

Accident Investigation

N711GH – UH-1H Super Huey

NTSB Investigation No. WPR20LA280

19 AUG 2020



Investigation conducted by:

Benjamin Berman, Helicopter Program Manager



Marty Buno, Chief of Maintenance



California Department of Forestry and Fire Protection
Aviation Management Unit



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SECTION 1. NTSB CERTIFICATION OF PARTY REPRESENTATIVE



NTSB Investigation No: WPR20LA280

Date of Accident: 08/19/2020

Accident Location: Coalinga, CA

CERTIFICATION OF PARTY REPRESENTATIVE¹

I acknowledge that I am participating in the above-referenced accident or incident investigation, on behalf of my employer who has been named a party to the National Transportation Safety Board (NTSB) safety investigation, for the purpose of providing technical assistance to the NTSB's evidence documentation and fact-finding activities. I understand that as a party participant, I and my organization shall be responsive to the direction of NTSB personnel and may lose party status for conduct that is prejudicial to the investigation or inconsistent with NTSB policies or instructions. No information pertaining to the accident, or in any manner relevant to the investigation, may be withheld from the NTSB by any party or party participant.

I further acknowledge that I have familiarized myself with the attached copies of the revised NTSB Accident/Incident Investigation Procedures (49 C.F.R. Part 831) and "Information and Guidance for Parties to NTSB Accident and Incident Investigations," and will comply, and, if the party coordinator for my party, take all reasonable steps to ensure that the employees and participants of my organization comply, with these requirements. This includes, but is not limited to, the provisions of 49 C.F.R. §§ 831.11 and 831.13, which, respectively, specify certain criteria for participation in NTSB investigations and limitations on the dissemination of investigation information.

No party coordinator or representative may occupy a legal position or be a person who also represents claimants or insurers. I certify that my participation is not on behalf of either claimants or insurers, and that, although factual information obtained as a result of participating in the NTSB investigation may ultimately be used in litigation (at the appropriate time, and in a manner that is not inconsistent with the provisions of 49 C.F.R. § 831.13 and 49 U.S.C. § 1154), my participation is to assist the NTSB safety investigation and not for the purposes of preparing for litigation. I also certify that, after the NTSB Investigator-in-Charge (IIC) releases the parties and party participants from the restrictions on dissemination of investigative information specified in 49 C.F.R. § 831.13, neither I nor my party's organization will in any way assert in civil litigation arising out of the accident any claim of privilege for information or records received as a result of my participation in the NTSB investigation.

Digitally signed by benjamin.berman@fire.ca.gov

Signature

8/19/2020

Date

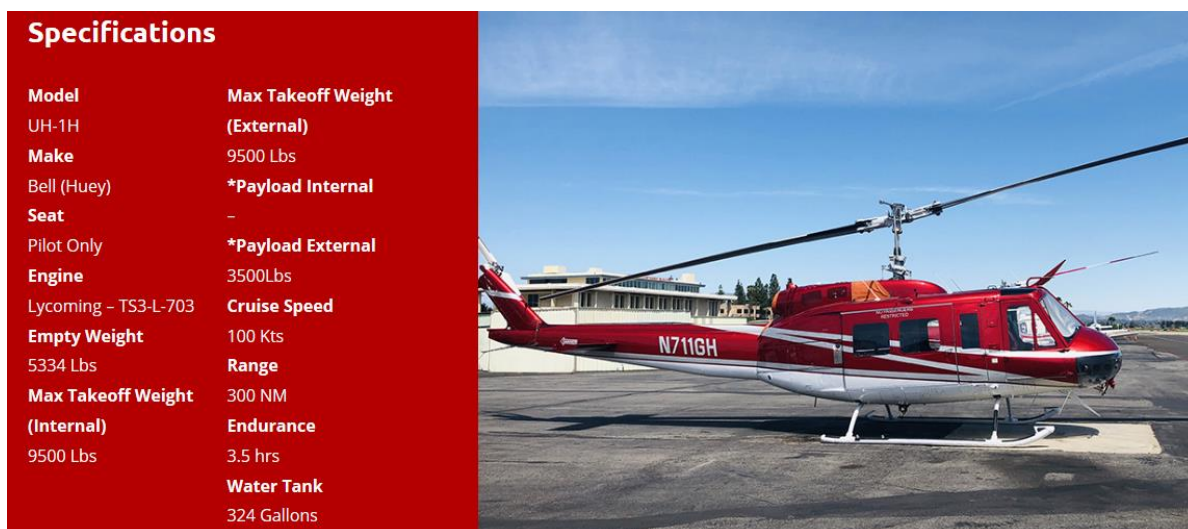
Benjamin J. Berman, Aviation Officer II, Helicopter Program Manager
Name & Title

California Department of Forestry and Fire Protection (CAL FIRE)
Party Organization/Employer

¹ In aviation investigations this form may also be referred to as "Statement of Party Representatives to NTSB Investigation."

SECTION 2. EXECUTIVE SUMMARY

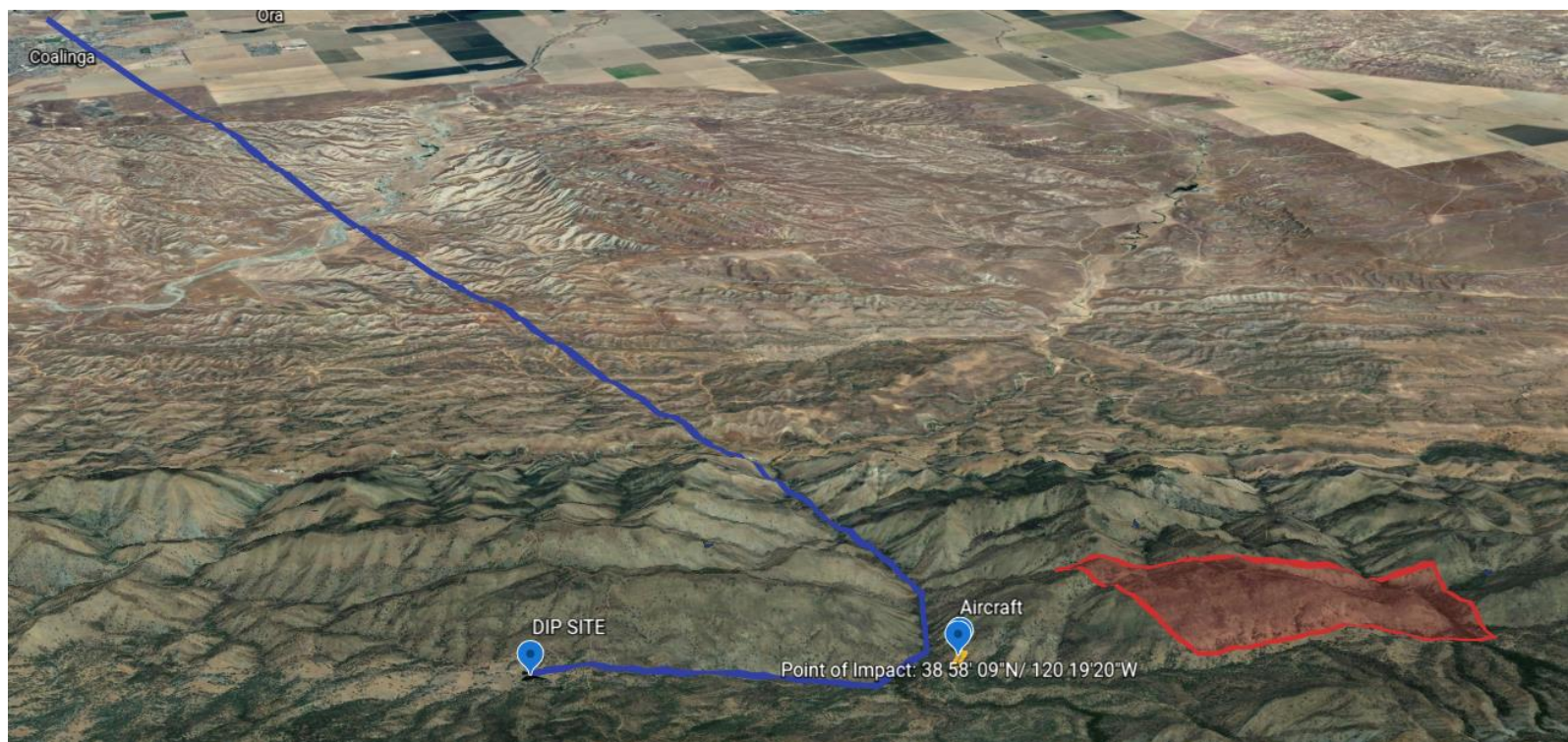
On August 19, 2020 at approximately 9:44 a.m. (all times are Pacific Standard Time), the mishap aircraft (MA), tail number N711GH, a UH-1H type aircraft impacted the ground and came to rest upside down approximately 83 feet south (downhill) of point of impact. The MA was assigned as a CAL FIRE - Call When Needed (CWN) contracted aircraft in support of the Hills Fire Incident approximately 11.5 NM SSE of Coalinga, CA. The MA was owned and maintained by Guardian Helicopters, Inc. in Fillmore, CA. The Mishap Pilot (MP) was reached by CAL FIRE crews at approximately 12:00 p.m., at which time, the aircraft fire caused a reported 20-acre wildfire. CAL FIRE crews were given orders by the Incident Commander to extinguish the fire and protect the crash site. MA was catastrophically damaged beyond recovery from ground impact and subsequent fire. There were no other injuries or property damage.

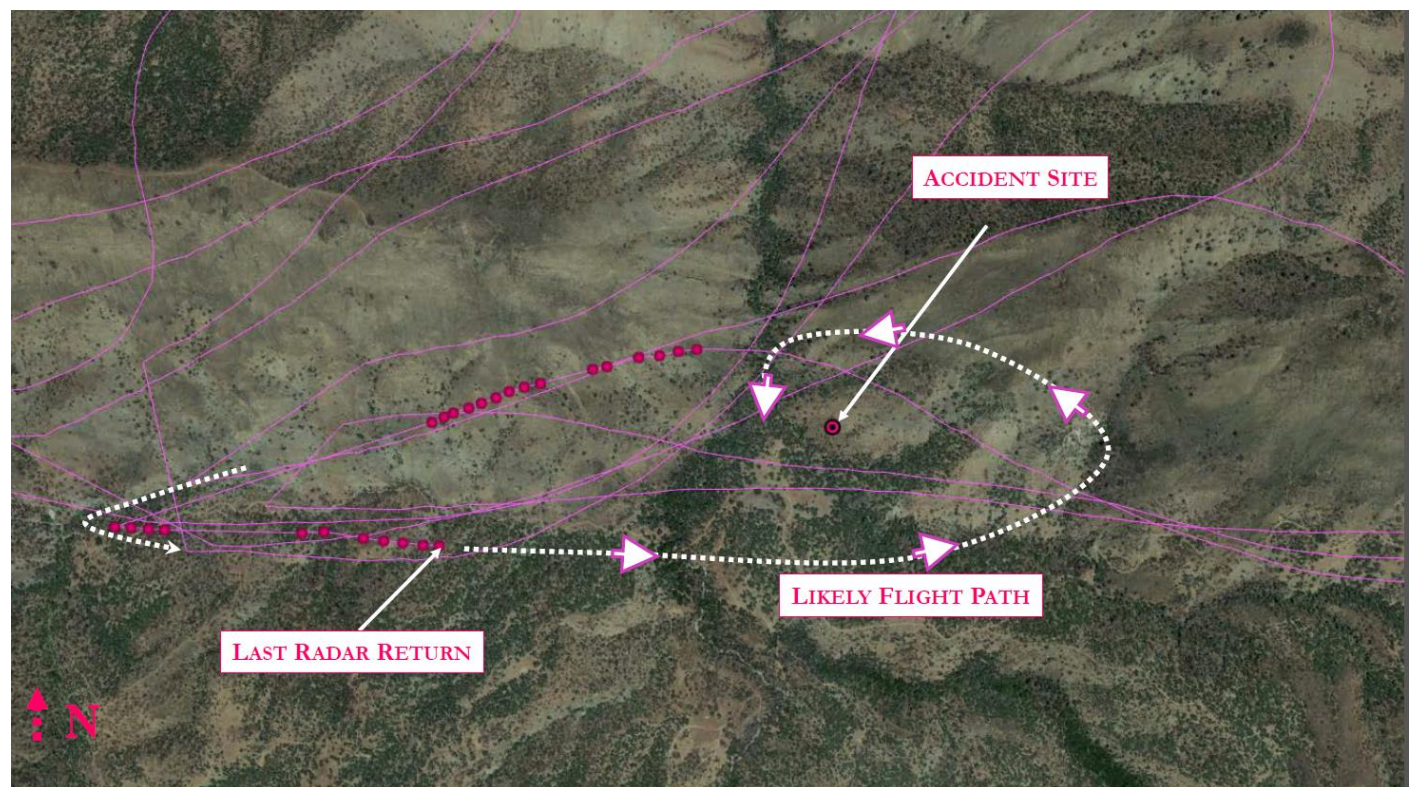
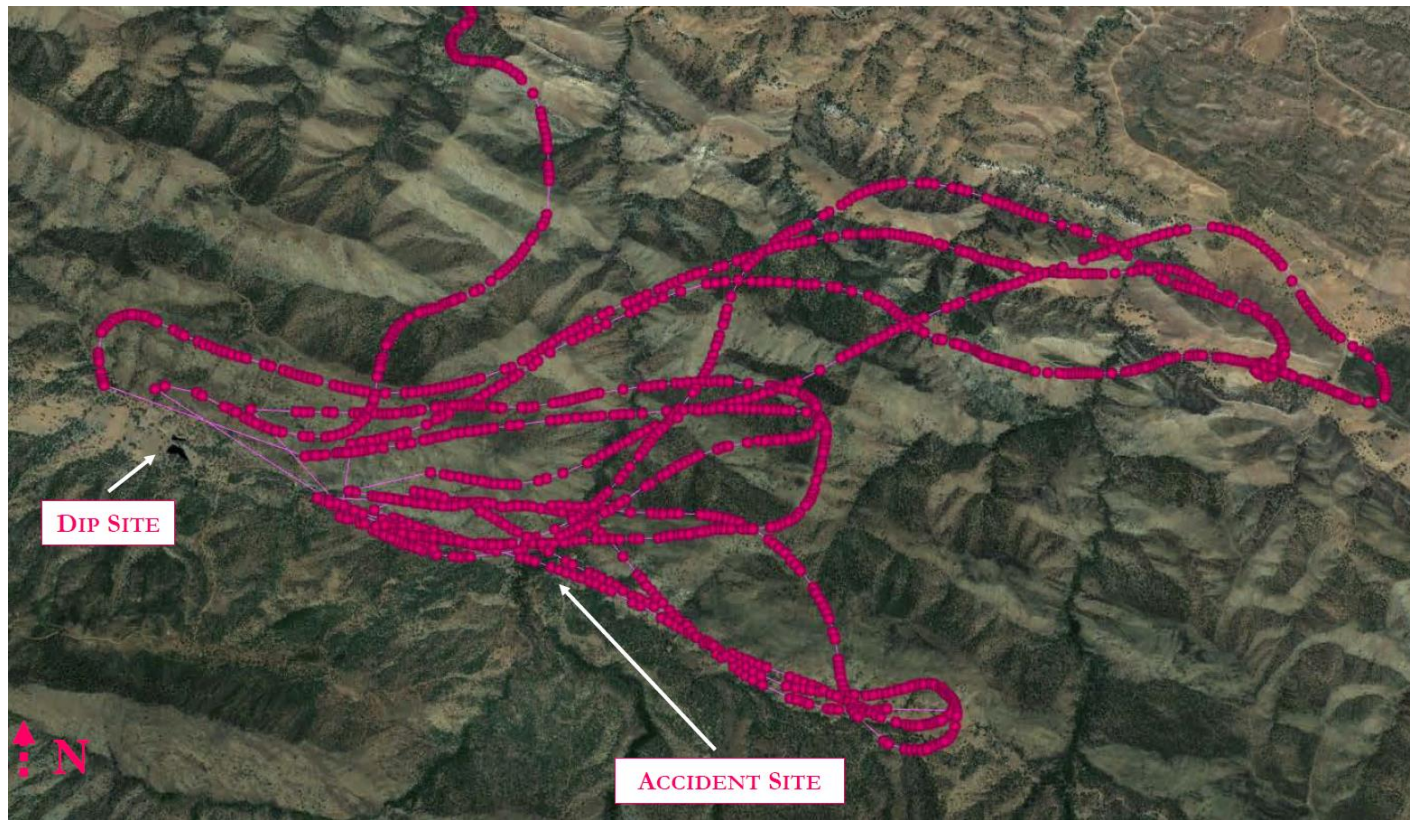


N711GH Specifications from Guardian Helicopters, Inc. website

Prior to the mishap, the MA was one of two helicopters conducting water drops from a water source or “dip site” to the fire drop location in support of CAL FIRE divisions on the ground. The other helicopter, tail number N811KA, was a UH-1H Super Huey operated by Rodgers Helicopters, Inc. The dip site was located WSW of the point of impact and the fire drop location was to the NE. Upon completion of approximately five drops, the MP reported to N811KA that the MA was experiencing abnormal noises and vibrations and was maneuvering to conduct a precautionary landing. Pilot of N811KA dropped his water and reported to N711GH that he will assist with selecting a landing zone. The MP reported to N811KA that all pressures and temperatures were “good”. At the time of this report by the MP, N811KA was behind N711GH for assistance. The MP then reported that he was experiencing a hydraulic malfunction. N811KA pilot directed the MP to “go to the flats”. N811KA pilot noticed the MA turn left into an estimated 30-

degree angle of bank for one full 360-degree turn. Then N811KA heard a “Mayday” call over the radio. N811KA pilot told the MP to “pickle the bucket; get forward airspeed.” MP announced “Mayday” approximately 3 times as the left coordinated turn become more of a left yaw. According to N811KA, the aircraft then began a nearly vertical nose down descent from approximately 300-feet AGL to impact. N811KA pilot stated the aircraft was intact before impact. After impact, N811KA pilot witnessed a large explosion, descended low over the MA, then climbed above the terrain and reported the accident to the helibase at Coalinga Airport. After establishing radio communications with the helibase, N811KA returned to the dip site and began dropping water on the MA until the end of the fuel cycle. N811KA returned to the helibase. N811KA reported light winds <5 knots, visibility 3-4 SM.





SECTION 3. PHOTOS OF N711GH COCKPIT (prior to mishap)



SECTION 4. WITNESS STATEMENTS

AUGUST 20, 2020 at 0950 (PST)

Deputy Chief James McDougald, CAL FIRE

Incident Commander, Hills Fire

Location: Coalinga High School – In-person

Interviewer: Walk me through what was reported to you yesterday.

Chief McDougald: Approximately 0958, I received a report from the helibase via Rodgers 1KA that 711GH reported a MAYDAY and was experiencing a Hydraulic Failure. I am not sure what frequency they were on. I heard that he circled around and went to the dip to drop water on the fire. TCU Fire Captain Steven Hewlett called for “RESCUE, RESCUE” and began coordinating bulldozer assistance to the scene.

Interviewer: Was there anyone else that saw or heard 711GH go down?

Chief McDougald: I know that TCU Fire Captain Erik Blakeway was on-scene with Steven Hewlett. He is available to talk, however he may be a bit shaken up.

Interviewer: When was the pilot extracted?

Chief McDougald: He was extracted at 2245 by Fresno Sherriff’s office. The POC is Matt Hamilton [REDACTED] Steven Ward from Operations documented the timeline.

August 20, 2020 at 1010 (PST)

TCU Fire Captain Steven Hewlett, CAL FIRE

Division M/ Battalion 4412

Location: Coalinga High School – In-person

Interviewer: Take me through what happened from the beginning? Where were you at before, during, and after the accident.

Captain Hewlett: 1GH was not communicating on Air-to-Ground (TAC 18). He was making south-to-north drops on the fire line with a long line. He seemed to be very unstable in a hover over the drainages at approximately 3100-3200 feet MSL; 200-400 feet AGL. Then he started dropping in altitude rapidly. He “E-dumped” his water load, but the bucket remained. He was still descending and I heard his siren engaged. I said to Captain Murphy, “Did you see that drop?” Murphy replied, “Yeah- didn’t look right.” He went to the dip and came back again.

Interviewer: Did he take the same flight path between the dip and the drop zone?

Captain Hewlett: Yes, but he seemed extremely unstable, no siren, and loses altitude. This was the day before the accident.

Interviewer: Oh, so this wasn't the day of the accident?

Captain Hewlett: No, I just thought I would point out that he seemed very unstable.

Interviewer: What did you see or hear yesterday before the accident occurred?

Captain Hewlett: 711GH and 1KA was doing bucket work from Cold Springs to Pacheco Rock. I heard that 711GH had a "hard landing" on FKU Local 2 frequency.

Interviewer: Did you take weather near the incident?

Captain Hewlett: Yes, I was across the drainage directly across the crash. I had winds shifting between the north, west, and east drainage at about 15 knots. Every 15 to 20 minutes, the wind would shift between drainages. Visibility was approximately 1 mile because of the smoke. Humidity was around 15 percent.

Interviewer: What happened next?

Captain Hewlett: Well, 1KA reported a "hard landing, new start." I picked up my rescue gear and headed toward the crash and 1KA started bucket work to suppress the fire and protect the aircraft. The fire was really bright magnesium. When I saw that it was bright white, I knew water couldn't put it out. We got about four dozers going to get to the crash and was trying to find multiple hoist aircraft to come to the area. The smoke was really thick. We saw 1KA hovering over the site and the pilot was outside the aircraft.

Interviewer: Was the land Bureau of Land Management property?

Captain Hewlett: No, it is Greg and Patricia Varian.

AUGUST 20, 2020 at 1129 (PST)

**Fire Fighters Peter Bosco, Scott Brush, Antonio Salas and Hayden Joyce,
CAL FIRE FKU Helibase Manager – Coalinga, CA**

Location: Coalinga Airport – In-person

Interviewer: Take me through the communications and what you did yesterday?

FF Bosco: At 0944 I heard over the radio from 1KA on 126.025 that 711GH had a hydraulic failure with a fire. We did not directly hear of the hard landing or MAYDAY. I notified OPS that 711GH had a hydraulic failure with a new start. 1KA relayed the position. I notified FKU on Local 2 command channel and contacted medivac assistance from Lemoore NAS. I cancelled Lemoore when rescue was no longer required after H40

was overhead and reported it was to be a recovery, not a rescue. After reporting, 1KA continued with water drops until the end of his fuel cycle, then RTB'd. He reported a 2-3 acre start around 1000, then 20 acres at 1005. Then Air Attack moved over the crash and reported 40 acres at 1109. The pilot was coming off of 12 days off and hadn't flown for 5 days. The day before, 711GH had to return to Paso because of a bucket problem.

Interviewer: Do you have the communication log? If so, can I get a copy?

FF Bosco: Yes.

Provided interviewers with 12 pages of documents: 3 pages of CAL FIRE contract; 1 page Load Calculation; 6 pages of Guardian Helicopter maintenance records for N711GH; 1 page USFS Interagency Card; 1 CWN Pre-Use Checklist (**See Section 5**).

AUGUST 20, 2020 at 1158 (PST)

Brian Guenthard, Rodgers Helicopters, Inc. (Pilot for N811KA)

FKU Helibase – Coalinga, CA

Location: Coalinga Airport – In-person

Interviewer: Brian, I am extremely sorry for what you have been through. I realize this was a tough situation to be in. If you can, could you walk me through what happened?

Mr. Guenthard: Yes, no problem. So, Mike was to go out first and I would follow second.

Interviewer: Brian, I am sorry to interrupt – could you take me back to preflight? What were the briefing items that were discussed?

Mr. Guenthard: Yeah, it was your typical helibase brief; hazards, load calcs, freqs, pretty much everything on the ICS-220. We were briefed dip coordinates, visibility, weather – just your standard helibase brief.

Interviewer: Then what happened?

Mr. Guenthard: Well, we completed about 1 or 2 buckets before working with Division M. After about 5 buckets, 711GH called “abnormal noises and vibrations – making a precautionary landing”. I dropped my water and told him, “I’ll assist with picking an LZ”.

Interviewer: Did 711GH drop his water?

Mr. Guenthard: I knew his bucket was empty the way it was flying. He reported that all pressures and temperatures were good. I maneuvered to behind him. Then he said, “It’s my hydraulics.” I told him, “Go to the flats”. Shortly after, he started a left turn into an 30-degree angle of bank for about one full turn. Then he called out “MAYDAY”. I told him,

“pickle the bucket – get forward airspeed”. The bucket was about the same position where I told him to pickle the bucket. Then Mike called out MAYDAY three times. About 30 seconds later he was on the ground. Before he hit the ground, he started a tight left turn, which got tighter and tighter. Then he went vertical nose down at about 300 feet AGL.

Interviewer: Was the aircraft intact before impacting the ground?

Mr. Guenthard: Yes. After impact, there was a huge mushroom cloud. The aircraft blew up like in the movies. I got low over it and saw the hole in the ground. I climbed up and called the helibase to report the accident. I then returned to the dip to drop on the aircraft. I finished my fuel cycle then RTB'd.

Interviewer: What was your weather?

Mr. Guenthard: Winds were very light if anything. Visibility was 3-4 miles.

AUGUST 20, 2020 at 1250 (PST)

Ken Johnson, Guardian Helicopter Director of Operations

Pilots Michael Klink and Mechanic Russell Reale

FKU Helibase – Coalinga, CA

Location: Coalinga Airport – In-person

Reviewed 12 pages of documents that were provided by the Helibase Manager.

Ken Johnson: 711GH was in Paso and moved up on 8/13. It did not fly on 8/14. It's first flight on the incident was on 8/15 and Mike's first flight was on 8/19. There were no reports of problems with the bucket or discrepancies with the helicopter. It was reported that the mechanic and the other pilot went around the aircraft with Mike and discussed frequencies. There were no issues with the FAA regarding aircraft documentation.

AUGUST 25, 2020 at 1452 (PST)

Fire Captain Eric Blakeway, CAL FIRE

TCU

Location: CAL FIRE Aviation Management Unit – Phone Interview

Interviewer: Thank you for speaking with us about the incident. I know you have been extremely busy. Could you take us through what happened the day of the accident?

Fire Captain Blakeway: I was at the Deer Camp on top of the hill in front of the crew. We were advancing around 0930 to 1000. I heard 1KA and 1GH over the incident. I heard 1GH transmitting that he had a “chip light”. Then I heard him transmit a “hydraulic issue.” I am not sure if it was 1GH or 1KA relaying for him. Then I heard “hard landing” on

the radio. I loaded up with Steve Hewlett and 2 other fire fighters and headed down the trail – it was untravellable. Steve was designated the incident commander. We did not know the pilot's status. 1KA communicated to us that is was a 2-acre fire and then reported a 20 acre fire. Then we heard that the pilot was outside the aircraft. We got to about 1/3 of a mile across the drainage and Hewlett saw him with his binoculars. I geared up and hiked across the drainage and up to him. When I got to him I saw that he was deceased. He was laying cross-slope. I laid a blanket over him and began securing the crash.

SECTION 5. SUPPORTING DOCUMENTATION

1. Call When Needed (CWN) Contract with CAL FIRE
2. CWN Pre-Use Checklist
3. N711GH AvCheck
4. USDA – Forest Service Interagency Fire Data Record
5. Aircraft Fuel Log
6. Aircraft Log Form 103
7. Helibase Unit Log (ICS-214)
8. N711GH Load Calculation
9. Fire Weather at Accident



DEPARTMENT OF FORESTRY AND FIRE PROTECTION

www.nrs.ca.gov



GUARDIAN HELICOPTERS, INC.

June 11, 2020

Thank you for responding to the California Department of Forestry solicitation for Call -When-Needed (CWN) emergency fire helicopter services. Enclosed is a signed copy of the lease agreement for the intermittent use of aircraft (FC-107 RW) and Appendix A. Please ensure that copies are on board all aircraft dispatched to incidents.

Below is a list of aircraft currently shown in our database with current aircraft inspection dates. Please send a copy of aircraft cards when inspected to insure that your aircraft are listed on our database. Only aircraft that are currently carded will be available for dispatch.

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
AVIATION MANAGEMENT

Sincerely,

STU SPRUNG

Aviation Management

Missing Items

Pilot Cards	☐	Part 133	☐
A/C Cards	☐	Part 135	☐
Appendix A Signature Page	☐	Proof of Insurance	☐
Safety Briefing Signature Page	☐		

Item Type	Model	Registration	Flt. Rate	Agency	Expiration
HELICOPTER, TYPE-2 LIMITE	UH-1H/703	N711GH			05/31/2021
HELICOPTER, TYPE-2 LIMITE	UH-1H/703	N777GH			05/31/2021
HELICOPTER, TYPE-2 STAND	BH205A++	N216GH			05/31/2021
HELICOPTER, TYPE-3 STAND	AS350B2	N498PT			10/31/2020
HELICOPTER, TYPE-3 STAND	AS350B3	N215GH			09/30/2020
HELICOPTER, TYPE-3 STAND	AS350B3	N718GH			11/30/2020
HELICOPTER, TYPE-3 STAND	BHT-407	N407GH			10/31/2020

Please note:

Your insurance expires on 07/30/2020. Please make sure to send CAL FIRE Aviation Management a renewal Certificate of Insurance by that date to avoid a lapse in your dispatch status.

LEASE AGREEMENT FOR THE INTERMITTENT USE OF AIRCRAFT

FC-107RW (Rev. 04/18)

2020

PLACE AN APPROVED COPY IN EACH HELICOPTER

FAILURE TO DO SO MAY RESULT IN LOSS OF PAYMENT
AND IMMEDIATE RELEASE FROM INCIDENT

Name and Address of Operator:

Guardian Helicopters, Inc.

Phone Number (day):

7CA0J716

67 D Street, Fillmore, CA. 93015

Phone Number (night):

Agreement Number:

7CA0J716

Vendor or Supplier ID Number:

30954 / 410000001639

California Small or DVBE Business

Certificate Number:

AIRCRAFT SPECIFICATIONS AND RATES

ICS Type	Agency Card	Aircraft Make & Model	FAA Reg. Number	Passenger Seats	Cargo Weight	Bucket/Tank Gal.	Foam Y/N	Rate w/Pilot	Standby Rate	Aircraft Location (State)
III	USFS	AS350B2	N498PT	5			N			California
III	DOI	AS350B3	N215GH	5			N			California
III	USFS	AS350B3	N718GH	5			N			California
II	USFS	BH205A1+	N216GH	9			N			California
II	USFS	BH UH1H+	N711GH	R			N			California
II	USFS	BH UH1H+	N777GH	R			N			California
II	USFS	BH 407	N407GH	6			N			California

ADDITIONAL CHARGES

ITEM	Per Diem Per Person	Extended Standby	Fuel Truck Capacity	Fuel Truck USFS Rate	Foam Concentrate	Fireball			
RATES	N/A	\$50	4369 Gal	USFS Rate /mile	Operator's Cost + 10%				

EMAIL ADDRESS: phil@guardianhelicoptersusa.cc REMARKS: N711GH 232 Gallon Tank Option

The undersigned agrees to furnish to the California Department of Forestry and Fire Protection (CAL FIRE) in accordance with the attached Intermittent Requirements Agreement, Appendix A, signed and dated 4/22/20, the aircraft described hereon at the designated rates, to the extent that he/she is willing and able. The Operator/Contractor further certifies that they have received a copy of these specifications and will comply with them to the extent that they are legally able. A discount of 1 % is offered by the undersigned if the State pays for any services rendered within 15 days of the date that the State receives the vendor's invoice. This agreement is valid for a period of one year from the date signed by a State Authorized Inspector unless canceled by either party in writing on a prior date.

Signature of Operator/Contractor:

Title:

President

Date:

4/22/20

APPROVED FOR USE

Signature of State Authorized Inspector:

Title:

A011

Date:

MAY 07 2020

Department of Forestry and Fire Protection
Contractor Certification Clauses for Services
CAL FIRE-20 (Rev. 05/15) (Page 1 of 3)

2020

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY that I am duly authorized to legally bind the prospective Contractor to the clause(s) listed below. This certification is made under the laws of the State of California.

Contractor/Firm Name (Printed)

Guardian Helicopters, Inc.

Federal ID Number

01-0611515

By (Authorized Signature)

Printed Name and Title of Person Signing

Phillip G. Difiore

Date Executed

4/22/20

Executed in the County of
Ventura County

ATTENTION CONTRACTOR: Please be sure to initial clauses, where required.

1. DAREFUR CONTRACTING ACT VENDOR CERTIFICATION

FORM CAL FIRE-720: Under the Darfur Contracting Act (Public Contract Code Sections 10475-10481), if a company that currently, or within the previous three years, has had business activities or other operations outside of the United States submits a bid or proposal for a State of California contract for goods or services, the State agency must require the company to certify that it is not a scrutinized company as defined in Public Contract Code Section 10476, or that it is a scrutinized company that has been granted permission by the California Department of General Services to submit a bid or proposal for the contract.

CONTRACTOR: You **MUST INITIAL** either line (a) or (b) below, to indicate your company's current certification requirement:

____ (a) We currently have, or have had within the previous three years, business activities or other operations outside of the United States, and, therefore, are **REQUIRED to and shall complete and submit a form CAL FIRE-720 (Darfur Contracting Act Vendor Certification) with our bid or proposal for this contract for goods or services.**

OR

____ (b) We currently do not have, and have not had within the previous three years, business activities or other operations outside of the United States, and, therefore, are **NOT REQUIRED** to complete and submit a form CAL FIRE-720 (Darfur Contracting Act Vendor Certification) with our bid or proposal for this contract for goods or services.

2. STATEMENT OF COMPLIANCE: Contractor has, unless exempted, complied with the nondiscrimination program requirements. (Gov. Code §12890 (a-f) and CCR, Title 2, Section 8103) (Not applicable to public entities.)

3. DRUG-FREE WORKPLACE REQUIREMENTS: Contractor will comply with the requirements of the Drug-Free Workplace Act of 1990 and will provide a drug-free workplace by taking the following actions:

- a. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
- b. Establish a Drug-Free Awareness Program to inform employees about:

- 1) the dangers of drug abuse in the workplace;
- 2) the person's or organization's policy of maintaining a drug-free workplace;
- 3) any available counseling, rehabilitation and employee assistance programs; and,
- 4) penalties that may be imposed upon employees for drug abuse violations.

- c. Every employee who works on the proposed Agreement will:

- 1) receive a copy of the company's drug-free workplace policy statement; and,
- 2) agree to abide by the terms of the company's statement as a condition of employment on the Agreement.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both and Contractor may be ineligible for award of any future State agreements if the department determines that any of the following has occurred: the Contractor has made false certification, or violated the certification by failing to carry out the requirements as noted above. (Gov. Code §8350 et seq.)

CALL WHEN NEEDED PRE-USE CHECKLIST

General							
Date: 8/15/20	Aircraft Make/Model: BELL 105-DH			N#: 71164			
Vendor: GUARDIAN Helicopters Inc.			Equipped Weight: 5365				
Pilot(s) Name(s):							
Card Expiration Date(s): APR 2021							
Pilot(s) Carded for Intended Mission(s):		Yes: ☒	No: ☐	Yes: ☐		No: ☐	
A/C Card Expiration Date: 5/31/21		A/C Carded For Intended Mission(s):		Yes: ☒		No: ☐	
Departure Base: Fillmore, CA		Departure HOBBS: 772-9		Arrival HOBBS: 774.0			
Copy Of Contract Onboard A/C:		Yes: ☒	No: ☐	HazMat HB/Exemption/ERG:		Yes: ☐	No: ☐

Logbook Review			
50/100-Hour, Progressive, Or Other Inspection Program Up-To-Date: 25 hours		Yes: ☒	No: ☐
Entries Indicating Damage to Aircraft:		Yes: ☒	No: ☒
Form HCM-5 "Turbine Engine Performance Analysis" Onboard Aircraft: +102 8/13		Yes: ☒	No: ☐
Power Check Completed/Results Satisfactory:		Yes: ☒	No: ☐
Comments: Follow block retorquer			

Condition Of Helicopter		
Item	OK	Document Inoperable Or Damaged Equipment (Dents, Tears, Leaks, Etc.)
Skin and Exterior	☒	
Windows	☒	
Doors	☒	
Upholstery	☒	
Cargo Compartment	☒	
Skids/Wheels	☒	
Fixed Tank	☒	
Other	☒	
Comments: 240 Bucket 210 324		

Required Helicopter Equipment Installed And Operative (Consult Contract)					
Item	Yes	No	Item	Yes	No
Seat Belts And Harnesses	☒	☐	Strobe Light(s)	☒	☐
Hi-Visibility Paint On Main Rotor Blades	☒	☐	Survival Kit	☒	☐
9600 Channel Radio	☒	☐	First Aid Kit	☒	☐
VHF-AM 720-Channel Radio	☒	☐	Fire Extinguisher(s)	☒	☐
Auxiliary Radio Adapter	☒	☐	Cargo Hook	☒	☐
GPS	☒	☐	Convex Mirror	☒	☐
High Skid Gear	☒	☐	Buckets (Appropriate Sizes)	☒	☐
Nine-Pin Plug (Type III Helicopters Only)	☒	☐	Anti-Theft Security Measures in Place	☒	☐
Comments:					

Required Service Truck Equipment Installed And Operative (Consult Contract)					
Item	Yes	No	Item	Yes	No
Spare Set Of Filters	☒	☐	Filter Change Date Placarded	☒	☐
Fire Extinguisher(s)/Current Inspection	☒	☐	Bonding Cables	☒	☐
HazMat Marking And Placards	☒	☐	Fuel Quality Control Log	☒	☐
Inspection Sticker	☒	☐	Absorbent Materials For Spills	☒	☐
Beginning Odometer Reading: 682568					
Comments:					

Signatures of: Inspecting Govt. Representative & Pilot	Print Name	Date
[Signature]	MIKE KLWIK	8/15/20
[Signature]	CURTIS WILCOX	8/15/20

A black silhouette of a helicopter, viewed from the side, showing its main rotor blades and tail boom.

--

[REDACTED]

☐BOA

Fillmore, CA

National

████████████████████

CA

██████████

UH-1H

9,500

████████████████████

0

90

727.3

Aircraft Inspector

05/28/2020

05/2021_{edit}

Jon Curtis

☒ **Longline/Remote Hook**

☒ Low Level Reconnaissance

☒ Cargo Only (Restricted Category)

☒ External Load (Sling)

☐ Rappelling

☐ Aerial Ignition

☒ Fire Suppression - Interagency

☒ Fire Suppression - Local

☒ Water Retardant Bucket

☒ Fixed Tank

☒ Rapid Refuel☒ CCR☒ Splash

☐ Air Attack Type:

☒ Approved for Left Seat Ops

☐ Approved MEL
MMEL Lookup

(MMEL Rev No.)

☐ Other

☐ Other

☐ Other

☐ Other

☐ Other

Aircraft Performance

Minimum Payload
HOGE / HOGE-J

Jettisonable (HOGE-J)

Exclusive Use

NA☒

1. PA

2. Temperature

3. Minimum Payload (HOGE)

4. Year (Base/Optional)

5. EU Bucket Bid Weight

6. EU Tank Bid Weight

NA

NA

EU Load Calc

Bucket

Tank

Operating Weight (HOGE)
(Item #12)

Allowable Payload (Item #13)

Call When Needed

NA☐

1. PA

2. Temperature

3. Minimum Payload (HOGE)

4. Year (Base/Optional)

5. CWN Bucket Bid Weight

6. CWN Tank Bid Weight

5000

30

Base

NA☐

NA☐

CWN Load Calc

Bucket

Tank

Operating Weight (HOGE)
(Item #12)

Allowable Payload (Item #13)

Schedule of Items

1. Additional VHF-AM radios:

Total A/C Qty:

2. Additional VHF-FM radios:

Total A/C Qty:

3. VHF-FM Programming Ports

4. PA System w/Siren

Type

18. Fixed Retardant Tank

Req

Tank S/N #

Model

Capacity

PAX

Ops Check

FMS

Isolair

323

Not Applicable

☐

☐

Type 1, accessible to HEMG	ICA	☐
5. Satellite Communications System	Emergency Dump	☐
Minutes/Month:	Ultra Extended	☐
6. Aeronautical GPS in lieu of a portable GPS	Height Gear	
7. GPS with Moving Map	19. STC'd for Left Seat Vertical Reference	
8. GPS Data Connector	20. Powerfill or Gated Bucket Required	
9. External Portable Aviation GPS Antenna	21. Auto Re-ignition System (if available)	
GPS Model:	22. Fast Fin/Strake (Bell 212 Only)	
10. Traffic Advisory System (TAS)	23. Tail Rotor Mod Kit (Bell 212 Only)	
11. Aft Cabin Audio Control Sys.	24. Closed Circuit Refueling (CCR)	ReqPASS
12. Additional Telemetry Unit (ATU)	25. Electronic Weight & Balance	
13. Dual USB Charging Port	26. Synthetic Long Line	
Qty:	27. Law Enforcement Short Haul	
Location:	28. Night Flying Operations	
14. P25 Mobile VHF-FM Radio for FSV	29. Left Seat Approved -Full Time (STC)	
15. Rappel	Full Time (OEM-STC)	{Type or Select}
Two Rappeller	30. Aircraft Marked "H-XXX"	
Full Time LH PIC	31. Aircraft Marked "FIRE"	
Skid Protectors	32. Remote Cargo Hook	
Tether	33. Required Authorized Areas of Operation	
Anchor	Alaska	☐
Last Inspection	Canada	☐
S/N	Caribbean	☐
ICA	Mexico	☐
FMS	34. Other	
16. Litter Kit	35. Other	
Type	36. Other	
17. FAA Overwater Kit	37. Other	
	38. Other	
	39. Other	
	40. Other	

Aircraft Maintenance

Aircraft

1. Aircraft total time

10376.1

2. Last Complete Inspection

Date C/W (mm/yyyy)

11/2019

Inspection Program

Manufacturer's (91.409(f)...

Airworthiness Limitations per 91.409e checked

Inspection Type

Annual

Total Time

10288.2

3. Weight & Balance

Date of Last Weighing (mm/yyyy)

06/2018

Bucket Bid Weight

Bucket Equipped Weight

Agency Check

No

Tank Bid Weight

Tank Equipped Weight

Equipment List

Pass

Change Record (Chart C)

Pass

Scales Certified

Pass

First Aid Kit on W&B

Pass

Downloads Accounted for

Pass

Weighing Record (Chart B)

Pass

Unusable Fuel/Oil, etc

Pass

Survival Kit on W&B

Pass

Lateral C.G. Checked

Pass

5. Flight Manual - Revision No.

20

Flight Manual - Revision Date

06/2018

6. Remote Cargo Hook Last Inspected Date

06/2020

7. Cargo Hook - Last Inspected Date

05/2016

Cargo Hook - Last Inspected Time

8. Transponder C/W Date

12/2018

9. Altimeter/Static C/W Date

12/2018

10. ATU Data Validation

NA

11. Bucket Operations Manual

Pass

12. Airframe Logbooks

Logbooks, Component Cards, and Status Sheet

13. Engine Logbooks

Logbooks, Component Cards, and Status Sheet

https://egp.nwcg.gov/avcheck/#/aircraft/h/1831

4/9

14. Engine Erosion Inspection	Complied		
15. FAA Form 337	Checked and ICA's incorporated		
16. AD's, S/B, & Listing	Pass		
17. Time Change List (Status Sheet)	Pass		
Date of Time Change List (mm/dd/yyyy)	05/21/2020		

Engine(s)

1. Engine Make & Model	Honeywell T53-L-703		TC#	
2. TBO	Hours	NA☐	3000	
	HSI	NA☐	1200	
3. Engine (Time/Date Since O/H & HSI)				
Hours	Left	568.3	Right	
HSI	Left	568.3	Right	

Website Links

Supplemental Type Certificates Type Certificate Data Sheets FAA Airworthiness Directives FAA Regulatory Library

FAA EDRS (Electronic Document Retrieval System)

FAA Approval or Minor Alteration

Fixed Tank	Pass	Cargo Hook	Pass
Air Filter	Pass	Comms	Pass
AFF	Pass	EFB	NA
Rappel	NA	9 or Less PAX	NA
Left Seats Ops	Pass	Shoulder Harness	NA
Other		Other	
Other		Other	
Other		Other	

General Certifications

1. 14 CFR 133 Certificate No.	GH4G133K		
Expiration Date	05/2021		
Aircraft Listing	Pass		
2. 14 CFR 135 Certificate No.	GH4A133K		
Is this a part 91 operator?	Aircraft Listing	NA	
	D73 AAIP	NA	
D93 Night Ops	D95 MEL or LOA	NA	

A061 Electronic Flight Bag or LOA	Pass	B50 Authorized Areas of Operation	NA
D102 Additional Maintenance Req.	NA	D104 Emergency Equipment	NA
D72 CAMP	NA		
3. 14 CFR 137 Certificate No.	GH4L133K		
Aircraft Listing	Pass		

Aircraft Condition & Equipment			
Interior			
1. Airworthiness Certificate	Restricted	19. Furnishings (Clean & Neat)	Pass
2. Registration	Pass	20. PAX Seats	NA
3. Flight Manual	Pass	No.	
Revision No.	20	Harness Approval	
Revision Date (mm/yyyy)	06/2018	21. First Aid Kit	Pass
Pilot Operating Handbook (POH)	☐	22. Survival Kit	Pass
4. Crew Checklist	Pass	23. Fire Extinguisher(s) (1.5lbs, 2-B:C Rating)	Pass
5. PAX Checklist	NA	24. Dual Controls (for Pilot Check)	Pass
6. Electronic Flight Bags (EFB)	Pass	25. Bucket Open Switch on Collective	Pass
Back-up/Paper Copies of EFB Docs	NA	26. Tank Switch as Required by STC (Open/Close)	Pass
7. Ops Specs/Ops Manual	Pass	27. Left Seat Approved	Pass
8. Hazmat Guide & Exemption Letter	Pass	ICA	☒
9. Maintenance Log (In Aircraft)	Pass	FMS	☒
10. Contract & Mods in Aircraft	Pass	Vert Ref or Full time (OEM-STC)	Vertical Ref - Field Approval
Mods No.	4	28. Required Placards	Pass
11. Hobbs Meter	Pass	29. Free Air temperature Gage	Pass
Hobbs Reading	727.3	30. Instruments (Condition & Lighting)	Pass
12. Pilot Shoulder Harness & Seat Belts	Pass	31. Windshields & Windows	Pass
Pilot	Pass	32. Cabin Heater for Windshield Defogger	Pass
Copilot	Pass	33. Exit Placards (Interior & Exterior)	Pass

Front Inertia Reels	Pass	34. Crashworthiness of all interior modifications	Pass
13. Rotorcraft Load Combinations Placard	Pass	35. Internal Floor to Ceiling Cargo Restraints	NA
14. 133 Operator Certificate on Board	Pass	36. Floor Protection	Pass
15. 135 Operator Certificate on Board	NA	37. Tools, Extra Oil, etc. Secure & part of Equipped weight	Pass
16. 137 Operator Certificate on Board	Pass	38. If 'Limited Use' PAX Seats Removed (If Applicable)	Pass
17. Rapid Refuel Procedures Approved	Pass	39. Other	
18. Security Devices Incorporated into Preflight Checklist	Pass	40. Other	
A.	T/R Pedal Lock	B.	Collective Lock

Aircraft Condition & Equipment			
Exterior			
1. Lights - Navigation/Landing	Pass	18. 150 Foot Long-line (Min 50 Ft Sections)	Pass
2. Pulse Lights/Conspicuity Lighting	Pass	19. Suppressant/Retardant Mixing Equip	NA
3. Strobe Lights (White or Red/White)	Pass	20. External Cargo Baskets	NA
4. Windshield Wipers & Motors	NA	LH	
5. Registration Marks (12 in.)	Pass	RH	
6. Business Name/Number displayed		21. Antennas (Security & Condition)	Pass
7. Wire Cutters	Pass	22. "Restricted" Placards	Pass
8. Convex Mirror (or Camera System)	Pass	23. Remote Cargo Hook (24 Months)	Pass
9. Extended Height/High Skid Gear	Pass	Last Inspected	06/2020
10. Personnel Access Step	Pass	Ops Check	Pass
11. Skids/Landing Gear (Condition)	Pass	24. Cargo Hook	Pass
12. Baggage Compartment (w/58 in. capacity)	NA	Last Inspected Date (mm/yyyy)	05/2016
13. Baggage Comp Mod or Basket (w/Lid)	NA	Last Inspected Time (Enter time or date)	
14. Finish (Condition)	Pass	Ops Check	Pass
15. Locking Fuel Cap (Not required w/CCR)	Pass	Keeperless	Pass
16. Rapid Refueling	Pass	Max Hook Capacity Placard	Pass
Closed Circuit	Pass	Cargo Hook Retainer (Bell Medium Aerial Ignition only)	
Open Port	Pass	25. Sliding Locking Door (Bell Medium Aerial Ignition only)	
17. Variable Capacity Buckets	Pass	26. Engine(s) & Gearbox (Serviceability, leaks, etc)	Pass
Level Markings	☒	27. Air Filtration System (If Available)	

Load Cells			Pass	Pass	
28. EPA Kit (If Available)					Pass
Bucket #1	#1 Capacity (gallons)	324	Pass	29. Main Rotor & Gearbox (Serviceability, leaks, etc)	Pass
Bucket #2	#2 Capacity (gallons)	240	Pass	30. Tail Boom & T/R Driveshaft (Serviceability, leaks, etc)	Pass
				31. Tail Rotor & Gearbox (Serviceability, leaks, etc)	Pass
				32. Main Rotor Blades (High Visibility)	Pass
				33. Dataplates	Pass
				34. Other	
				35. Other	

Avionics

1. Inspected Date		05/28/2020	14. #1 VHF-FM		Pass
2. Avionics Checks Performed By:			Type:	NPX136D-000	
Title.	Maintenance Inspector		15. #2 VHF-FM		Pass
Name.	Jon Curtis		Type:	NPX136D-000	
3. Emergency Locator Transmitter		Pass	16. #3 VHF-FM		NA
ELT Ops Check		Pass	Type:		
ELT Annual Check		Pass	17. AUX FM Provisions		Pass
ELT Type		TSO C12...	VSWR		NA
ELT Multi Axis G-Switch		Pass	Radio Mount		Pass
ELT Battery Due Date (mm/yyyy)		04/2021	18. Audio Controls		Pass
NOAA Expiration (mm/yyyy)		06/2021	No: 2		Pass
4. Magnetic Compass		Pass	Receiver Selectors		Pass
5. Automated Flight Following		Pass	Transmitter Selectors		Pass
Portable		☐	19. Transceiver PTT		Pass
Website Check(AFF)			20. Rear Seat Transceiver PTT		NA
6. Transponder (91.413)		Pass	21. Drop Cords		NA
Certification C/W Date		12/2018	22. Intercom		NA
Mode S (TSO-C112)		NA	ICS Hot Mic/VOX		
7. Altimeter/Static (91.411)		Pass	ICS PTT		
			Aft Cabin ICS		No:

Certification C/W Date		12/2018	23. Rappel Audio Control & Drop Cords	NA
8. GPS		Pass	24. Auxiliary Power (3 Pin)(5Amp)	Pass
GPS Mount:	Panel Mount		25. Bucket/Torch Connector (9 pin)	Pass
GPS Type:	VFR	☒ VFR Placard	26. ATU Installation	NA
GPS Database Exp Date: (mm/dd/yyyy)		06/18/20	27. Avionics Placarding	Pass
9. TAS/TCAS		NA	28. General Condition	Pass
Type			29. Avionics Records, Diagrams, & Schematics	Pass
Minimum Display Range			30. Other	
10. ADS-B OUT	Type:	1090ES	31. Other	
11. #1 VHF-AM 760 channel required		Pass	32. Other	
12. #2 VHF-AM	Type	760		
13. #3 VHF-AM	Type	NA		

USDA - Forest Service Interagency Fire HELICOPTER DATA RECORD (Reference FSH 5709.16)		1. Contract/Rental Agreement No. _____ 2. Item No. _____ 3. Designated Base BOA 4. Region/Area Fillmore, CA National	
SECTION I - Operator & Aircraft Information (Fill in Blanks)			
1. Operator Guardian Helicopters Inc.		2. Address (Street, City, State & ZIP Code) Fillmore CA 91406	
3. Phone No. [REDACTED]	4. Make and Model UH-1H	5. FAA Registration No. N711GH	6. Manufacturer's Serial No. 65-10027
7. Hobbs Reading 727.3		8. Max Gross Weight (Internal) 9,500	
9. Max Gross Weight (Ext.) 9500		10. No. of Passengers 0	11. Type Fuel Jet A
12. Fuel Flow (Cruise) 90 G.P.H		FOR CURRENT EQUIPPED WEIGHT CHECK WEIGHT & BALANCE DATA IN AIRCRAFT FLIGHT MANUAL 13. Authorized Uses (Initial appropriate boxes) (Line Through Unapproved Uses)	
a. ☐ Passenger & Cargo b. ☒ Low Level Reconnaissance c. ☒ Cargo Only (Restricted Category) d. ☒ External Load (Sling) e. ☐ Rappelling f. ☐ Aerial Ignition g. ☐ Manager May Ride (Type 1 ONLY)		Expires (Fill in the Blank) <u>May - 2021</u> (Month/Year) h. ☒ Fire Suppression - Interagency i. ☒ Fire Suppression - Local j. ☒ Water/Retardant Bucket k. ☒ Fixed Tank Tank No. () l. ☒ Longline/Remote Hook m. ☒ Rapid Refuel x CCR x Splash. n. ☐ Air Attack Type ()	
14. Approved By (Signature) Jon Curtis		15. Title Aircraft Inspector	
16. Region 05		17. Date 05/28/2020	

electronically signed: 06/02/2020 ← Card with electronic signature invalid without date stamp

Fuel: Jet-A, Aviation, Turbine Engine, Class 3, UN1803, PG II, 3, B1										TRUCK # 9		
Fuel Condition-Clear, Clean and Bright										MONTH/YEAR August, 2020		
										Filter Change? Reason and Date		
Day	Tank	Filter	Nozzle	Differential Pressure Reading	Flow Rate GPM	Fuel Hose Inspection	Strain	Fire Extinguisher	Pressure Filters Flush	Pump Motor Valves	Bonding Grounding Cable	Initials
		Daily	Daily	Daily	Daily	Daily	Weekly	Weekly	Weekly	Monthly	Monthly	
1	CCB	CCB	CCB	OK	50	OK	OK	OK	OK	OK	OK	
2	CCB	CCB	CCB	OK	50	OK						
3	CCB	CCB	CCB	OK	50	OK						
4	CCB	CCB	CCB	OK	50	OK						
5												
6												
7	CCB	CCB	CCB	OK	50	OK	OK	OK	CCB			
8	CCB	CCB	CCB	OK	50	OK						
9	CCB	CCB	CCB	OK	50	OK						
10	CCB	CCB	CCB	OK	50	OK						
11	CCB	CCB	CCB	OK	50	OK						
12	CCB	CCB	CCB	OK	50	OK						
13	CCB	CCB	CCB	OK	50	OK						
14	CCB	CCB	CCB	OK	50	OK	OK	OK	OK			
15	CCB	CCB	CCB	OK	50	OK						
16	CCB	CCB	CCB	OK	50	OK						
17	CCB	CCB	CCB	OK	50	OK						
18	CCB	CCB	CCB	OK	50	OK						
19	CCB	CCB	CCB	OK	50	OK						
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

GUARDIAN
HELICOPTERS, INC.
67 D Street Fillmore, Ca 93015
Ph: (818) 442-9904 Fx: (818) 442-9901

Aircraft Registration
Aircraft Serial No.

N711GH
65-10027

Flight Log 1005
Date 8/13/20

F	Pilot	Type of Flight	Runtime		Maintenance		Flight Time	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
			Start	Stop	Start	Stop									
1	M. KENNEDY	5604.7	5604.2	772.9	774.0		1.1	1	1						
2															
3															
4															
5															
DAILY TOTALS															

Pre-Flight Inspection Complied With

Signature & Certificate #

Engine	Values
Condt Check	
PALT	92100
OAT:	15
Torque	40
Rotor RPM	100%
% N1	9790
TOT	790
Result	6000+10
Maint Hobbs	773.2

Aircraft	Engine	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
TOTALS Brought Forward	10431.4	1433.6	4501	6132	743.460	1165.993	807.000	898.4	19177
TOTALS for Today	1.1	1.1	1	1					
Current TOTALS	10432.5	1434.7	4502	6133	744.960	1167.014	808.750	899.6	19177

Fit	Destination	Mission	Crew
1	PASO ROBLES	I.A. CALIFORNIA	RESC/DATA
2			
3			
4			
5			

Next Inspection Due 10/4/20

Type of Inspection 257th CMB/Standard

Annual Due 5/21

DISCREPANCIES: CORRECTIVE ACTION/MAINTENANCE RELEASE

N711GH DATE: 8/13/20 AC TT: 10431.4
COMPLIED WITH PREVENTATIVE MAINT CK IN ACCORDANCE WITH BELL
UH-1H MM REQUIREMENTS. COMPLIED WITH THE FOLLOWING DAILY ICA
INSPECTIONS: BLR STRAKE, DUAL CARGO MIRROR, GLOBAL FIN SPAR, AAI
HIGH SKID GEAR, COPILOT EMERGENCY CARGO RELEASE, ISOLAIR TANK,
CARGO HOOK MAN RELEASE CK, CARGO HOOK/LOAD WEIGHING SVS,
REMOTE CARGO HOOK.

ASST

GUARDIAN
HELICOPTERS, INC.
 67 D Street Fillmore, Ca 93015
 Ph. (818) 442-9904 Ex. (818) 442-9901

Aircraft Registration
 Aircraft Serial No.

N711GH
65-16087

Flight Log 1006
 Date 8/15/20

¹⁴
²⁵
 41

F	Pilot	Type of Flight	Runtime		Maintenance		Flight Time	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
			Start	Stop	Start	Stop									
1	W. V. LANE	9/1/33	3600.2	3814.2	774.0	781.0	7.0	4	6					41	41
2															
3															
4															
5															
DAILY TOTALS															

Pre-Flight Inspection Complied With

Signature & Certificate #

Engine Cond. Check	Values
PAL T	
OAT	
Torque	
Rotor RPM	
% N1	
TOT	
Result	
Maint Hobbs	

Aircraft	Engine	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
TOTALS Brought Forward	104325	14347	4502	6133	744.570	1162.614	808.730	899.6	19177
TOTALS for Today	7.0	7.0	4	0				41	41
Current TOTALS	104395	14417	4506	6139	744.950	1178.829	808.730	904.5	19218

Fit	Destination	Mission	Crew
1	PAR	1. A. Out E12E	Russ/DALC
2			
3			
4			
5			

Next Inspection Due 10/15/20

Type of Inspection 25 Hr Envtl Sample

Annual Due 6/21

DISCREPANCIES:

CORRECTIVE ACTION/MAINTENANCE RELEASE

clw 50 Hour LIT link Insp, 50 Hour ENG oil Filter Insp, MR (Composite) cleaning and Insp AS per 25 Hour Requirements, AD 2001-15-13, Recurring ENG CCH Visual Insps per 25 Hour Requirements (GHS REQ). 8/14/20, ACT: 10,432.5
 clw 50 Hour Lubrication Requirements. 8/14/20, ACT: 10,432.5

N711GH DATE: 8/14/20 ACT: 10,432.5
 TOOK ENGINE OIL SAMPLE PER 12.5 HOUR

N711GH DATE: 8/15/20 ACT: 10,432.5
 COMPLIED WITH PREVENTATIVE MAINT CK IN ACCORDANCE WITH BELL UH-1H NM REQUIREMENTS. COMPLIED WITH THE FOLLOWING DAILY ICA INSPECTIONS: BLR STRAKE, DUAL CARGO MIRROR, GLOBAL FIN SPAR, AM HIGH SKID GEAR, COPILOT EMERGENCY CARGO RELEASE, ISOLAIR TANK, CARGO HOOK MAN RELEASE CK, CARGO HOOK/LOAD WEIGHING SYS, REMOTE CARGO HOOK.

N711GH DATE: 8/14/20 ACT: 10,432.5
 COMPLIED WITH THE FOLLOWING 25 HOUR INSPECTION REQUIREMENTS PER BELL UH-1H NM: HYD, TRANS, 42 DEGREE GB & 90 DEGREE GB OIL SAMPLES; TAIL ROTOR GRIP & 25 HOUR LUBRICATION; MAIN ROTOR BLADE INSP & CLEANING. COMPLIED WITH 25 HOUR BULLETINS: AD 2013-13-06 PAR.B & UH-1-03-ASAM-01 MR GRIP 10X INSP, AMAM UH-1-12-AMAM-02 TAIL BOOM LONGERON INSP.

GUARDIAN
HELICOPTERS, INC.
 67 D Street Fillmore, Ca 93015
 Ph. (818) 442-9904 Fx. (818) 442-9901

Aircraft Registration
 Aircraft Serial No.

N711GH
65-10027

Flight Log 1007
 Date 8/16/20

F	Pilot	Type of Flight	Runtime		Maintenance		Flight Time	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
			Start	Stop	Start	Stop									
1	1	1	11/133	3614.2	3621.0	7884.0	787.4	6.4	3	5				23	25
2															
3															
4															
5															
DAILY TOTALS															

Pre-Flight Inspection Completed With

		Aircraft	Engine	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
TOTALS Brought Forward		10439.5	1441.7	4506	6139	749950	1178.829	814.290	9041.5	19218	19218
TOTALS for Today		6.4	6.4	3	3					23	25
Current TOTALS		10445.9	1448.1	4509	6142	751240.1190.139	819.500908.1	19241	19241		

Engine	Values
Cond. Check	
PAL T	4000
OAT	36
Torque	40
Rotor RPM	323
% N1	97.0
TOT	795
Result	500 P25
Maint Hobbs	782.8

Next Inspection Due

10446.4 (6.4 Reserve)
10445.0 (5.5 Reserve)

Type of Inspection Pilot Block Performance
3.5 hr. Evt. Sample

Annual Due 6/21

DISCREPANCIES:

CORRECTIVE ACTION/MAINTENANCE RELEASE

N711GH DATE: 8/16/20 AC TT: 10439.5
 COMPLIED WITH PREVENTATIVE MAINT CK IN ACCORDANCE WITH BELL
 UH-1H MM REQUIREMENTS. COMPLIED WITH THE FOLLOWING DAILY ICA
 INSPECTIONS: BLR STRAKE, DUAL CARGO MIRROR, GLOBAL FIN SPAR, AAT
 HIGH SKID GEAR, COPILOT EMERGENCY CARGO RELEASE, ISOL AIR TANK,
 CARGO HOOK MAN RELEASE CK, CARGO HOOK/LOAD WEIGHING SYS,
 REMOTE CARGO HOOK.

GUARDIAN

HELICOPTERS, INC.
67 D Street Fillmore, Ca 93015
Ph. (818) 442-9904 Fx. (818) 442-9901

Aircraft Registration N711G14
Aircraft Serial No. 65-10027

Flight Log 1008
Date 8/17/20

F	Pilot	Type of Flight	Runtime		Maintenance		Flight Time	Starts	Landings	Comp Cyc	G.P. Cyc	Imp Cyc	P.T. Cyc	Hook Cyc	Ext Lift
			Start	Stop	Start	Stop									
1	W. Kline	9/1/20	3621.0	3625.5	7824	791.5	41.1	2	3					29	29
2															
3															
4															
5															

Pre-Flight Inspection Complied With

DAILY TOTALS

	Aircraft	Engine	Starts	Landings	Comp Cyc	G.P. Cyc	Imp Cyc	P.T. Cyc	Hook Cyc	Ext Lift
TOTALS Brought Forward	10445.9	1446.1	4509	6142	754240	1190.139	819.500	908.1	19241	19241
TOTALS for Today	4.1	4.1	4.2	3					29	29
Current TOTALS	10450.0	1450.2	4511	6145	757710	1198.334	824.720	910.6	19270	19270

Engine	Values
Cond. Check	
PAL T	
OAT:	
Torque	
Rotor RPM	
% N1	
TOT	
Result	
Maint Hobbs	

Next Inspection Due 10457.5 (11.6 hours)

Type of Inspection 25 Hour Logbook

Annual Due 6/21

CORRECTIVE ACTION/MAINTENANCE RELEASE

DISCREPANCIES: clw AD 92-23-21 Dated APR 23, 1993, para (A) (1) Torque checked all (4) main P/Bow Black
Belts to 65 FT LBS - Nuts did not move. Torque has stabilized. No further air Recurring
action Required for this AD. 8/17/20 left: 10445.9

N711G DATE: 8/17/20 ACT: 10445.9
TOOK ENGINE OIL SAMPLE PER 12.5 HOUR REQUIREMENTS.

N711G DATE: 8/17/20 ACT: 10445.9
COMPLIED WITH PREVENTATIVE MAINT CK IN ACCORDANCE WITH BELL
UH-1H MM REQUIREMENTS. COMPLIED WITH THE FOLLOWING DAILY ICA
INSPECTIONS: BLR STRAKE, DUAL CARGO MIRROR, GLOBAL FIN SPAN, AAI
HIGH SKID GEAR, COPILOT EMERGENCY CARGO RELEASE, ISOLAIR TANK,
CARGO HOOK MAN RELEASE CK, CARGO HOOK/LOAD WEIGHING SYS,
REMOTE CARGO HOOK.

GUARDIAN
HELICOPTERS, INC.
 67 D Street Fillmore, Ca 93015
 Ph: (818) 442-9904 Fax: (818) 442-9901

Aircraft Registration
 Aircraft Serial No.

N711GH
65-10027

Flight Log 1009
 Date 8/18/20

F	Pilot	Type of Flight	Runtime		Maintenance		Flight Time	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
			Start	Stop	Start	Stop									
1	M. PLANE	9/103	3025.5	3631.8	791.5	797.3	5.8	41	5					43	43
2															
3															
4															
5															

Pre-Flight Inspection Complied With

DAILY TOTALS

Aircraft	Engine	Starts	Landings	Comp Cye	G.P. Cye	Imp Cye	P.T. Cye	Hook Cye	Ext Lift
TOTALS Brought Forward	10,450.0	1452.2	4611	6145	757.710	1198.534	824.720	910.6	19270
TOTALS for Today	5.8	5.8	4	5					43
Current TOTALS	10455.8	1458.0	4575	6150	764.110	1210.007	832.880	915.2	19313

Engine Cond. Check	Values
PAL T	41064
OAT:	30
Torque	40
Rotor RPM	100%
% N1	970
TOT	795
Result	690105
Main/Hobbs	7749

Next Inspection Due 10457.5 (7.5 hours)

Type of Inspection 25 Hour Loss/Examples

Annual Due

6/21

DISCREPANCIES:

CORRECTIVE ACTION/MAINTENANCE RELEASE

Flt	Destination	Mission	Crew
1	COMANCHE	HILLS FIVE (AT FIVE)	BUSS/DAVE
2			
3			
4			
5			

N711GH DATE: 8/18/20 AC TT: 10450.0
 COMPLIED WITH PREVENTATIVE MAINT CK IN ACCORDANCE WITH BELL
 UH-1H MM REQUIREMENTS. COMPLIED WITH THE FOLLOWING DAILY ICA
 INSPECTIONS: BLR STRAKE, DUAL CARGO MIRROR, GLOBAL FIN SPAR, AAT
 HIGH SKID GEAR, COPILOT EMERGENCY CARGO RELEASE, ISOLAIR TANK,
 CARGO HOOK MAN RELEASE CK, CARGO HOOK/LOAD WEIGHING SYS,
 REMOTE CARGO HOOK.

GLARDIAN HELICOPTERS, INC.

**AIRCRAFT TOTAL
TIME**

DATE
7-29-2021
7-30-2021
7-31-2021
8-2-20
8-3-20
8-4-20
8-6-20
8-7-20
8-12-20
8-13-20
8-14-20
8-15-20
8-16-20
8-17-20
7-29-2021
7-30-2021
7-31-2021
8-2-20
8-3-20
8-4-20
8-6-20
8-7-20
8-12-20
8-13-20
8-14-20
8-15-20
8-16-20
8-17-20

	10416.4
	10416.9
	10416.9
	10417.0
	10420.8
	10421.7
	10425.0
	10427.2
	10429.2
	10431.4
	10432.5
	10432.5
	10439.5
	10445.9
AIRCRAFT TOTAL	
TIME	
	10416.4
	10416.9
	10416.9
	10417.0
	10420.8
	10421.7
	10425.0
	10427.2
	10429.2
	10431.4
	10432.5
	10432.5
	10439.5
	10445.9

08/19/2020

HILLS Incident

TIME	MAJOR EVENTS
1001	Started aircraft - fixed wing
1002	contact ops 2-3 acres out side the Burn
1004	ops to D.V A/M Rescue and fire
1005	20 acres per 1KA
1005	Poor Visibility steep canyon
1006	1KA says 1GAH is completely burnt to the ground
1007	1KA asking frequencies for air attack
1008	update to ops 20 acres
1009	AA will use Peter vactor 126-27 173-825
1011	406 cancelled H40 lifting L02 - UNKNOWN ETA on Bot
1013	406 continuing H40 L02
1013	AA ETA 1030
1017	1KA 1 more drop fuel and Return
1021	line mediz and ambulance to canyon Ranch
1025	1KA 10 miles out hot fuel and Return
1027	IC at Canyon Ranch / 33
1033	1KA landed @ Coalinga helibase
1036	1KA 75% of H2O drops at new incident 25' on div m
1039	contact Fresno order 1 Ground ambulance
1042	H40 on scene fire 360° around the incident per AA
1046	H40 fire movement w/ aircraft 1GAH
1048	AA confirming One soul on board 1GAH
1055	Coalinga M252 arrived @ Coalinga Helibase
1102	"West IL" established per AA
1036	called Stew Sprung no answer / left voicemail
1037	called CAL FIRE maintenance
1045	talked to Tony Agosto - notified of the incident
1105	H40 and Rescue 2 released from Host Rescue mission
1107	Per Fresno continue Copter 406
1107	4464 West IC Admin to walk in to protect site
1108	Recovery ordered to West IC
1109	40 acres burning uphill
1110	Per AA ground 1KA at helibase
1114	H40 land at Coalinga helibase
1123	406 ETA 1126 for fuel and brief
1127	406 landed at Coalinga helibase
1140	H40 off Coalinga Helibase Return to Fresno
1149	406 off Coalinga Helibase for water drop mission
1202	AA Request two S2 out of Fresno
1224	West Incident Renamed Reedwater Incident
1246	Per AA hold all ground Resources for 406
1325	406 landed @ Coalinga helibase H033 63.6/2.4/4.6 Remaining
1336	2HT 15hr ETA to Coalinga helibase
214 ICS 5-80	9. PREPARED BY (NAME AND POSITION) 2TH SCOTT BRUSA HECM(T)

HELICOPTER LOAD CALCULATION AMD-67/FS 5700-17 (10/06)		MODEL
PILOT(S) <i>M. [REDACTED]</i>		N# <i>71164</i>
MISSION		DATE <i>8/19/20</i>
		TIME <i>0800</i>
1 DEPARTURE <i>Carlsbad</i>	PA <i>1500</i>	OAT <i>39</i>
2 DESTINATION <i>Hill</i>	PA <i>3900</i>	OAT <i>35</i>
3 HELICOPTER EQUIPPED WEIGHT		<i>5365</i>
4 FLIGHT CREW WEIGHT		<i>220</i>
5 FUEL WT (<i>206</i> gallons X <i>7</i> lbs per gal)		<i>1442</i>
6 OPERATING WEIGHT (3 + 4 + 5)		<i>7027</i>
	Non-Jettisonable	Jettisonable
	HIGE	HOGE HOGE- J
7a PERFORMANCE REF (List page/chart from FM)		<i>Fig 7.3</i>
7b COMP GROSS WT (FM Performance Section)		<i>9200</i>
8 WT REDUCTION (Req for all Non-Jettisonable)		
9 ADJUSTED WEIGHT (7b minus 8)		<i>9200</i>
10 GROSS WT LIMIT (FM Limitations Section)		<i>9500</i>
11 SELECTED WEIGHT (Lowest of 9 or 10)		<i>9200</i>
12 OPERATING WEIGHT (From Line 6)		<i>7027</i>
13 ALLOWABLE PAYLOAD (11 minus 12)		<i>2173</i>
14 PASSENGERS/CARGO MANIFEST		
<i>2406 bucket</i>		<i>135</i>
<i>LH</i>		<i>30</i>
15 ACTUAL PAYLOAD (Total of all weights listed in Item 14) Line 15 must not exceed Line 13 for the intended mission.		<i>2157</i>
PILOT SIGNATURE [REDACTED]		HazMat
MGR SIGNATURE		Yes ☐ No ☒

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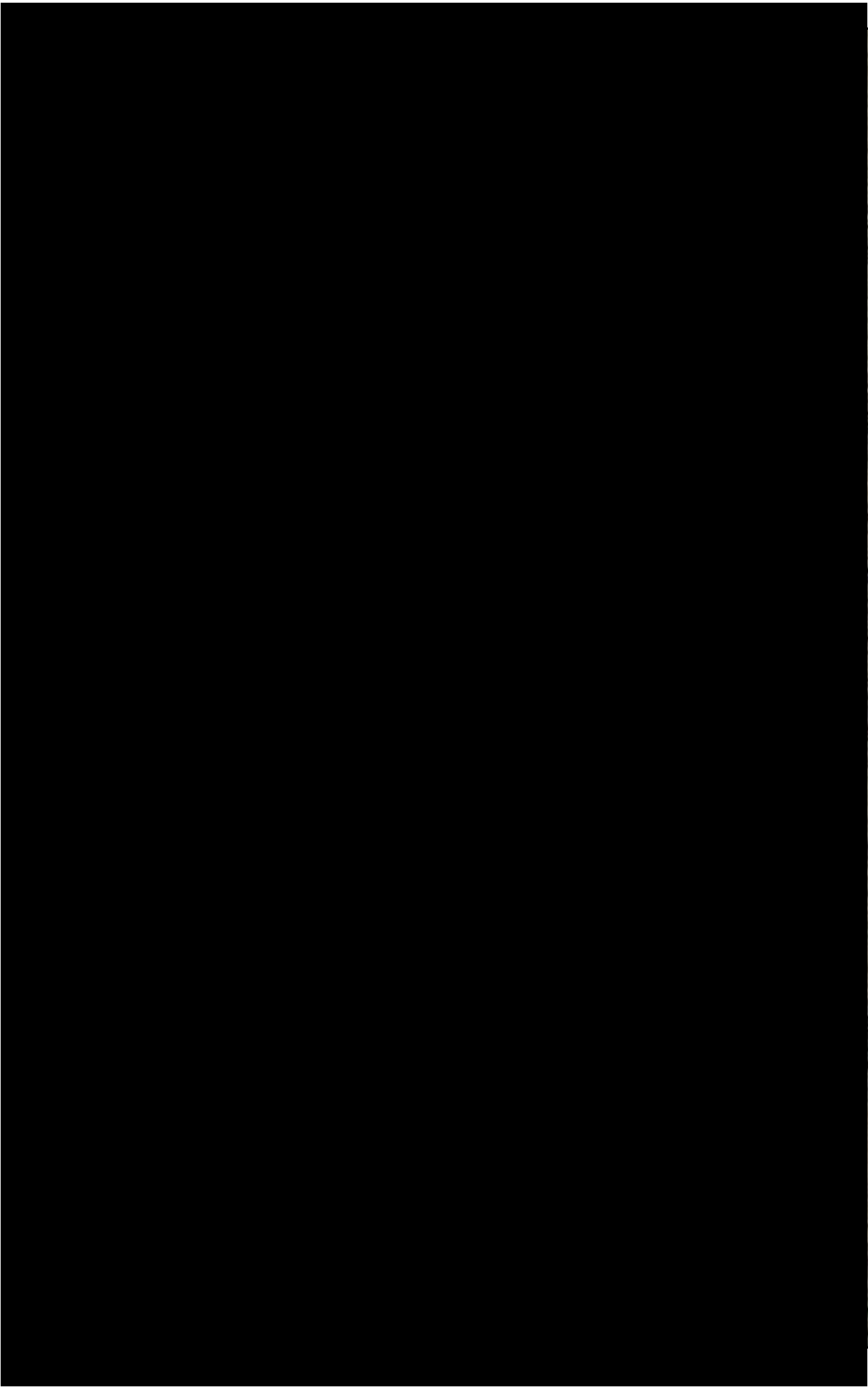
SECTION 6. ACCIDENT SCENE

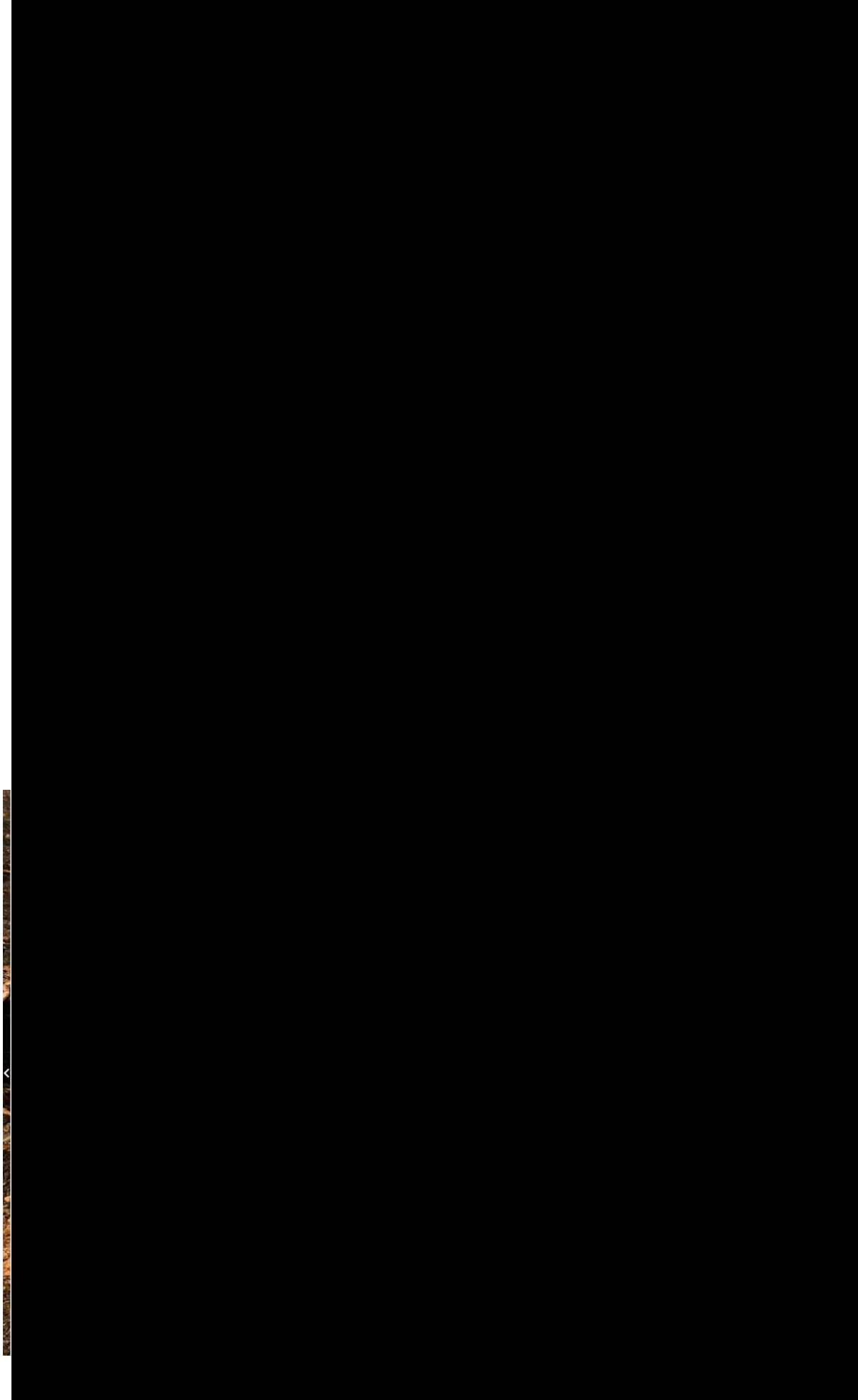
August 20, 2020 at 1530 PST

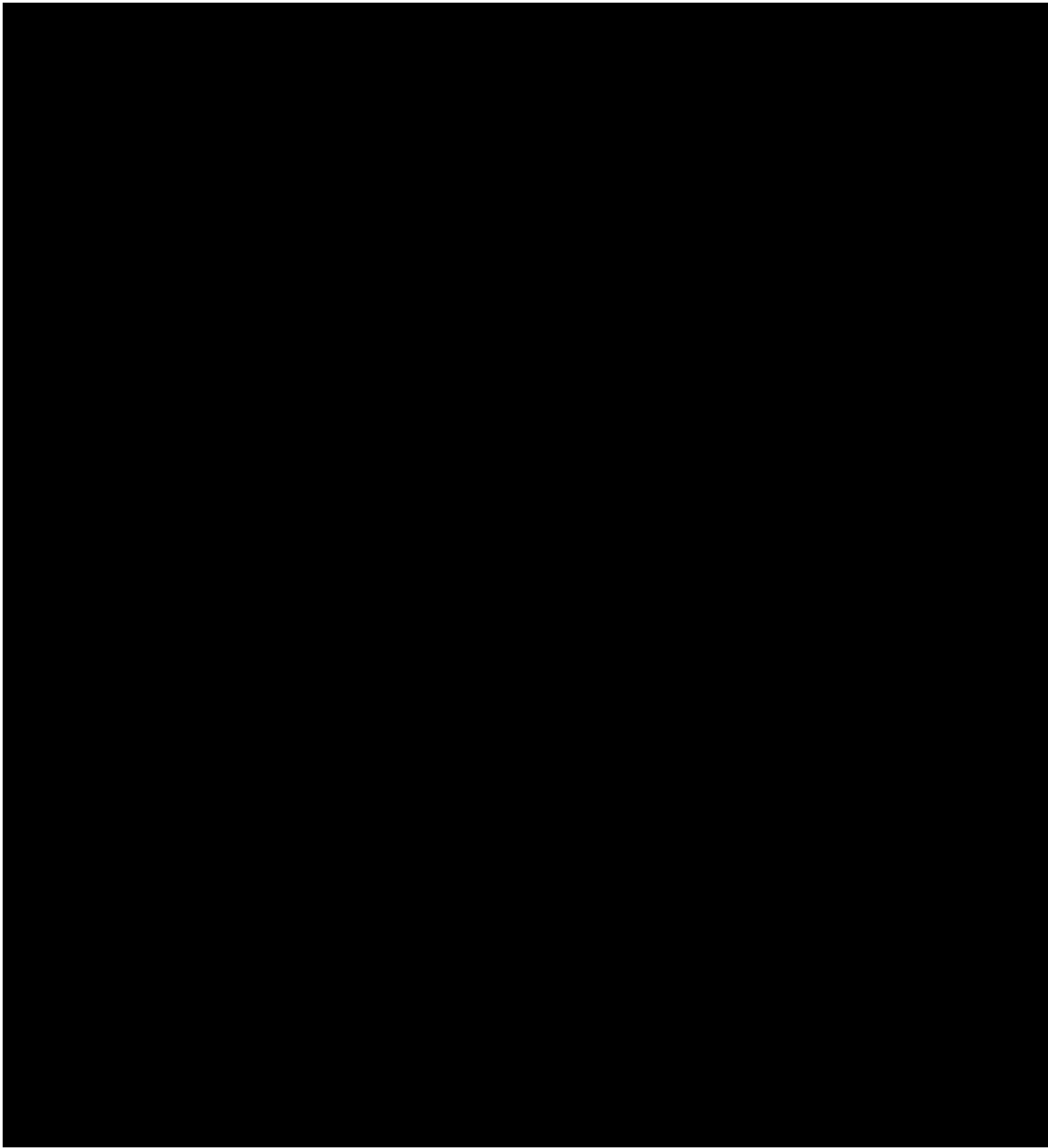
**Information within is privileged and shall not be distributed without permission
from the NTSB and FAA**

Corresponding grid photos are protected. Access inquiries must be made to:

[REDACTED]







The first part of the paper discusses the importance of the research and the objectives of the study. It then presents a literature review of the existing research on the topic. The next section describes the methodology used in the study, including the data collection and analysis techniques. The results of the study are then presented, followed by a discussion of the findings and their implications. The paper concludes with a summary of the main points and a list of references.

The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data was collected from a representative sample of the population, and the analysis was carried out using appropriate statistical methods. The results of the study are presented in a clear and concise manner, and the implications of the findings are discussed in detail.

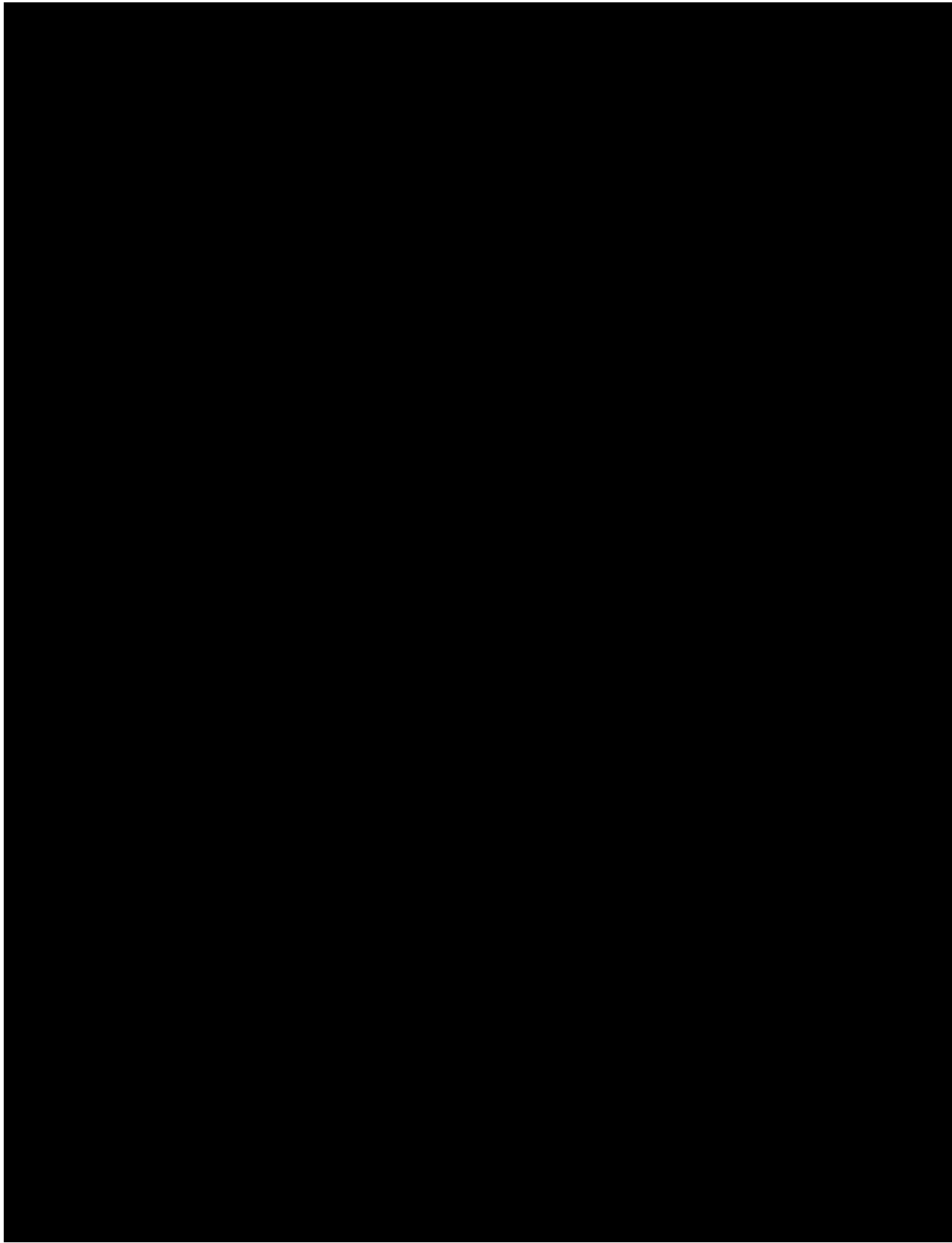
The findings of the study have important implications for the field of research. They provide valuable insights into the nature of the phenomenon being studied, and they suggest areas for further research. The results also have practical implications, and they can be used to inform policy and practice.

In conclusion, the study has made a significant contribution to the understanding of the topic. The findings are robust and reliable, and they provide a solid basis for further research. The study also highlights the need for continued research in this area, and it suggests ways in which the research can be improved.

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The study was conducted in a laboratory setting, and the participants were recruited from a local university. The data was collected using a series of questionnaires and interviews. The results of the study show that there is a significant relationship between the variables being studied. The findings suggest that the research has practical implications for the field.

The study was limited by the sample size and the laboratory setting. Future research should aim to replicate the study in a more naturalistic setting and with a larger sample size. The results of the study provide a foundation for further research in this area.



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the 1990s, the incidence of *S. flexneri* has increased in the United Kingdom [10]. In the United States, *S. flexneri* has been reported as the most common serotype in children with acute bacterial dysentery [11]. In the United Kingdom, *S. flexneri* has been reported as the most common serotype in children with acute bacterial dysentery [12].

There is a need to monitor the epidemiology of *S. flexneri* in the United Kingdom. The purpose of this study was to determine the prevalence of *S. flexneri* in children with acute bacterial dysentery in the United Kingdom, and to determine the serotypes of *S. flexneri* isolated from these children.

METHODS

Study area

The study was conducted in the United Kingdom, which is a country with a population of approximately 55 million. The United Kingdom is divided into four countries: England, Scotland, Wales and Northern Ireland. The study was conducted in England, which has a population of approximately 48 million. The study was conducted in the United Kingdom, which is a country with a population of approximately 55 million.

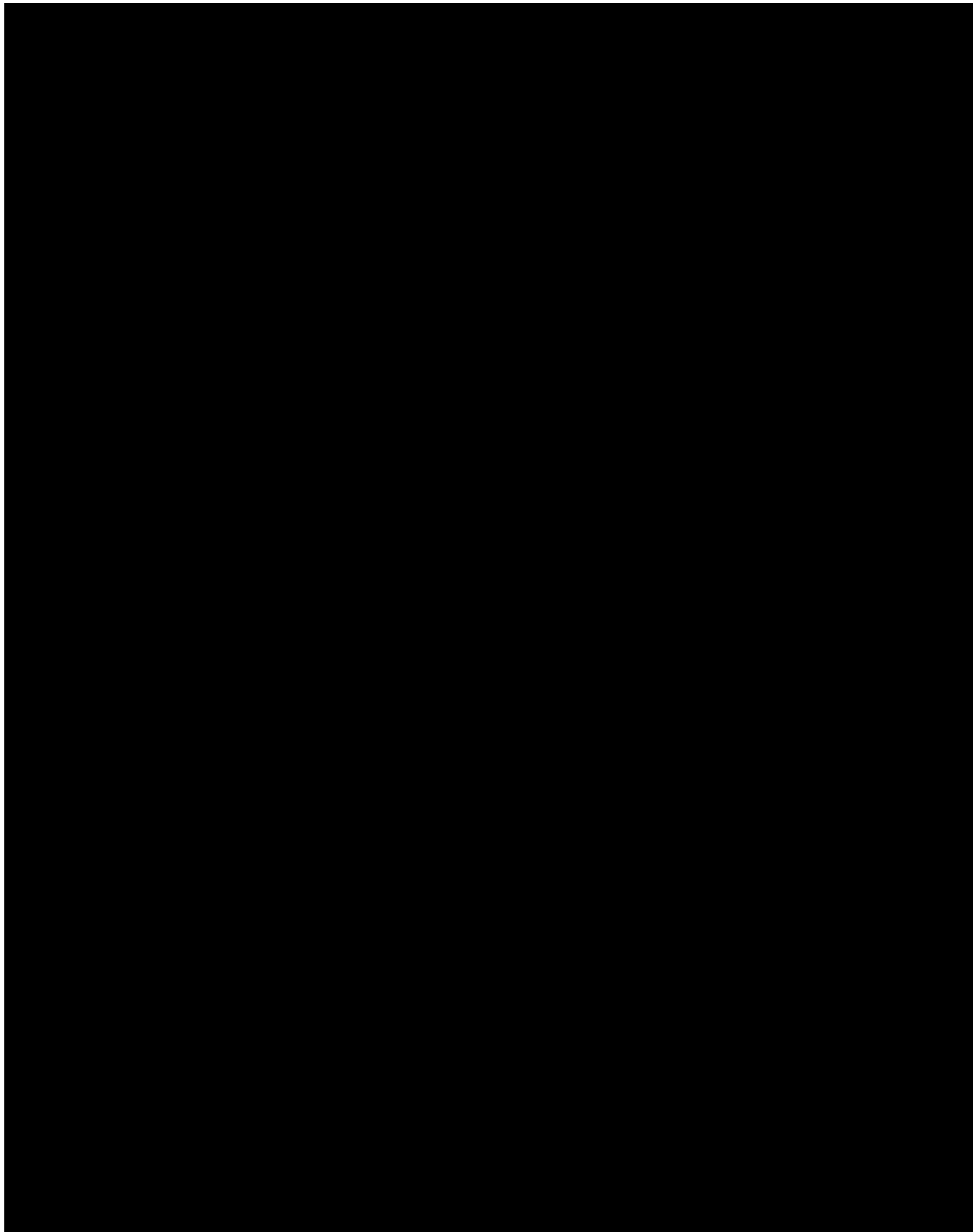
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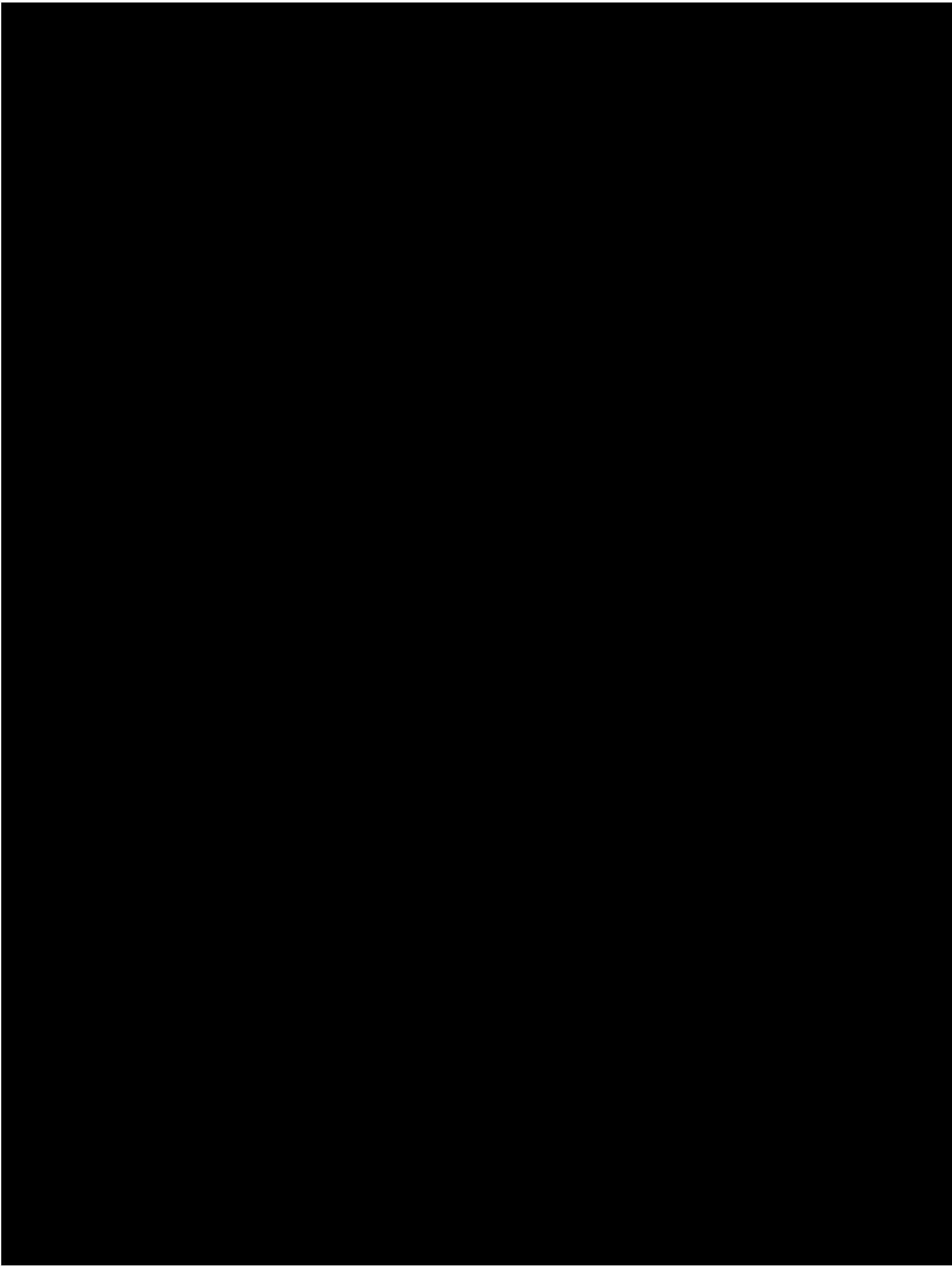
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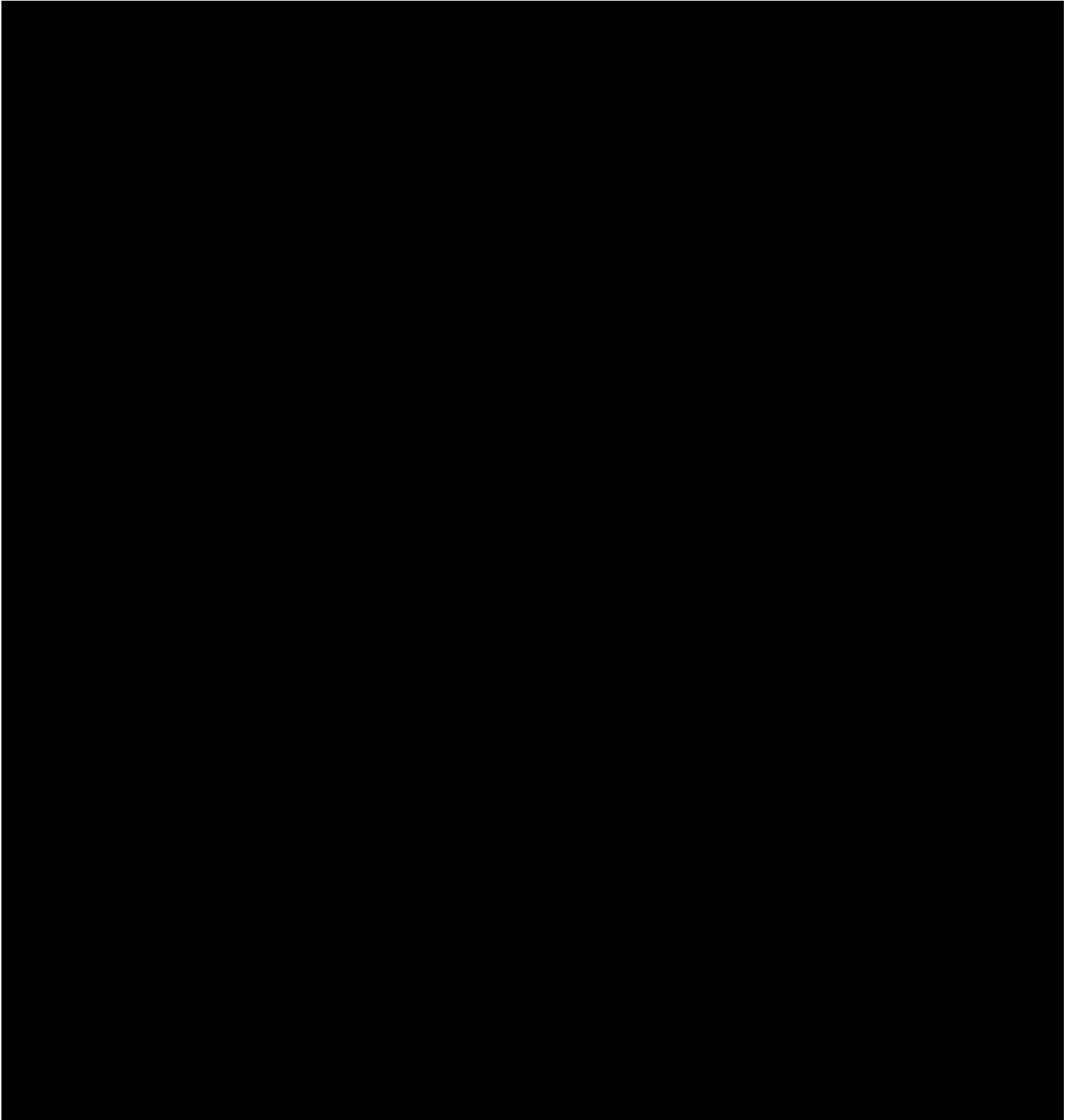
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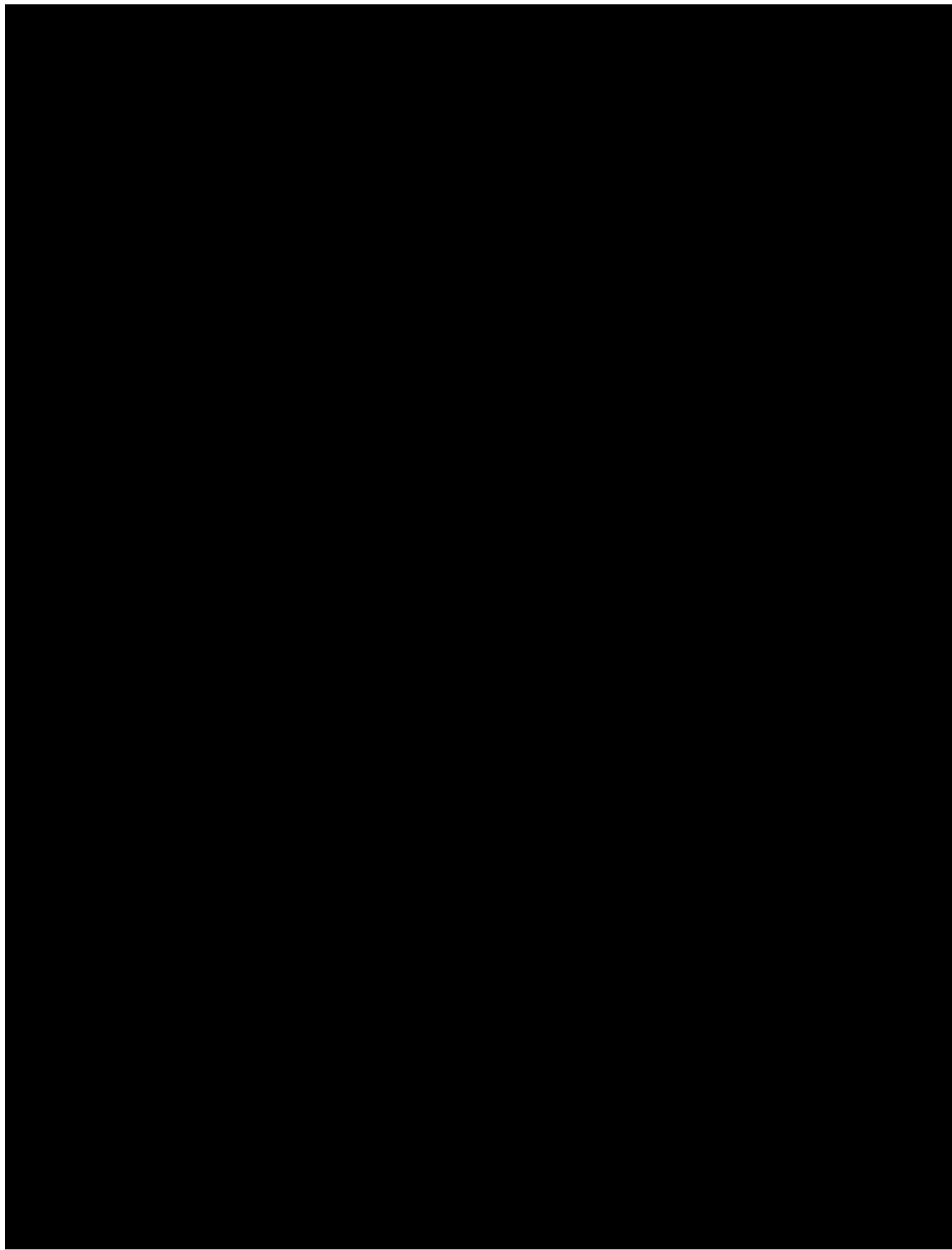
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GRID B





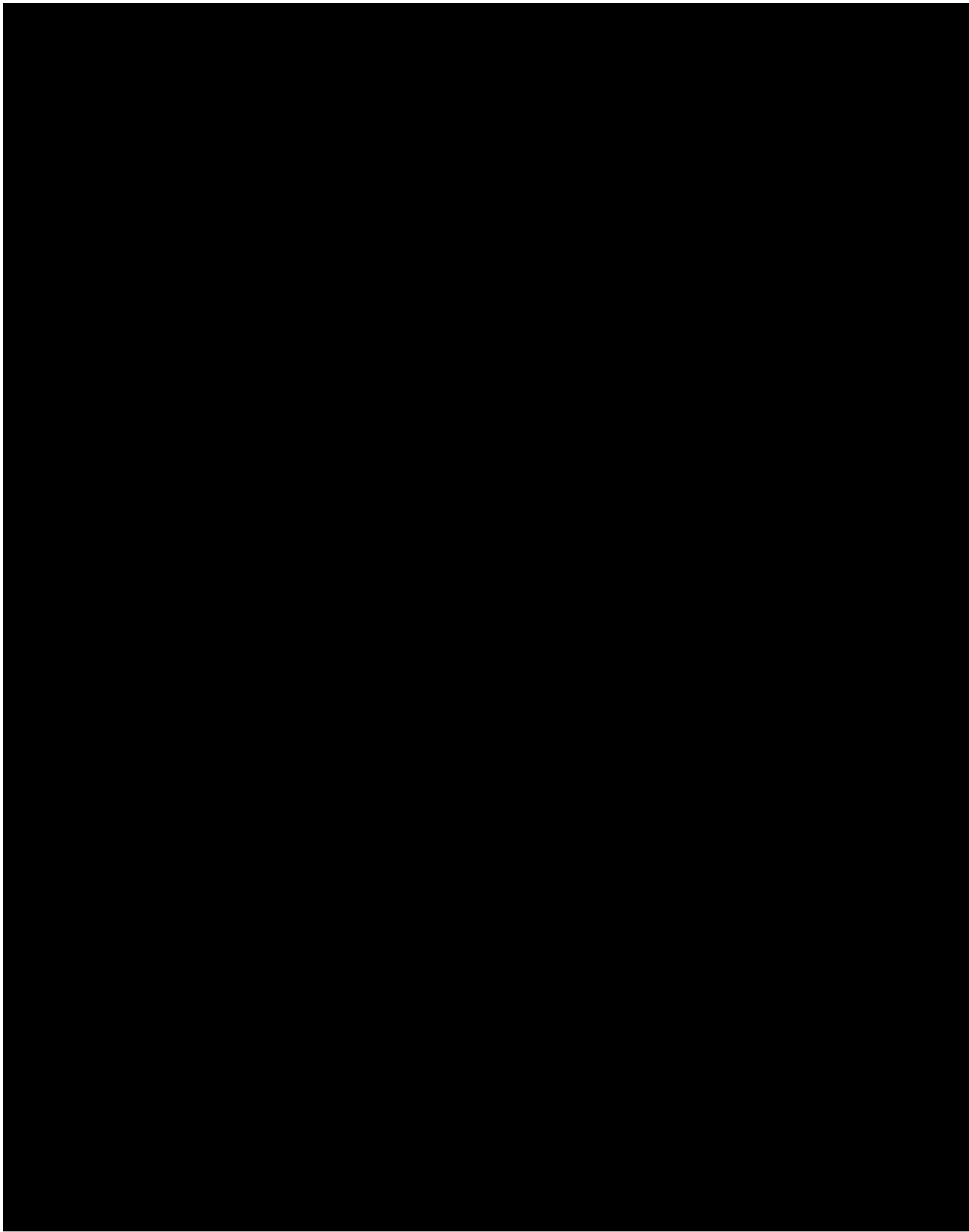
[The following text is a dense, handwritten manuscript, likely a letter or a journal entry. It is written in a cursive script and covers the majority of the page. Due to the image quality and the nature of the document, the specific words and sentences are largely illegible. The text appears to be organized into several paragraphs, with some lines indented. There are some visible markings that could be punctuation or small symbols, but they cannot be definitively identified.]

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The research was conducted in a systematic and rigorous manner, following the principles of good research practice. The data was collected from a representative sample of the population, and the analysis was carried out using appropriate statistical methods. The results of the study are presented in a clear and concise manner, and the conclusions are based on the evidence presented in the paper.

The findings of the study have important implications for the field of research, and they provide a valuable contribution to the understanding of the topic. The research also has practical implications, and it can be used to inform policy and practice in the relevant area.

The paper is well-structured and easy to read, and it provides a comprehensive overview of the research. The writing is clear and concise, and the arguments are well-supported by evidence. The paper is a valuable contribution to the field of research, and it is well-recommended for reading by anyone interested in the topic.



the 'information' and 'communication' fields. The 'information' field is defined as:

...the study of the nature, creation, organisation, storage, retrieval, dissemination and use of information, and the social, cultural, economic and political contexts in which these activities take place. (p. 1)

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SECTION 7. FINDINGS

According to the pilot of 811KA, the MA impacted the ground at a nose down, near vertical attitude. The impact area is slightly larger than the nose cross-section of a UH-1H, which would be consistent with impact and expansion of the fuselage as it decelerates during impact.

The impact area does not show main rotor blade impact with the ground. Based on the aircraft attitude at impact, if the main rotor blades were turning, whether power applied by the powerplant or during an autorotation, catastrophic main rotor blade damage would have been seen. Other than post-crash fire damage, both main rotor blades and tail rotor blades were unremarkable. There was no evidence of torsional damage to the main rotor mast or the tail rotor. There was no evidence at the point of impact of main rotor blade contact while turning.

All witnesses stated that N711GH reported a hydraulic malfunction and was maneuvering in a left turn – which requires more torque. Case studies have shown that UH-1H pilots have accidentally secured fuel on the fuel management panel instead of hydraulics due to the close proximity of the switch locations. This is compounded by each panel utilizing a switch which is the same size and shape – pictured right. Note that CAL FIRE installed side guards on the main fuel shutoff switch which is not organic to the panel.



If fuel was secured in lieu of hydraulics, while maneuvering to the left, rotor decay would occur immediately after fuel starvation to the powerplant, possibly creating the loss of controlled flight. This theory cannot be reasonably confirmed at the accident scene without further analysis of the MA components.

Another point of interest was a main transmission roller bearing that was found to have been missing several rollers (Pictured right). I am not confident in speculating if this could have seized the main transmission, however it may be of interest to the investigators.



END OF REPORT

