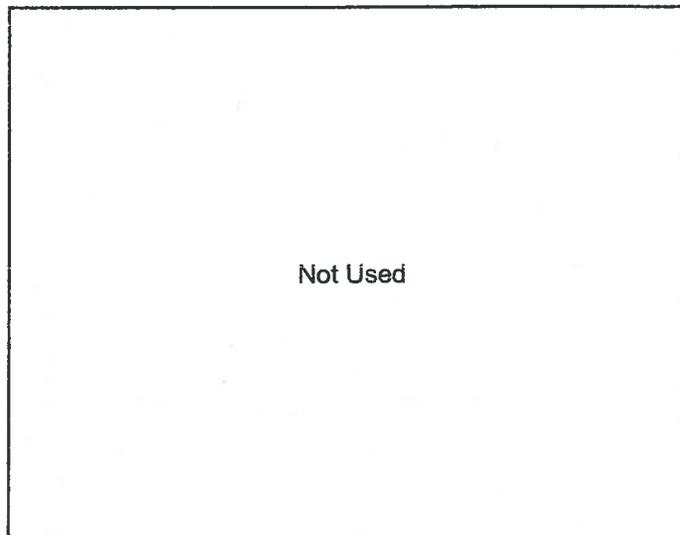


Photo 30

b6 & b7C

**From:** b6 & b7C  
**Sent:** Saturday, September 16, 2017 2:12 PM  
**To:** b6 & b7C  
**Cc:** b6 & b7C  
**Subject:** USFS-Helena Fire, PG&E response to USFS request for transmission circuit relay details on 8/30/17, Trinity Co.

b6 & b7C

This follows our phone call yesterday afternoon and is to provide you with information you requested regarding PG&E circuit relay information on our 2 transmission circuits near the Trinity PUD distribution lines, and area of origin for the Helena Fire (start date 8/30/17).

We have two separate, parallel transmission circuits in this area;

- 1) Trinity-Maple Creek 60kV line, and
- 2) Humboldt-Trinity 115kV line

The following is relay information for both of these circuits:

- 
- 1) Trinity-Maple Creek 60kV line:

**System Protection Fault Location Estimate**

**Line and time of outage:** *Trinity – Maple Creek on 8/30/2017 @ 17:32*

**Phase Involved in Fault:** *PG&E phase BC*

**Fault Location (in miles):** *42.7 from Maple Creek (unable to connect to Trinity)*

**Fault Location details:** *12/2*

**Accuracy of Location:** *+/- 4 mile*

- 2) *Humboldt-Trinity 115kV line:*

**System Protection Fault Location Estimate**

**Line and time of outage:** *Humboldt – Trinity 115kv line on 8/30/2017 @ 18:05, 18:26 & 18:31*

**Phase Involved in Fault:** *PG&E phase AC*

**Fault Location (in miles):** *10.55 from Trinity*

**Fault Location details:** *56/5*

**Accuracy of Location:** *+/- 4 mile*

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Please advise if you have any questions, or require additional information. Thank you.

b6 & b7C

PG&E Law-Claims  
6030 West Oaks Blvd., Rm#: 3082A  
Rocklin, CA. 95765

Ph#: b6 & b7C  
Cell: b6 & b7C  
Fax: b6 & b7C  
Email: b6 & b7C