INVESTIGATION REPORT

CASE NUMBER: 15CAAEU024918
CASE NAME: Butte Incident
DATE: September 9, 2015
INCIDENT TYPE: Wildland Fire
INCIDENT INVESTIGATOR: Gianni Muschetto
1 - VIOLATION(S):

Public Resources Code 4421: A person shall not set fire or cause fire to be set to any forest, brush, or other flammable material which is on any land that is not his own, or under his legal control, without the permission of the owner, lessee, or agent of the owner or lessee of the land.

Public Resources Code 4435: If any fire originates from the operation or use of any engine, machine, barbecue, incinerator, railroad rolling stock, chimney, or any other device which may kindle a fire, the occurrence of the fire is prima facie evidence of negligence in the maintenance, operation, or use of such engine, machine, barbecue, incinerator, railroad rolling stock, chimney, or other device. If such fire escapes from the place where it originated and it can be determined which person's negligence caused such fire, such person is guilty of a misdemeanor.

Health and Safety Code 13007: Any person who personally or through another willfully, negligently, or in violation of law, sets fire to, allows fire to be set to, or allows a fire kindled or attended by him to escape to, the property of another, whether privately or publicly owned, is liable to the owner of such property for any damages to the property caused by the fire.

Health and Safety Code 13009: (a) Any person (1) who negligently, or in violation of the law, sets a fire, allows a fire to be set, or allows a fire kindled or attended by him or her to escape onto any public or private property, (2) other than a mortgagee, who, being in actual possession of a structure, fails or refuses to correct, within the time allotted for correction, despite having the right to do so, a fire hazard prohibited by law, for which a public agency properly has issued a notice of violation respecting the hazard, or (3) including a mortgagee, who, having an obligation under other provisions of law to correct a fire hazard prohibited by law, for which a public agency has properly issued a notice of violation respecting the hazard, fails or refuses to correct the hazard within the time allotted for correction, despite having the right to do so, is liable for the fire
suppression costs incurred in fighting the fire and for the cost of providing rescue or emergency medical services, and those costs shall be a charge against that person. The charge shall constitute a debt of that person, and is collectible by the person, or by the federal, state, county, public, or private agency, incurring those costs in the same manner as in the case of an obligation under a contract, expressed or implied.

(b) Public agencies participating in fire suppression, rescue, or emergency medical services as set forth in subdivision (a), may designate one or more of the participating agencies to bring an action to recover costs incurred by all of the participating agencies. An agency designated by the other participating agencies to bring an action pursuant to this section shall declare that authorization and its basis in the complaint, and shall itemize in the complaint the total amounts claimed under this section by each represented agency.

(c) Any costs incurred by the Department of Forestry and Fire Protection in suppressing any wildland fire originating or spreading from a prescribed burning operation conducted by the department pursuant to a contract entered into pursuant to Article 2 (commencing with Section 4475) of Chapter 7 of Part 2 of Division 4 of the Public Resources Code shall not be collectible from any party to the contract, including any private consultant or contractor who entered into an agreement with that party pursuant to subdivision (d) of Section 4475.5 of the Public Resources Code, as provided in subdivision (a), to the extent that those costs were not incurred as a result of a violation of any provision of the contract.

(d) This section applies to all areas of the state, regardless of whether primarily wildlands, sparsely developed, or urban.
2 - SUMMARY:

On Wednesday, September 9, 2015, at approximately 2:26 PM, the Camino Emergency Command Center (ECC) dispatched CAL FIRE and cooperating agency units to a reported wildland fire near Butte Mountain Road and Charamuga Ranch Road east of the community of Jackson in Amador County (See Attachment #1). Fire units contained the fire on October 1, 2015. The fire burned 70,868 acres and damaged or destroyed approximately 965 structures (See Attachment #2). The fire also resulted in 2 fatalities and 1 injury.

During the origin and cause investigation I, Gianni MUSCHETTO, determined the fire was caused when a Gray Pine (Evidence Item #1) contacted a PG&E powerline conductor which ignited portions of the tree. Burning embers from this contact with the conductor dropped into the fine dead fuels below the conductor, igniting the wildland fire which burned uncontrolled onto numerous properties not owned or controlled by PG&E in violation of PRC 4421.

During the investigation I determined PG&E and/or its sub-contractors ACRT and Trees, Inc. conducted powerline vegetation management inspections and maintenance in 2014-2015 within the area of origin. They identified (October 2014) and removed (January 2015) two Gray Pines on the outer edge of the pine stand on the north side of the powerline conductor identified as being within the General Origin Area (GOA) of the fire. The removal of these two pines exposed the interior trees, including the Gray Pine (Evidence Item #1) that were previously captured and developed within the closed stand provided by those removed pines. These now exposed trees were left open to the south, towards the path of the sun and the powerlines. It is known, when a stand is altered and captured interior trees are exposed to open spaces, they are prone to failure. PG&E and/or its sub-contractors ACRT and Trees, Inc. failed to identify this during their 2014 inspection when the pine trees were identified for removal, or in January 2015 when the trees were removed, or during any subsequent inspections/maintenance conducted on that section of powerlines and poles. Failing to
identify the potential hazard of leaving weaker, inherently unstable trees on the edge of
the stand, without conducting maintenance on them, ultimately led to the failure of the
Gray Pine (Evidence Item #1) which contacted the powerline conductor operated by
PG&E and ignited a wildland fire.
3 - SUBJECT(S):

Pacific Gas & Electric Corporation
77 Beale Street 24th Floor
San Francisco, CA 94105

ACRT Inc.
CT Corporation
818 West Seventh Street, Suite 930
Los Angeles, CA 90017

Trees Inc.
CT Corporation
818 West Seventh Street, Suite 930
Los Angeles, CA 90017
4 - VICTIM(S):

The Butte Incident burned approximately 70,868 acres within Amador and Calaveras Counties. The fire damaged and/or destroyed approximately 965 structures, resulted in two fatalities and one injury. See Attachment #2 for the initial Butte Incident Damage Inspection Summary. This summary does not account for all damage to infrastructure, mobile property, miscellaneous property improvements, natural vegetation, livestock, wildlife or other misc. damage.

WITNESSES:

OLIVARRIA, Mike
2840 Mt. Danaher Road
Camino, CA 95709
(530) 644-2345
CAL FIRE Battalion Chief

CLINKENBEARD, Jarrod
2840 Mt. Danaher Road
Camino, CA 95709
(530) 644-2345
CAL FIRE Captain

JACKSON, Garrett and GAWRONSKI, Jeff
1300 “U” Street
P.O. Box 944246
Sacramento, CA 94244-2460
(916) 445-4276
CAL FIRE Transportation Surveyors
PODESTA, Louie, Jr.

PODESTA, Louie, Sr.

AFFONSO, Jamie

CAUFIELD, Jack and Diane

MAHONEY, Michael
Independent Consultant
32759 Greene Drive
Springville, CA 93265
(949) 283-6439
RASMUSSEN, Mark
Pacific Gas and Electric Corporation
12626 Jackson Gate Road
Jackson, CA 95642
(209) 736-6483

STOWE, Shawn
ACRT Inc.
4636 Missouri Flat Road
Placerville, CA 95667
(530) 513-2015

O'BRIEN, Todd
Trees, Inc.
1557 Starr Drive, Ste. C
Yuba City, CA 95993
(209) 403-6173

WEGER, Mike
Weger Fire Investigations, Inc.
2003 E. Parkview Ct.
Visalia, CA
(559) 623-1212

CARLSON, Alan
Alan Carlson & Associates LLC
13989 Kelsey Drive
Chico, CA 95973
5 - EVIDENCE:

E-1 – Gray Pine
E-2 – Stump of Gray Pine
E-3 – Powerline Conductor
E-4 - Photographs
E-5 – Photographs received from CAL FIRE Air Attack 440
E-6 – Images from PG&E Red Corral Camera

See Attachment #9 for the LE-75e Evidence Log
6 – CONDITION(S):

Weather:

At scene weather conditions on September 9, 2015, at 4:50 PM:
- Temperature: 98° F
- Relative Humidity: 8%
- Wind: W to NW at 4 MPH
- Weather was taken approximately 400 feet from the SOA.

Mount Zion RAWS on September 9, 2015, at 2:56 PM:
- Temperature: 99° F
- Relative Humidity: 10%
- Wind: W to NW at 5 MPH
- Distance from RAWS to SOA approximately 4.2 miles.

Campo Seco RAWS on September 9, 2015, at 2:59 PM:
- Temperature: 106° F
- Relative Humidity: 8%
- Wind: NW at 5 MPH
- Distance from RAWS to SOA approximately 12.2 miles.
7 – EQUIPMENT:

Pacific Gas & Electric Corporation Electra 1101 Circuit (Martell 1102) powerline facilities.
8 - PROPERTY:
The Butte Incident originated on the following property:

APN: [Redacted]
Address: Across from 17501 Butte Mountain Road, Jackson, CA 95642
Owner: Kirk Chester A & Dorothy L 1990 Trust
C/O: Jack and Diane CAUFIELD – 1021 S. Pleasant Ave, Lodi, CA 95240
County: Amador

Latitude: 38 20.339
Longitude: -120 41.704

The fire ultimately burned approximately 70,868 acres within Amador and Calaveras counties
9 - NARRATIVE:

On Wednesday, September 9, 2015, at approximately 2:26 PM, the Camino Emergency Command Center (ECC) dispatched CAL FIRE and cooperating agency units to a reported wildland fire near Butte Mountain Road and Charamuga Ranch Road east of the community of Jackson in Amador County (See Attachment #1). Fire units contained the fire on October 1, 2015. The fire burned 70,868 acres and damaged or destroyed approximately 965 structures (See Attachment #2). The fire also resulted in 2 fatalities and 1 injury.

I, Gianni MUSCHETTO, responded at the time of dispatch to investigate the fire. While responding, units were advised that powerlines were possibly down at the fire. While responding, I observed the smoke column from the fire and could see it was blowing in a southeast direction due to a north/northwest wind. The smoke was light gray in color when first observed and continually got darker until it was very dark gray in color. I arrived at scene at approximately 2:40 PM and saw someone in a backhoe tractor driving from 17501 Butte Mountain Road through a field towards the fire. I drove south on Charamuga Ranch Road and could see the fire was approximately 2 to 3 acres in size, burning in oak, pine and brush vegetation. The fire was advancing to the southeast towards residences and structures at the end of Charamuga Ranch Road. As I travelled south on the road I came up to powerlines that ran east to west across the road. The powerlines extended west across a field and into the area of the fire. From the road I did not see any powerlines down but I lost sight of the lines as they extended into the smoke of the fire and heavier oak and pine vegetation. As I continued south to the end of Charamuga Ranch Road I observed the head of the fire had not reached the residence at the end of the road but there were numerous spot fires igniting in the pasture and around the structures surrounding the residence. Fire units began to arrive and suppress the spot fires and make access to the main fire. I made contact with CAL FIRE Battalion Chief Mike OLIVARRIA and Fire Captain Jarrod CLINKENBEARD at the end of Charamuga Ranch Road. We immediately observed additional spot fires southeast of the residence we were at. These fires were approximately ¼ acre in size and were located below the smoke column of the main fire which was blowing southeast.
over the Mokelumne river canyon. The spot fires were burning in the steep river
canyon. OLIVARRIA asked if I could help locate any access points into the steep
canyon to get to the spot fires. I assisted fire suppression units and returned to
Charamuga Ranch Road to conduct the origin and cause investigation of the fire at
approximately 3:30 PM. I made access to the area where I initially observed the fire
burning when I arrived at scene. The fires progression had been stopped in that area
and crews were finishing cutting line and mopping up the perimeter of that area of the
fire. I walked west from Charamuga Ranch Road to the eastern edge of the fire. From
the edge of the fire I could see powerlines ran east to west through the northern portion
of the fire. The powerlines appeared intact and fire units never reported finding
powerlines down in the area. I also saw the backhoe tractor I observed when I first
arrived was parked near the northeast end of the fire. I did not see the operator around
but could see where he attempted to scrape fire breaks on the east end of the fire. I
walked south along the fire line and began observing burn pattern indicators and looking
for evidence. As I walked around the perimeter and then back I observed burn pattern
indicators such as angle of char, grass stem fall, vegetation freeze and white ash
deposits. These macro-scale indicators showed the fires progression as advancing
south through the brush and trees south of the powerlines, backing north through the
pine and oak trees north of the powerlines and the flanks of the fire burning laterally to
the east and west. These burn pattern indicators were consistent with the fire behavior I
observed while responding to the incident and when I arrived at scene. During my walk
around I also observed the remains of a partially burned pile of what appeared to be tree
limbs located north of the powerlines along the northeast edge of the fire perimeter.
Based on my observations of the burn pattern indicators and fire behavior I determined
the GOA of the fire was an area approximately 75 feet by 75 feet in size located
between the stand of trees on the north side of the powerlines and the stand of trees
and brush on the south side of the powerlines and approximately fifty feet east of the
utility pole with a blue number “7” painted on it. The burned remains of the pile of tree
limbs I observed along the northeast edge of the fire were outside of the GOA. As I
walked around the perimeter of the GOA I observed burn pattern indicators and
continued to look for evidence. As I walked around the perimeter and then back again in
the opposite direction I observed burn pattern indicators along the south and southwest
edge of the GOA showing the fire advanced in that direction. Along the western
perimeter of the GOA I observed grass stem fall, sooting and protection indicators
showing the fire moving laterally towards the utility pole with the blue number “7” painted
on it. On the north and northeast perimeter of the GOA I observed angle of char,
protection, sooting and degree of damage indicators showing the fire backed north and
northeast through a stand of pine and oak trees. On the eastern perimeter of the GOA I
observed grass stem fall, sooting, protection and degree of damage indicators showing
the fire moving laterally to the east below the powerlines and to the southeast through
trees on the south side of the powerlines and into the predominantly grass fuels. From
the perimeter of the GOA I observed the overhead powerlines generally ran east to west
over the GOA. The powerlines consisted of three separate conductors that spanned
over the top of the GOA between the utility pole with a blue number “7” painted on it to
the west and a utility pole with a metal PG&E tag #099651 on it to the east. Within the
GOA I observed several burning tree stumps and logs on the north side of the
powerlines adjacent to the stand of pine and oak trees. I also observed a pine tree that
had fallen over and was lying below the powerlines. The pine tree appeared to be
mostly unburned and was intact. The base of the tree appeared to still be in the ground
and the stem of the tree was bent towards the powerlines. The lower stem (trunk) of the
tree was off of the ground with only approximately the top 1/3 of the tree in contact with
the ground below the powerlines.
I walked around to the south side of the GOA and entered from the advancing run of the
fire. I walked in an S-shape pattern across (east/west) the advancing run of the fire until
I identified a transition to lateral progression. I identified advancing indicators with red
colored flags and lateral indicators with yellow colored flags. As I moved north I reached
the top of the pine tree that had fallen over and was lying below the powerlines. The top
portion of the tree appeared to be unburned except for an approximate one foot section
of the stem that was burned and appeared to have sap bubbles on the stem. There
were also two small branches that appeared to have been burned through in the same
area. The rest of the top 1/3 of the tree that was in contact with the ground appeared unburned. There were still green needles on the branches. I marked the burned portion of the tree with a white colored flag as potential evidence. This burned section of the stem appeared to have been exposed to a significant amount of heat which was not consistent with the condition of the rest of the tree that was in contact with the ground. It appeared this section had come into contact with one of the overhead powerline conductors prior to falling to the ground. I did not observe anything on the ground that would have caused the tree to burn only in that small section of the tree stem that was lying on the ground. As I observed the rest of the tree, I saw the lower 1/3 of the tree stem had sustained burn damage consistent with burn damage I observed on adjacent trees. It appeared that the top portion of the tree was still in contact with the conductor when the wildland fire burned the surface fuels causing burn damage to the base of the tree and not the upper portion of the tree. I continued observing burn pattern indicators and determined the Specific Origin Area (SOA) was an area approximately 10 feet wide by 25 feet long located north of the center conductor of the powerlines. I conducted an S-shape grid search of the SOA. I searched each lane visually and ran a magnet over the area as I progressed. I continued until backing indicators were identified at the stand of pine trees north of the powerlines. No evidence of an ignition source was found other than the overhead powerlines and fallen pine tree that appeared to have contacted a conductor. I observed each conductor of the powerlines over the SOA with binoculars. There appeared to be discoloration on the northern most conductor over the area where the pine tree was lying below the powerlines. I did not observe any discoloration or damage to the other two conductors. (See Sketch, Attachment #3).

At approximately 4:50 PM I took the weather at scene. I took the weather from outside of the fire perimeter in the area east of the fire (See RAWS Data, Attachment #4). After taking the weather I began taking digital photographs of the scene (See Attachment #5). CAL FIRE Captain Nate BARCKLAY arrived at scene and walked to my location.

BARCKLAY assisted me with taking measurements within the GOA. We measured the length of the tree that had fallen and was lying below the powerlines. We measured along the stem of the tree from the ground at the base of the tree to the top of the tree.
which was lying on the ground. The tree measured at approximately 44’ 2” in height.
We measured along the ground from the base of the tree to the northern most powerline
conductor where I observed discoloration on the conductor. The distance measured at
approximately 23’ 6”. We also took a measurement from that location under the
conductor to the utility pole with the blue #7 painted on it. The distance measured at
approximately 105’ 3”.

At approximately 5:30 PM two men walked over to my location from the direction of a
residence along Butte Mountain Road. I recognized one of the men as Louie PODESTA
Jr. who works for the Jackson City Fire Department. I made contact with PODESTA Jr.
who introduced me to his father, Louie PODESTA Sr. PODESTA Jr. told me he
reported the fire and had driven the backhoe tractor over to try and put line around the
fire. At approximately 5:30 PM I interviewed PODESTA Jr. separate from his father
(See Attachment #6). PODESTA Jr. told me the following in summary:

Louie PODESTA Jr. told me his parents lease the property where the fire started. He
told me he was at the barn across from 17501 Butte Mountain Road cleaning it up for a
wedding. He told me he saw smoke over the hill in the trees in the area where the
powerlines run through the trees. He looked at his cell phone log and told me he called
the Jackson City Fire Station at 2:21 PM to report the fire, then immediately called the
CAL FIRE Camino ECC to report the fire. PODESTA Jr. told me he reported that
powerlines were possibly down because the fire was in the area of the powerlines and
he didn’t know of anything else in the area that could have caused the fire. He told me
prior to seeing the fire he did not hear or see anything in the direction of the fire. He told
me the gate to access the property was next to where he was working and nobody went
into the field. PODESTA Jr. told me he also called the responding CAL FIRE Battalion
Chief and told him the fire was near Charamuga Ranch Road. He then called his mom
who was home next door and told her about the fire. PODESTA Jr. told me he got on
the backhoe tractor at the barn and drove through the field to the fire. He told me when
he got there the fire was a couple of acres in size. He pointed to the stand of pine and
oak trees on the north side of the powerlines and told me the fire was creeping through
the trees. He told me the wind was pushing the main fire south and had already spread
to the neighbors house. PODESTA Jr. showed me where he tried to cut a fire line with
the tractor on the north and east side of the fire on the edge of the stand of trees.
PODESTA Jr. told me when he got to the fire there was nobody around and he was not
aware of anyone being on the property or of any ongoing trespass issues. PODESTA
Jr. told me the owners of the property don't live in the area but they had been up for
several days and were staying at 17501 Butte Mountain Road and were across the
street from the barn he was working on. I asked PODESTA Jr. if he or anyone else had
been burning the brush pile I observed along the edge of the fire north of the powerlines.
PODESTA Jr. told me, "Absolutely not". PODESTA Jr. told me he did not have any
other information as to what caused the fire and I concluded the interview.

I then interviewed Louie PODESTA Sr. separately at approximately 5:45 PM (See
Attachment #6). PODESTA Sr. told me the following in summary:

Louie PODESTA Sr. told me he was not home when the fire started and was at work
most of the day. PODESTA Sr. told me he has not been out in the field in a long time
other than at the barn next to Butte Mountain Road. He told me he didn't know of
anyone that would have been in the field and has not had any trespass issues. I asked
him about the partially burned pile of brush along the edge of the fire north of the
powerlines. He told me he had not burned the pile and believed it was left by the tree
trimmers when they trimmed around the powerlines. PODESTA Sr. told me tree crews
had cut down a couple of trees next to the powerlines during the winter or spring of this
year. PODESTA Sr. did not know the last time anyone came to inspect the lines or
trees. He told me he did not have any information as to what may have caused the fire
and I concluded the interview.

After completing the interviews, I completed taking digital photographs and taking
measurements within the GOA. The pine tree lying on the ground within the SOA was
labeled as Evidence Item #1.

At approximately 6:00 PM I contacted CAL FIRE Battalion Chief Chris VAN COR, advised him of the incident and requested a CAL FIRE LIDAR team and an arborist. VAN COR told me he would respond to my location and would work on ordering the resources requested. VAN COR arrived at scene at approximately 9:00 PM and told me the resources ordered would be out the next day. I maintained security of the origin throughout the night.

On September 10, 2015, at approximately 7:20 AM, VAN COR returned to my location and advised me the LIDAR team would be out this morning and the arborist would be out in the afternoon. The CAL FIRE LIDAR team arrived at approximately 9:45 AM and consisted of Garrett JACKSON and Jeff GAWRONSKI. VAN COR maintained security of the origin with the LIDAR team at scene and I cleared the incident. I returned to the incident at 1:10 PM and met with arborist Michael MAHONEY who had just arrived at the incident. I asked MAHONEY to complete an Arborist Report for the tree (Evidence Item #1) which was still in place and the surrounding stand of trees and vegetation. MAHONEY identified the pine (Evidence Item #1) as a Gray Pine. MAHONEY finished at approximately 4:10 PM and left the incident (See Attachment #7). The CAL FIRE LIDAR team finished at 4:55 PM and left the incident (See Attachment #8). VAN COR left the incident at 6:15 PM and I maintained security of the origin throughout the night.

On September 11, 2015, at approximately 7:15 AM, VAN COR returned to the incident. I collected Evidence Item #1 at approximately 8:00 AM. The tree was cut into several sections for transport and storage. VAN COR maintained security of the origin and I submitted Evidence Item #1 into the CAL FIRE evidence locker at approximately 10:23 AM. I returned to the incident and a bucket truck was ordered so I could get a vantage point to observe the powerline conductors and take photographs. A Trees Inc. bucket truck arrived at the origin at approximately 12:25 PM and I met with General Foreman Todd O'BRIEN. I went up in the bucket and observed discoloration on the northern most conductor over the SOA and took photographs. I did not observe any discoloration.
or damage to the other two conductors. Trees Inc. left the incident at 1:30 PM.
I contacted the incident base and asked them to contact the PG&E representative at the
base and have them contact me at the origin. At approximately 2:20 PM, PG&E
representatives Robert CUPP and Jason REGAN arrived at the origin. I advised them
of my observations to that point and that I would need to collect a section of the
powerline conductor as evidence. They began to make some phone calls and left the
origin at approximately 2:40 PM. At approximately 3:00 PM, PG&E representative Mark
RASMUSSEN arrived at the origin. I showed him what conductor section was to be
collected as evidence and he gathered the information needed for a crew to come do the
work. At approximately 3:05 PM CUPP and REGAN returned to the origin. They told
me a PG&E investigator was enroute from San Francisco and they could not remove the
conductor until the investigator arrived. At approximately 3:22 PM the PG&E
representatives left the origin. At approximately 5:50 PM, PG&E representative R.
YARNELL and ACRT Inc. representatives Shawn STOWE and B. BOYD arrived at the
origin and observed the GOA. STOWE had a tablet with him and was looking at the
vegetation work done within that section of the powerlines. He told me two pine trees
adjacent to the tree I collected as evidence had been removed in January of 2015. It
appeared the stumps and downed logs I observed in the SOA were part of those trees.
He also told me Trees, Inc. does the trimming and removal work. STOWE, BOYD and
YARNELL left the origin at 6:15 PM. I left the origin at 6:25 PM and VAN COR
maintained security of the origin. At 8:24 PM I received an email from CAL FIRE Staff
Chief Shane CUNNINGHAM (See Attachment #10). The email was forwarded by
several people and the original email was from PG&E Helicopter Operations Department
Manager Ken MCCLURE. The email stated that a PG&E fire patrol aircraft was one of
the first to report the Butte Incident and included three photos taken from the aircraft.
The photographs were taken at approximately 2:24 PM on 9/9/15 and show the fire’s
location and fire behavior. The information shown in the photos are consistent with my
GOA determination, confirming my location determination and fire behavior
observations. I returned to the origin at approximately 9:15 PM and VAN COR left the
origin area. I maintained security of the origin throughout the night.
On September 12, 2015, at approximately 8:15 AM, VAN COR arrived at the origin.
Neither of us heard from the PG&E investigator or were given an estimated arrival time.
At approximately 11:00 AM, PG&E representatives Mark RASMUSSEN, Niel FISCHER,
Micah BROSnan and Kamran RASHEED arrived at the origin to observe the GOA.
FISCHER, BROSnan and RASHEED left the origin area at 11:35 AM. At 12:05 PM,
RASMUSSEN told us PG&E investigator Mike WEGER was going to arrive on
September 13th at about 12:00 PM. We contacted the incident base and placed an
order for a security officer to our location to maintain security of the origin for the night.
 Paladin Security officer A. FINCH arrived at the origin at 12:10 PM. I showed FINCH the
flagged off area surrounding the GOA and the overhead powerlines. He was given
direction not to allow any access into the flagged area or access to the overhead
powerlines. If anyone came to the origin he was to document their contact information
and they could only view the area from outside the flagged area as well as call me and
let me know who was there. At approximately 12:30 PM, RASMUSSEN left the origin
area. After confirming FINCH’s instructions were clear, VAN COR and I left the origin
area at approximately 12:35 PM. At approximately 1:41 PM I received a call from
FINCH. He told me PG&E representatives Eric BACK, Kamran RASHEED and
Rebecca JOHNSON came to the origin area. FINCH told me they were not allowed
within the flagged area and they left. FINCH was relieved by Paladin Security officer
VENTURINO and at 7:00 PM VENTURINO noted on his log that two PG&E employees
were denied access to the site.

On September 13, 2015, at approximately 8:00 AM I arrived at the origin and met with
security officer A. FINCH. VAN COR arrived at 8:10 AM and we waited for the PG&E,
ACRT and Trees Inc. representatives and investigators. Representatives from ACRT
and Trees Inc. with investigator Alan CARLSON arrived at approximately 9:41 AM. I
showed CARLSON the location of the GOA and he began his documentation of the
area. They also had a LIDAR team with them and they began their documentation
outside the flagged area.
At approximately 11:20 AM, a woman came over to our location from the residence at the end of Charamuga Ranch Road. I recognized her as someone I contacted when I first arrived at the fire on September 9th. I contacted the woman and she identified herself as Jaime AFFONSO. She said she walked over to see why so many vehicles were over here since the fire was mostly burning in Calaveras. I told her I was investigating the origin and cause of the fire and if I could ask her some questions. She agreed (See Attachment #6) and AFFONSO told me the following in summary:

AFFONSO told me on September 9th she was home babysitting her two grandchildren. She was in the kitchen and noticed it got darker outside, she looked out and saw smoke. She went out and saw a fire burning between her house and the Podesta’s. She told me she called 911 to report the fire. AFFONSO told me prior to seeing the fire she did not lose power or notice any power surges. She told me she was outside on her porch about ten minutes before the fire and did not hear or see anyone in the area where the fire occurred. She told me she did not hear any vehicles or equipment in the area prior to the fire. AFFONSO told me she did not have any information as to what may have caused the fire and I concluded the interview.

At approximately 11:30 AM, PG&E Area Supervisor RASMUSSEN arrived with investigator Mike WEGER. I showed WEGER the GOA and he began his documentation of the area. I remained at the origin during this time and provided CARLSON and WEGER with information when asked. At approximately 1:58 PM, the PG&E, ACRT and Trees Inc. representatives stated they would like to collect the stump from the tree (Evidence Item #1). We all agreed the stump would be collected as evidence and retained by CAL FIRE. The stump was cut with a hand saw by Trees Inc. representative Todd O’BRIEN. After we completed taking photographs I collected the tree stump as Evidence Item #2 at approximately 2:04 PM.

At approximately 3:40 PM, PG&E had a bucket truck put in place within the GOA so we could photograph the powerline conductors prior to having any removed as evidence.
went up in the bucket with PG&E representative RASMUSSEN. I again observed and photographed discoloration on the northern most conductor as I had when I went up in the bucket on September 11th. I did not observe discoloration or damage to the center or southern conductors. RASMUSSEN and I observed the discoloration on the northern conductor was visible over several feet along the conductor. He told me it appeared the tree slid along the conductor before falling to the ground. After taking photos, I identified a twenty foot section of the northern conductor, over the GOA, to be collected as evidence. WEGER and CARLSON also went up in the bucket to view and photograph the conductors. They agreed the twenty foot section I identified was the only section of conductor needed to be retained as evidence. After WEGER and CARLSON completed their documentation, PG&E representatives removed the twenty foot conductor section at approximately 4:53 PM. At this time, CAL FIRE, PG&E, ACRT and Trees Inc. representatives present were able to visually observe the conductor and take photographs. At approximately 5:22 PM, I collected the section of conductor as Evidence Item #3. At approximately 5:45 PM, all parties left the origin area and CAL FIRE no longer maintained security of the origin area. Evidence Items #1 – 3 were secured and retained within a CAL FIRE evidence locker.

On September 16, 2015, VAN COR and I took a helicopter flight over the origin area of the fire. During the flight I took several photographs of the area. All the photographs I had taken to this point in the incident were retained as Evidence Item #4.

On September 18, 2015, at approximately 11:00 AM, myself, as well as VAN COR and Dave WISEMAN from CAL FIRE met with PG&E representatives E. BACK and A. BABAR as well as CPUC representative R. YAMAMOTO in Jackson at their request. We accompanied them to the origin area of the fire so R. YAMAMOTO could observe the area. We all left the origin area at approximately 11:37 AM.

At approximately 12:30 PM I met with Jack and Diane CAUFIELD at 17501 Butte Mountain Road and asked if I could interview them regarding the fire. They told me their family owns the property at 17501 Butte Mountain Road which includes the barn and
property on the south side of the road. The CAUFIELD’s told me the following in
summary (See Attachment #6):
D. CAUFIELD told me her family had gotten together at the ranch for Labor Day
weekend and when everyone left, she and Jack stayed a few extra days. She told me
on September 9th they were sitting in the shade and pointed to an area on the north side
of the house. Diane and Jack told me they didn’t know there was a fire until Louie
PODESTA Jr. yelled to them from the barn. J. CAUFIELD told me by the time he saw
smoke it seemed like the fire engines were already driving by their house. J. CAUFIELD
told me he saw the smoke in the area where the powerlines go through the trees and
pointed it out to me from the house. Both Jack and Diane told me they didn’t know
anyone who would have been in the field and did not hear or see anything in the area of
the fire. The CAUFIELD’s told me they did not have any information as to what may
have caused the fire and I concluded the interview.

At approximately 2:50 PM I met with CAL FIRE Battalion Chief Frank PODESTA at the
CAL FIRE Columbia Air Attack Base. PODESTA was the initial air attack officer on the
fire and had taken photographs of the incident. I collected the photos taken by
PODESTA as Evidence Item #5.
On September 19, 2015, I received an email from PG&E representative Gayle GOUGH.
The email provided me a link to download PG&E vegetation and maintenance inspection
records for the origin area of the fire which I had requested (See Attachment #11). The
documentation provided includes aerial images and LIDAR data of the origin area as
well as vegetation management work request reports for the origin area location. They
also included photos taken of the origin area after the fire. The documents state the
aerial images were obtained on 6/24 and 6/25 and the LIDAR data obtained on 7/19 and
7/20, the year was not specified. I observed the images provided with the LIDAR data
showing the tree height of the canopy adjacent to the powerline conductors. I observed
the images provided and was unable to identify individual trees within the canopy,
specifically the Gray Pine (Evidence Item #1) on the north side of the powerlines. If
PG&E and/or its sub-contractors were using these images and LIDAR data to conduct a
vegetation management or hazard inspection along the powerlines during the time frame shown on the images, it does not appear an adequate inspection of individual trees could be completed. For example, the Gray Pine (Evidence Item #1) cannot be clearly identified in the images or LIDAR data provided. Therefore, it cannot be determined if the tree is succumbing to the prolonged drought and showing signs of dying or disease and/or if it's leaning towards the powerline conductors and needing to be trimmed or removed in accordance with Public Resources Code 4293.

I also reviewed the vegetation management reports provided. The reports refer to the powerlines as both the Electra 1101 and Martell 1102 circuits. PG&E representative RASMUSSEN told me they are the same circuit and include the powerlines identified in the origin area. He told me the lines run from Electra to the Martell substation and the vegetation management companies refer to it as the Martell 1102 because they work from the substation out. The documents show an inspection of the origin area occurred in October 2014 and identified the removal of the two Gray Pines adjacent to the Gray Pine identified as Evidence Item #1 as well as the trimming of other trees. The inspection was completed by PG&E sub-contractor ACRT. The report states the trees were removed in January 2015 which is consistent with what ACRT representative STOWE told me. It shows PG&E sub-contractor Trees, Inc. as the company that completed the work.

In the reports provided, there was no documentation regarding the interior trees that would be exposed after the removal of the two Gray Pines in January. There is nothing from the October 2014 ACRT inspection regarding the stand or the need to re-evaluate the interior trees once the outer (edge) trees were removed. The reports show Trees, Inc. removed the trees in January 2015. There is nothing documenting the condition of the newly exposed interior trees or a request to have them evaluated after that date. The documents provided also have the vegetation management inspection reports for the clearance around the base of poles with specific equipment. Two of the poles identified at 17501 Butte Mountain Road were pole #099650 and #099651. These poles were at the west and east edges of the fire and the Gray Pine (Evidence Item #1) was located along one of the spans running between these poles. The reports for each pole
show an inspection date of April 15, 2015. They also show work request numbers for each pole with completion dates of April 15, 2015 and July 27, 2015. The reports document work done at the base of the two poles but there is nothing documenting if the powerline conductors or vegetation was inspected between the two poles.

Between September 22, 2015, through February 17, 2016, three evidence viewings for the Butte Incident were held at the CAL FIRE Headquarters in Auburn. (See Attachment #12) for the evidence viewing documentation.

On February 29, 2016, I received the Arborist Report from M. MAHONEY (See Attachment #7). The following is a summary of the report:

The report identifies the Gray Pine (Evidence Item #1) as being encompassed by a stand of Gray Pines. MAHONEY states in the report when trees are captured and develop within a closed stand, they have narrow growth rings and poor stem taper. When the stand is altered and captured interior trees are exposed to open spaces, whether for right-of-way clearance or other reasons, they are prone to failure. He states it's apparent that the act of cutting the larger pines that previously contained the stand exposed the interior trees. The report provides a sketch of the Gray Pine (Evidence Item #1) and certain trees in the stand and their proximity with the conductors south of the stand along with a compass rose and indication of the path of the sun. MAHONEY states it is well understood that trees have a physical orientation toward the path of the sun and this can have significant consequences for maintaining safety. In his observations of the Gray Pine (Evidence Item #1), MAHONEY states the burn marks on the tree in the second increment beneath the tip of growth are characteristic of contact with energized electrical equipment. He describes the stem at this location as severely charred (top and bottom) with two lateral limbs whose tips caught fire, were burned-off, and fell onto the easement below. He states there is less charring on the two lateral branches indicating they rested on the conductor very briefly compared to the larger main stem.
MAHONEY states there are significant growth and development implications for the captured tree (Evidence Item #1) released in the 2015 growing season. The subject tree (Evidence Item #1) was already tall enough to reach the conductor and when it was allowed greater solar exposure tip extension was fortified. MAHONEY also made several arboricultural hypotheses in his report; the following are some of those:

- The unusual appearance of the subject tree was immediately apparent
- Burn marks on the tree top corresponded with likely tree/line contact.
- Site inspection and photographic evidence demonstrate the tree lacked reaction wood and was unable to stand on its own.
- Recent tree/line maintenance activities caused the tree to fail.
- Trees that are captured within the confines of a dense stand do not develop reaction wood, have poor trunk taper, and are inherently unstable.
- Stable trees were removed exposing the weak interior trees to the elements.
- Visual inspection of burns & contact points and the series of nodes and internodes that correspond to annual growth increments demonstrate that the tree was sufficiently tall to reach the conductor in the 2014 growing season, before adjacent larger trees were removed.
- Stable trees were removed from the stand edge and they exposed weak interior trees to physical properties of the natural elements.
- Prevailing winds are to the south in the Jackson CA vicinity predisposing the unstable Gray pine to fall toward the conductors.
- Secondary growth developing in the subject tree's canopy and other recently exposed tree canopies would be most prolific on their southern side - facing the energized conductors.
- Gravitational leverage resulting from new foliage and tip growth causes the tree to fall to the south.

This concludes the summary of the Arborist Report.
Opinions/Conclusions:
I believe based on my training, education, experience, observations, evidence, 911 audio, reports and witness statements the wildland fire (Butte Incident) was caused when a Gray Pine (Evidence Item #1) contacted a PG&E powerline conductor which ignited portions of the tree. Burning embers from this contact with the conductor dropped into the fine dead fuels below the conductor, igniting the wildland fire which burned onto numerous properties not owned or controlled by PG&E in violation of PRC 4421. While conducting the origin and cause investigation I was able to exclude all other standard wildland fire causes.
During the investigation I determined PG&E and/or its sub-contractors ACRT and Trees, Inc. conducted powerline vegetation management inspections and maintenance in 2014-2015 within the area of origin. They identified (October 2014) and removed (January 2015) two Gray Pines on the outer edge of the pine stand on the north side of the powerline conductor identified as being within the GOA of the fire. The removal of these two pines exposed the interior trees, including the Gray Pine (Evidence Item #1) that were previously captured and developed within the closed stand provided by those removed pines. These now exposed trees were left open to the south, towards the path of the sun and the powerlines. It is known, when a stand is altered and captured interior trees are exposed to open spaces, they are prone to failure. PG&E and/or its sub-contractors ACRT and Trees, Inc. failed to identify this during their 2014 inspection when the pine trees were identified for removal, or in January 2015 when the trees were removed, or during any subsequent inspections/maintenance conducted on that section of powerlines and poles. Failing to identify the potential hazard of leaving weaker, inherently unstable trees on the edge of the stand, without conducting maintenance on them, ultimately led to the failure of the Gray Pine (Evidence Item #1) which contacted the powerline conductor operated by PG&E and ignited the uncontrolled wildland fire.

Gianni Muschetto, #15
Battalion Chief, CAL FIRE
10 - ATTACHMENTS:

1. FC-34 Interagency Report of Incident and Dispatch Action
2. Butte Incident Damage Inspection Summary
3. Incident Sketch
4. Weather Data
5. Photographs
6. LE71’s – Witness Interviews
7. Arborist Report
8. LIDAR Mapping Exhibit
9. LE75e – Evidence Log
10. Email and Photographs sent by PG&E Helicopter Operations
    Department Manager Ken MCCLURE
11. PG&E Vegetation and Maintenance Inspection Records
12. Evidence Viewing Documents