

NATIONAL TRANSPORTATION SAFETY BOARD

NTSB Form 6120.1

PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

The pilot/operator aircraft accident/incident report may be filed by mailing in this form, per instructions on the last page. Copies of this form may be obtained from the NTSB Web site <<http://www.nts.gov>>, the National Transportation Safety Board Regional Offices, and the Federal Aviation Administration Flight Standards District Offices.

Rules pertaining to aircraft accidents/incidents, overdue aircraft, and safety issues are contained in Part 830 of the National Transportation Safety Board's Regulations, 49CFR. These rules state the authority of the Board, define accidents, incidents, injuries, and other terms, and provide procedures for initial and immediate notification by aircraft pilots/operators.

A. APPLICABILITY

The pilot/operator of an aircraft shall file a report with the Regional Office of the National Transportation Safety Board nearest the accident or incident for which immediate notification is required by section 830.5(a) **The report shall be filed within ten (10) days after an accident for which notification is required by Section 830.5 or when, after seven (7) days, an overdue aircraft is still missing.** An aircraft accident, as defined in 49CFR 830.2, is determined as an occurrence that involves a fatality, serious injury, or substantial damage. For occurrences that do not involve a fatality, the determination that the occurrence is an accident can be appealed by writing to the Director, Office of Aviation Safety, National Transportation Safety Board, 490 L'Enfant Plaza, S.W., Washington, D.C. 20594.

The Pilot/Operator Aircraft Accident/Incident Report Form is used in determining the facts, conditions, and circumstances for aircraft accident prevention activities and for statistical purposes. It is necessary that ALL questions be answered completely and accurately to serve the above purposes.

INSTRUCTIONS TO PILOTS/OPERATORS FOR COMPLETING THIS FORM

It is necessary that ALL questions on this report be answered completely and accurately.
If more space is needed, continue on a blank sheet.

Nearest City/Place: Use the name of the nearest community that has a Post Office in the state where the accident/incident occurred.

Date & Time: Indicate the date and local time of the event. Be sure to indicate the time zone.

Phase of Operation: Indicate the phase of operation during which the accident/incident occurred.

Aircraft Information: Enter aircraft make and model information as indicated on the aircraft registration certificate, including series. If the involved aircraft is certified as "amateur-built," include the name of manufacturer of the kit or plans when appropriate.

Max Gross Weight: Enter the certificated max gross weight for the aircraft involved in the occurrence. This should be the same as the maximum gross weight indicated on the aircraft weight and balance documents.

Airworthiness Certificate: For light sport aircraft, if aircraft certificated as "Light Sport - Experimental", check both the "Light Sport" and "Experimental" check boxes.

Type of Fire Extinguishing System: If a fire extinguishing system was used to fight an aircraft fire, specify the type(s) of extinguishing system(s) used. Examples include handheld extinguisher, engine fire bottle,

B. DEFINITIONS

1. "Aircraft Accident" means an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death, or serious injury, or in which the aircraft receives substantial damage.

2. "Substantial Damage" means damage or failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. NOTE: Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairing or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered "substantial damage" for purposes of this report.

3. "Operator" means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

4. "Fatal Injury" means any injury that results in death within thirty (30) days of the accident.

5. "Serious Injury" means any injury that (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fracture of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

cargo/baggage compartment fire suppression system, or airport emergency ground equipment.

Engine: Enter engine make and model information as indicated on the engine data plate.

Owner/Operator Information: Enter the owner information as shown on the registration certificate. Commercial operators, enter the operator information, including "Doing Business as" when applicable, as shown on the operator certificate.

Revenue Sightseeing Flight: Indicate whether the accident aircraft was conducting revenue sightseeing operations under FAR Part 91 at the time of the accident.

Public Use: Federal, state or local government flight operations such as official travel, law-enforcement, low-level observation, aerial application, firefighting, search and rescue, biological or geological resource management, or aeronautical research. Military operations should not be included under public use. If public use, also indicate whether the flight was conducted by Federal, State, or Local government.

Air Medical Flight: Indicate whether accident flight was being conducted for the purpose of carrying medical personnel, patient(s), or organs.

Purpose of Flight (FAR 91, 103, 133, 137): Indicate the type of operation that was being conducted at the time of the occurrence using the following definitions:

PERSONAL—Flying for personal reasons (excludes business transportation) including pleasure or personal transportation. This also includes practice or proficiency flights performed under flight instructor supervision and not part of an approved flight training program.

BUSINESS—Includes all personal flying **without** a paid, professional crew for reasons associated with furthering a business, including transportation to and from business meetings or work. This does not include corporate/executive operations, air taxi, or commuter operations.

EXECUTIVE/CORPORATE—Company flying **with** a paid, professional crew.

OTHER WORK USE—Miscellaneous flight operations conducted for compensation or hire such as construction work (not FAR Part 135 operation), parachuting, aerial advertising, towing gliders, etc.

INSTRUCTIONAL—Flying while under the supervision of a flight instructor or receiving air carrier training. Personal proficiency flight operations and personal flight reviews, as required by federal air regulations, are excluded.

FERRY—Non-revenue flight under a special flight or "ferry" permit. Refer to 14 CFR 21.197 for details of special flight permit issuance.

POSITIONING—Non-revenue flight conducted for the primary purpose of moving the aircraft to a maintenance facility or to load passengers or cargo, etc.

AERIAL APPLICATION—Operations using an aircraft to perform aerial application or dispersion of any substance. Examples include agricultural, health, forestry, cloud seeding, firefighting, insect control, etc.

AERIAL OBSERVATION—Aerial mapping/photography, patrol, search and rescue, hunting, highway traffic advisory, ranching, surveillance, oil and mineral exploration, criminal pursuit, fish spotting, etc.

AIR DROP—Aerial operations, other than aerial application, that are intended to release items in flight.

AIR RACE/SHOW—Includes any flight operations conducted as part of an organized air race or public demonstration.

FLIGHT TEST—Flight for the purpose of investigating the flight characteristics of an aircraft/aircraft component, or evaluating an applicant for a pilot certificate or rating.

PUBLIC USE—See definition above.

UNKNOWN—Use only if the primary purpose of flight is not known.

Other Aircraft – Collision: For all accidents involving a collision with another aircraft, including parked aircraft, check "Collision with other aircraft" under Basic Information and complete this section indicating details about the OTHER aircraft involved in the collision.

Airport Information: Complete this section if the accident/incident occurred on approach, takeoff, or within 3 miles of an airport. Please refer to the FAA Airport/Facility Directory or other official source for airport information.

Airport Identification: Provide the official 3 or 4 character airport identifier.

Runway: Indicate the number of the runway used, including L, R, or C if applicable.

Runway/Landing Surface: Indicate the type of intended runway/landing surface (do not indicate surface conditions). If the surface type was mixed, check all that apply.

Condition of Runway/Landing Surface: Indicate the condition of the intended runway/landing surface. If multiple conditions existed at the time of the accident, check all that apply.

Weather Information at the Accident/Incident Site: Indicate the weather conditions reported at the accident/incident site at the time of occurrence. If no weather reporting was available for the accident/incident site, indicate the reported conditions at the nearest reporting site. Specify the weather reporting site identifier, the observation time, and distance from the accident/incident site.

Sky/Lowest Cloud Condition: Indicate the height above ground level of the lowest cloud condition present at the time of the accident and whether coverage was reported as few, scattered, broken or overcast. Also indicate the height above ground level and coverage of the lowest cloud ceiling present at the time of the accident (reported as broken or overcast).

NOTAMs ((D), (L) and FDC), AIRMETs, SIGMETs, PIREPs: Describe all NOTAMs, AIRMETs, SIGMETs, PIREPs in effect near the accident/incident. For NOTAMs, state if they were distant (D), local (L), or Flight Data Center (FDC), if known.

Pilot Information: Indicate the category that best describes the capacity served by this flight crewmember at the time of the accident. The designators "Pilot A" and "Pilot B" do not refer to a specific pilot position or responsibility. If more than one pilot is aboard, they may be entered in any order and their capacity entered as appropriate.

Degree of Injury: See Definitions on the top half of Page 1 of the instructions. Minor injury is not defined. If an injury does not meet the criteria for another injury category, select Minor.

Date of Last Flight Review or Equivalent: Enter the date of the most recent flight review, or equivalent, completed by this pilot. Refer to 14 CFR 61.56 for accepted equivalents.

Type Ratings: List all type ratings on the pilot certificate. If the pilot holds no type ratings indicate "none". If the pilot holds a pilot certificate other than student, and was flying an aircraft requiring an endorsement enter the type and date of any logbook endorsement(s) for that aircraft. See 14 CFR 61 for examples of required endorsements.

Student Endorsements: If the pilot holds a student pilot certificate, enter all solo endorsements and dates on the student pilot certificate.

Flight Time: Complete the flight time matrix. Solo flight time should be included as "Pilot-in-Command (PIC)" and all dual flight instruction given should be included as "Time as Instructor".

Additional Flight Crew Members: Complete this section if there were more than two required flight crew members on the aircraft. This also includes a check airman performing official duties, but does not include cabin crew. State the capacity served by each included crewmember at the time of the accident.

Passenger(s)/Other Personnel: Please enter identification and injury severity information for all passengers and other personnel involved in the accident. See page 1 of the instructions for the official definition of injury levels. Occupants are considered "Revenue" passengers if they were being carried for compensation or hire. The option "FAA" refers to any FAA personnel performing a flight related function, including flight check, airman practical test, etc.

Several questions throughout the form allow for multiple responses; when appropriate choose all responses that apply.

These instructions only pertain to major issue areas covered by the NTSB Form 6120.1 *Pilot/Operator Aircraft Accident/Incident Report*. For additional definitions of questions and responses, please refer to <<http://www.nts.gov>>.

**NATIONAL TRANSPORTATION SAFETY BOARD
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT**

This form to be used for reporting civil and public use aircraft accidents and incidents

BASIC INFORMATION

Accident/Incident Location

Nearest City/Place: Cape Canaveral Air Force Station State: FL
 ZIP: 32925 Country: United States of America
 Latitude: N28 28.02 (dd:mm:ss N/S) Longitude: W80 33.56 (ddd:mm:ss E/W)

Date/Time

Date: 05/10/2013 Local Time: 1224
 mm/dd/yyyy Time Zone: EDT

Phase of Operation

☐ Standing ☐ Takeoff (incl. initial climb) ☐ Cruise ☒ Hover
☐ Taxi ☐ Climb ☐ Maneuvering ☐ Other
☐ Descent ☒ Landing ☐ Approach ☐ Unknown

Collision with Other Aircraft

☐ Midair
☐ On-ground
☐ None

Altitude of In-Flight Occurrence

_____ ft MSL

AIRCRAFT INFORMATION

Manufacturer: General Atomics

Model: MQ-9

Serial Number: CBP 113

Registration Number: N/A

Amateur-built: ☐ Yes ☐ No

Max Gross Weight: 10,500 lbs

Weight at Time of Accident/Incident: 7,325 lbs

Location of Center of Gravity at Time of Accident/Incident:

_____ in limits inches from ☐ nose or ☒ datum
 -or- _____ Percent Mean Aerodynamic Cord (% MAC)

Category of Aircraft

☐ Airplane
☐ Balloon
☐ Blimp/Dirigible
☐ Glider
☐ Gyrocraft
☐ Helicopter
☐ Powered lift
☐ Ultralight
☐ Unknown

**Type of Airworthiness Certificate
(Check all that apply)**

Standard

☐ Normal
☐ Utility
☐ Acrobatic
☐ Transport

Special

☐ Restricted
☐ Limited
☐ Provisional
☐ Experimental
☐ Special Flight
☐ Light Sport

Number of Seats: UAS

If Large Aircraft, how many seats for:

Flight Crew: _____

Cabin Crew: _____

Passengers: _____

Landing Gear ☐ Retractable

Check any additional landing gear configuration that applies:

☒ Tricycle ☐ Tailwheel
☐ Amphibian ☐ High Skid
☐ Emergency Float ☐ Skid
☐ Float ☐ Ski
☐ Hull ☐ Ski/Wheel
☐ Unknown

Type of Maintenance Program

☐ Annual
☐ Conditional (Amateur-built only)
☐ Manufacturer's Inspection Program
☐ Other Approved Inspection Program (AAIP)
☐ Continuous Airworthiness
☐ Other, specify: _____

Last Inspection Type

☒ 100 Hour ☐ Continuous Airworthiness
☐ AAIP ☐ Conditional Inspection
☐ Annual ☐ Unknown

Date Last Inspection: 03/11/2013

mm/dd/yyyy

Airframe Total Time: 2,638 hrs

hours measured at (check one)

☐ Last Inspection ☒ Time of Accident/Incident

IFR Equipped

☒ Yes ☐ No ☐ Unknown

Stall Warning System Installed

☐ Yes ☒ No ☐ Unknown

Type of Fire Extinguishing System

☐ None
☐ Specify _____

ELT Installed

☐ Yes ☐ No

ELT Activated

☐ Yes ☒ No

ELT Manufacturer: Artex

Model/Series: 452-5499

Serial Number: 0105182

Battery Type: Lithium

Battery Exp. Date: 03/2014

ELT Aided in Locating Accident/Incident

☐ Yes ☒ No

Engine Type

☐ Reciprocating ☐ Turbo Jet
☐ Turbo Shaft ☐ Turbo Fan
☐ Turbo Prop ☐ Unknown

Reciprocating Fuel System Type

☐ Carburetor
☐ Fuel Injected

Propeller

☐ Fixed Pitch
☒ Controllable Pitch

Manufacturer: McCaulley

Model: 3GFR36606-B/0-110GFA-0

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. mm/dd/yyyy	Engine Rated Power Measured as (check one) ☐ Horsepower or ☐ lbs of Thrust	Total Time (hours)	Time Since Inspection (hours)	Time Since Overhaul (hours)
Eng. 1	Honeywell	TPE331-YGD	P125132	10/2007	900	1,904	27	27
Eng. 2								
Eng. 3								
Eng. 4								

OWNER/OPERATOR INFORMATION			
Registered Aircraft Owner Name: <u>US Customs and Border Protection, US Government</u> Fractional Ownership Aircraft: ☐ Yes ☒ No		Owner Address City: <u>Washington</u> State: <u>DC</u> ZIP: <u>20229</u> Country: <u>United States</u>	
Operator of Aircraft ☒ Same As Registered Owner Name: _____ Doing Business As: _____ Air Carrier/Operator Designator (4 Character Code): _____		Operator Address ☐ Same As Registered Owner City: <u>Cape Canaveral</u> State: <u>FL</u> ZIP: <u>32925</u> Country: <u>United States</u>	
Regulation Flight Conducted Under ☐ FAR 91 ☐ FAR 129 ☐ FAR 91 Special Flight ☐ FAR 103 ☐ FAR 133 ☐ Non-US, Commercial ☐ FAR 121 ☐ FAR 135 ☐ Non-US, Non-commercial ☐ FAR 125 ☐ FAR 137 ☐ Armed Forces ☒ Public Use (select type) ☒ Federal ☐ State ☐ Local ☐ Unknown		Revenue Sightseeing Flight ☐ Yes ☒ No Air Medical Flight ☐ Yes ☒ No	
Purpose of Flight for FAR 91, 103, 133, 137 (Select one) ☐ Personal ☐ Business ☐ Executive/Corporate ☐ Other Work Use ☐ Instructional ☐ Ferry ☐ Positioning ☐ Aerial Application ☐ Aerial Observation ☐ Air Drop ☐ Air Race / Show ☐ Flight Test ☒ Public Use ☐ Unknown	Revenue Operation for FAR 121, 125, 129, 135 (Select one) ☐ Scheduled or Commuter ☐ Non-Scheduled or Air Taxi Domestic or International ☐ Domestic ☐ International Cargo Operation ☐ Passenger/Cargo ☐ Passenger _____ How many? ☐ Cargo _____ lbs ☐ Mail	Type of Commercial Operating Certificate Held (Select all that apply) ☒ None ☐ Flag Carrier Operating Certificate (121) ☐ Supplemental ☐ Air Cargo ☐ Foreign Air Carriers (129) ☐ Commuter Air Carrier (135) ☐ On-Demand Air Taxi (135) ☐ Large Helicopter (127) ☐ Rotorcraft External Load (133) - or - ☐ Agricultural Aircraft (137) ☐ Other Operator of Large Aircraft	
OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for other aircraft)			
Aircraft Registration Number _____	Manufacturer: _____ Model: _____		Damage to Other Aircraft ☐ Destroyed ☐ Minor ☐ Substantial ☐ None
Registered Owner of Other Aircraft First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____			
Pilot of Other Aircraft First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____			
MECHANICAL MALFUNCTION/FAILURE (If more space is needed, continue on separate sheet)			
Was there Mechanical Malfunction/Failure? ☐ Yes ☒ No ☐ Unknown <i>(If yes, list the name of the part, manufacturer, part no., serial no., and describe the failure.)</i> 			Total Time/Cycles On Part _____ Hours _____ Cycles Time Since This Part Inspected/Overhauled _____ Hours
DAMAGE TO AIRCRAFT AND OTHER PROPERTY			
Aircraft Damage ☐ None ☒ Substantial ☐ Minor ☐ Destroyed		Aircraft Fire ☒ None ☐ Both Ground and In-Flight ☐ In-Flight ☐ Unknown Origin ☐ On-Ground	
Aircraft Explosion ☒ None ☐ Both Ground and In-Flight ☐ In-Flight ☐ Unknown Origin ☐ On-Ground			

Description of Damage to Aircraft and Other Property (use additional sheet if necessary)

1. Nose wheel strut broken at yoke, nose wheel assembly departed.
2. Main landing gear struts cracked.
3. Vertical Fin broken off.
4. Propeller multiple strikes, destroyed.
5. EO/IR sensor destroyed.
6. Engine mounts damaged. Internal engine damage unknown.
7. Radar antenna and dome damaged.
8. Left wing tip damaged.
9. Additional damage to avionics and structure unknown.

AIRPORT INFORMATION (If the accident/incident occurred on approach, takeoff or within 3 miles of an airport, complete this section)Airport Identifier: KXMRDistance From Airport Center: 0 SMAirport Name: Cape Canaveral Air Force Station Skid StripDirection From Airport: 100 degrees MAGProximity to Airport ☐ Off Airport/Airstrip ☐ On Airport ☒ On AirstripAirport Elevation: 10 ft. MSL**Approach Segment** (Select one)

- ☐ On Instrument Approach ☒ Landing ☐ Base leg ☐ Final ☐ Go Around
☐ Crosswind ☐ Downwind ☐ Low Approach ☐ Aborted Landing (after touchdown)

IFR Approach (Check all that apply)

- ☒ None ☐ PAR ☐ MLS ☐ Practice
☐ ADF/NDB ☐ Sidestep ☐ LDA ☐ GPS
☐ SDF ☐ ILS ☐ ASR ☐ Loran
☐ VOR/TVOR ☐ Localizer Only ☐ Visual ☐ Unknown
☐ VOR/DME ☐ LOC-back course ☐ Contact
☐ TACAN ☐ RNAV ☐ Circling

VFR Approach (Check all that apply)

- ☐ None ☐ Stop and Go
☐ Traffic Pattern ☐ Touch and Go
☐ Straight-In ☐ Simulated Forced Landing
☐ Valley/Terrain Following ☐ Forced Landing
☐ Go Around ☐ Precautionary Landing
☒ Full Stop ☐ Unknown

Runway InformationRunway ID: 13 (L/R/C) Length: 10,000 ft Width: 200 ft**Runway/Landing Surface** (Check all that apply)

- ☒ Asphalt ☐ Grass/Turf ☐ Macadam ☐ Water
☐ Concrete ☐ Gravel ☐ Metal/Wood ☐ Unknown
☐ Dirt ☐ Ice ☐ Snow

Condition of Runway/Landing Surface (Check all that apply)

- ☒ Dry ☐ Snow-Compacted ☐ Water-Calm
☐ Holes ☐ Snow-Crusted ☐ Water-Choppy
☐ Ice Covered ☐ Snow-Dry ☐ Water-Glassy
☐ Rough ☐ Snow-Wet ☐ Wet
☐ Rubber Deposits ☐ Soft ☐ Unknown
☐ Slush Covered ☐ Vegetation

FLIGHT ITINERARY INFORMATION**Last Departure Point**Airport ID: KXMRCity: Cape CanaveralState: FLCountry: United States**Time of Departure**Time: 0736Time Zone: EDT**Destination**Airport ID: KXMRCity: Cape CanaveralState: FLCountry: United States**Type Flight Plan Filed**

- ☒ None ☐ VFR/IFR
☐ Company VFR ☒ IFR
☐ Military VFR ☐ Unknown
☐ VFR

Activated? ☐ Yes ☐ No**Type of ATC Clearance/Service** (Check all that apply)

- ☐ None ☐ Special VFR ☐ Special IFR ☐ VFR Flight Following ☐ Cruise
☒ VFR ☒ IFR ☐ VFR On Top ☐ Traffic Advisory ☐ Unknown / NA

Airspace where the accident/incident occurred (Check all that apply)

- ☐ Class A ☐ Class E ☐ Prohibited Area ☐ Jet Training Area ☐ Special
☐ Class B ☐ Class G ☒ Restricted Area ☐ TRSA ☐ Air Traffic Control Area
☐ Class C ☐ Demo Area ☐ Military Operations Area (MOA) ☐ FAR 93 ☐ Unknown
☒ Class D ☐ Warning Area ☐ Airport Advisory Area

Aircraft Load Description (Check all that apply)

- ☒ None ☐ Towing Glider ☐ Parachutists ☐ Livestock
☐ Passengers ☐ Towing Banner ☐ Water ☐ Unknown
☐ Cargo ☐ Other External ☐ Chemical/Fertilizer/Seeds

FUEL & SERVICES INFORMATION**Fuel on Board at Last Takeoff**

(convert from pounds, as necessary)

270 Gallons**Fuel Type**

- ☐ 80/87 ☐ 115/145 ☐ JP3 ☒ Other, specify JP-8
☐ 100 Low Lead ☒ Jet A ☐ JP4
☐ 100/130 ☐ Automotive ☐ JP5

Other Services, if Any, Prior to Departure

Not applicable

EVACUATION OF AIRCRAFT			
Was an emergency evacuation of the aircraft performed? ☐ Yes ☒ No			
Method of Exit – Describe how the occupants exited and how many occupants evacuated each location Not applicable - UAS			
WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE			
Weather Observation Facility Facility ID: <u>KXMR</u> Observation Time: <u>1224</u> Time Zone: <u>EDT</u> Distance from Accident Site: <u>0</u> NM Direction from Accident Site: <u>314</u> degrees MAG		Source of Weather Information <i>(Check all that apply)</i> ☐ National Weather Service ☐ Flight Service Station ☐ TV/Radio ☐ Automated Report ☐ Commercial Weather Service (DUATS) ☐ Company ☒ Military ☐ Internet ☐ Unknown	
Briefing Type/Completeness ☒ Full ☐ Partial / Limited By Pilot ☐ Partial / Limited By Briefer ☐ Abbreviated ☐ Unknown ☐ Not Pertinent		Light Condition ☐ Dawn ☒ Day ☐ Dusk ☐ Night ☐ Dark Night ☐ Bright Night ☐ Not Reported	
Visibility <u>10</u> miles			
Sky/Lowest Cloud Condition ☐ Clear ☒ Few ☐ Partial Obscuration ☐ Scattered ☐ Thin Broken ☐ Thin Overcast ☐ Unknown		Ceiling ☒ None (clear) ☐ Broken ☐ Overcast ☐ Obscured ☐ Indefinite ☐ Unknown	
Lowest Cloud Condition Height <u>10,000</u> ft AGL		Ceiling Height <u> </u> ft AGL	
Wind Direction ☒ Indicated: <u>140</u> degrees MAG ☐ Variable		Wind Speed Velocity: <u>11</u> KTS -or- ☐ Calm ☐ Light and Variable	
Wind Gusts Velocity: <u> </u> KTS ☐ Gusting ☒ Not Gusting		Restriction to Visibility <i>(Check all that apply)</i> ☒ None ☐ Blowing Dust ☐ Blowing Sand ☐ Blowing Snow ☐ Blowing Spray ☐ Dust ☐ Fog ☐ Ground Fog ☐ Haze ☐ Ice Fog ☐ Smoke ☐ Unknown	
Type of Turbulence <i>(Check all that apply)</i> ☐ None ☒ Clear Air ☐ In Clouds ☐ Vicinity of Thunderstorm		Severity of Turbulence ☐ Extreme ☐ Severe ☐ Moderate ☒ Light	
NOTAMs (D, L and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident None for immediate area of accident.			
Temperature: <u>29</u> (C) or <u> </u> (F) Altimeter Setting: <u>30.10</u> in. HG or <u> </u> MB Density Altitude: <u>1,474</u> ft Dew Point: <u>22</u> (C) or <u> </u> (F)		Icing Forecast Amount ☒ None ☐ Moderate ☐ Trace ☐ Severe ☐ Light Type ☐ Rime ☐ Clear ☐ Mixed	
Icing Actual Amount ☒ None ☐ Moderate ☐ Trace ☐ Severe ☐ Light Type ☐ Rime ☐ Clear ☐ Mixed		Type of Precipitation <i>(Check all that apply)</i> ☒ None ☐ Rain ☐ Snow ☐ Hail ☐ Rain Showers ☐ Freezing Rain ☐ Snow Shower ☐ Drizzle ☐ Ice Pellets ☐ Snow Pellets ☐ Snow Grains ☐ Ice Crystals ☐ Ice Pellets Shower ☐ Freezing Drizzle	
Intensity of Precipitation ☐ Light ☐ Moderate ☐ Heavy			

PILOT "A" INFORMATION																																																																																																				
Pilot "A" Responsibilities at the Time of Accident/Incident ☒ Pilot ☐ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew																																																																																																				
Pilot "A" Identification First Name: [REDACTED] Middle Initial: [REDACTED] Last Name: [REDACTED] City: [REDACTED] State: <u>FL</u> ZIP: [REDACTED] Country: <u>United States</u> Age at time of Accident/Incident: <u>49</u> Date of Birth: [REDACTED] mm/dd/yyyy Certificate Number: [REDACTED] +																																																																																																				
Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious			Seat Occupied ☒ Left ☐ Front ☐ Unknown ☐ Right ☐ Rear ☐ Center ☐ Single			Seat Belt Used ☐ Yes ☒ No Available ☐ Yes ☒ No			Shoulder Harness Used ☐ Yes ☒ No Available ☐ Yes ☒ No																																																																																											
Pilot Certificate(s) <i>(Check all that apply)</i> ☐ None ☐ Student ☐ Private ☒ Flight Instructor ☐ Recreational ☒ Commercial ☐ Sport ☒ Airline Transport ☐ Flight Engineer ☐ Foreign ☒ U.S. Military																																																																																																				
Principal Occupation ☒ Pilot ☐ Other ☐ Unknown		Medical Certificate ☐ None ☐ Class 3 ☒ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown			Medical Certificate Validity ☒ Without limitations/waivers ☐ With limitations/waivers ☐ Unknown			Date of Last Medical <u>11/26/2012</u> mm/dd/yyyy																																																																																												
Medical Certificate Limitations None																																																																																																				
Medical Certificate Waivers None																																																																																																				
Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>08/17/2012</u> mm/dd/yyyy				Flight Review Aircraft Make: <u>Cessna</u> Model: <u>210</u>																																																																																																
Airplane Rating(s) <i>(Check all that apply)</i> ☐ None ☒ Single-Engine Land ☐ Single-Engine Sea ☒ Multiengine Land ☐ Multiengine Sea		Other Aircraft Rating(s) <i>(Check all that apply)</i> ☒ None ☐ Airship ☐ Free Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift		Instrument Rating(s) <i>(Check all that apply)</i> ☐ None ☒ Airplane ☐ Helicopter ☐ Powered Lift		Instructor Rating(s) <i>(Check all that apply)</i> ☐ None ☒ Airplane Single-Engine ☒ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☐ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport																																																																																														
Type Ratings L-382, HS-25						Student Endorsements <i>(Include dates)</i> None																																																																																														
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PILOT "B" INFORMATION																																																																																																				
Pilot "B" Responsibilities at the Time of Accident/Incident ☐ Pilot ☐ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew																																																																																																				
Pilot "B" Identification First Name: _____ Middle Initial: _____ Last Name: _____ City: _____ State: _____ ZIP: _____ Country: _____ Age at time of Accident/Incident: _____ Date of Birth: _____ mm/dd/yyyy Certificate Number: _____																																																																																																				
Degree of Injury ☐ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious			Seat Occupied ☐ Left ☐ Front ☐ Unknown ☐ Right ☐ Rear ☐ Center ☐ Single			Seat Belt Used ☐ Yes ☐ No Available ☐ Yes ☐ No			Shoulder Harness Used ☐ Yes ☐ No Available ☐ Yes ☐ No																																																																																											
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Student ☐ Private ☐ Flight Instructor ☐ Recreational ☐ Commercial ☐ Sport ☐ Airline Transport ☐ Flight Engineer ☐ Foreign ☐ U.S. Military																																																																																																				
Principal Occupation ☐ Pilot ☐ Other ☐ Unknown		Medical Certificate ☐ None ☐ Class 3 ☐ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown			Medical Certificate Validity ☐ Without limitations/waivers ☐ With limitations/waivers ☐ Unknown			Date of Last Medical _____ mm/dd/yyyy																																																																																												
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ADDITIONAL FLIGHT CREW MEMBERS (Exclusive of cabin attendants, complete the following information)																
Pilot Name and Address						Degree of Injury										
First Name: _____			City: _____			☐ None		☐ Fatal								
Middle Initial: _____			State: _____ ZIP: _____			☐ Minor		☐ Unknown								
Last Name: _____			Country: _____			☐ Serious										
Pilot Certificate(s) (Check all that apply)						Seat Occupied										
☐ None		☐ Student		☐ Recreational		☐ Commercial		☐ Flight Engineer								
☐ Private		☐ Flight Instructor		☐ Sport		☐ Airline Transport		☐ U.S. Military								
☐ Foreign																
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No				Total Flight Time at the Time of this Accident/Incident: _____ hrs												
Pilot Name and Address						Degree of Injury										
First Name: _____			City: _____			☐ None		☐ Fatal								
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☐ Foreign																
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No				Total Flight Time at the Time of this Accident/Incident: _____ hrs												
PASSENGER(S) / OTHER PERSONNEL (Include flight attendants; continue on separate sheet if necessary)						Seat	Crew	Non-Revenue	Revenue	Non-Occupant	FAA	Fatal	Serious Injury	Minor Injury	No Injury	Unknown
First Name: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Middle Initial: _____																
Last Name: _____																
City: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	
State: _____ ZIP: _____																
Country: _____																
First Name: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Middle Initial: _____																
Last Name: _____																
City: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	
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Country: _____																
First Name: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
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Last Name: _____																
City: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	
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City: _____						_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	
State: _____ ZIP: _____																
Country: _____																

NARRATIVE HISTORY OF FLIGHT (Please type or print in ink)

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State time and point of departure, intended destination, and services obtained.

On May 10, 2013, a US Customs and Border Protection(CBP), Office of Air and Marine(OAM), MQ-9 Predator callsign Omaha 13 departed from Cape Canaveral Air Force Station (KXMR) at 0736 EDT for a routine patrol in the warning areas east of KXMR. The aircraft conducted the launch and patrol without incident. The aircraft departed the patrol area at approximately 1142 EDT for return to KXMR.

During the initial approach under VFR conditions, the aircraft conducted a go-around after first touching down. During the first landing attempt, the Sensor Operator (SO) called for a go-around when he noticed that the aircraft was slowing below the recommended landing speed based on the weight of the aircraft (computed reference speed was 102 knots) and that the aircraft was floating. The main landing gear contacted the runway, rebounding the aircraft back into the air. The aircraft remained airborne for the go-around procedure. Flight instrumentation in the GCS recorded a G-Load of +3.8 with the hard landing annunciator illuminating momentarily. Flight was re-established in the traffic pattern for a second landing procedure. Winds were reported from the control tower at 140 degrees at 11 knots with no gusts reported. The approach was made to Runway 13.

Upon the second landing attempt to Runway 13, the control tower once again reported winds from 140 degrees at 11 knots. No gusts were reported by the control tower. As the aircraft approached its landing area, a flare to land was conducted resulting in the aircraft maintaining an altitude of approximately 20 feet above the runway (based on laser altimeter information) as power was reduced. The indicated airspeed dropped to approximately 89 knots as the landing gear came into contact with the runway nose wheel first. As the aircraft bounced on the nose wheel, the SO called for a go-around. The PIC stated that the aircraft was already on the ground and did not initiate a go-around at that time. The nose wheel bounced a second time with the height of the rebound being greater than the first. Upon the third contact of the nose wheel with the runway, the nose wheel tire failed and the aircraft rebounded with a higher pitch angle resulting in a high angle of attack warning. During the fourth contact with the runway, the landing gear sheared. The aircraft then fell onto its EO/IR payload (located under the nose portion of the fuselage) and veered off of the runway to its left. The aircraft came to rest on its nose approximately 30 feet to the left side of the runway. The left winglet was in contact with the sod and its right main landing gear was holding up the right side of the aircraft. The G-Load recorded in the GCS during the accident landing sequence was +5.0. The LRE PIC utilized the daytime airframe camera for the approach/landing with the SO utilizing the daytime EO/IR system.

During both approaches and landings the LRE PIC utilized the daytime airframe camera for the approach/landing with the SO utilizing the daytime EO/IR system.

The aircraft gross weight and center of gravity were within the limits as stated in the Operators Manual with no indication of CG related issue being present.

The Ground Control Station(GCS) was configured in a standard setting that was appropriate for the mission being flown. An analysis was completed and it was determined by our UAS engineers that the GCS was working properly and did not contribute the accident.

RECOMMENDATION (How could this accident/incident have been prevented?)**Operator/Owner Safety Recommendation**

Due to US Customs and Border Protection having previous incidents with similar divergent oscillations after nose wheel contact with the runway, training of MQ-9 pilots has included training on previous incidents including video playback of previous incidents. In addition the following recommendations have been made by the investigation team:

-Research of the benefits of trailing link main landing gear configuration that is now available for the MQ-9. The use of the trailing link gear may absorb additional energy during hard landings/divergent events thereby increasing ability to recover and minimizing airframe damage.

-Add specific nose wheel landing/Pilot-Induced-Oscillation(PIO) emergency procedure with immediate action items (Bold Face) to the current OAM checklist.

-Add cautions to the OAM MQ-9 Aircrew Standardization Manual(ASM) to emphasize the importance of recognizing a nose gear first landing attitude and acting immediately to prevent damage.

-Establish required annual recurrent training for MQ-9 Landing and Recovery Element(LRE) pilots.

Aircrew specific recommendations:

-Conduct a full post accident evaluation of the LRE PIC to determine if continued designation is warranted.

-If the LRE PIC is to continue designation at the LRE PIC provide training focused on landing procedures and immediate go-around parameters.

ADDITIONAL INFORMATION *(Please type or print in ink)*

Use this space if additional space is needed for any answers.

See attached photographs(7).

See attached Ground Control Station(GCS) Data Plots(4).

See attached site maps(2).

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Date of this Report

05/22/2013

mm/dd/yyyy

Signature

Signature

Type or P

Signature _____ if Other than Pilot/Operator

Signature: _____

Type or P _____

Title: Supervisory Air Interdiction Agent/Aviation Safety Program Manager

FOR NTSB USE ONLY

NTSB Accident/Incident No.
DCA13CA088

Reviewed by NTSB Regional Office

Name of Investigator

Date Report Received





Date & Time: Fri May 10 18:43:41 EDT 2013

Position: +028°28'2.2" / -080°33'55.5"

Altitude: 21ft

Azimuth/Bearing: 326° N34W 5796mils (Magnetic)

Elevation Angle: -08.5°

Horizon Angle: -02.1°

Zoom: 1X



Date & Time: Fri May 10 18:43:03 EDT 2013

Position: +028°28'2.5" / -080°33'56.5"

Altitude: 13ft

Azimuth/Bearing: 086° N86E 1529mils (Magnetic)

Elevation Angle: -06.9°

Horizon Angle: +01.0°

Zoom: 1X





Date & Time: Fri May 10 18:32:04 EDT 2013

Position: +028°28'12.2" / -080°34'12.7"

Altitude: 3ft

Azimuth/Bearing: 140° S40E 2489mils (Magnetic)

Elevation Angle: -24.1°

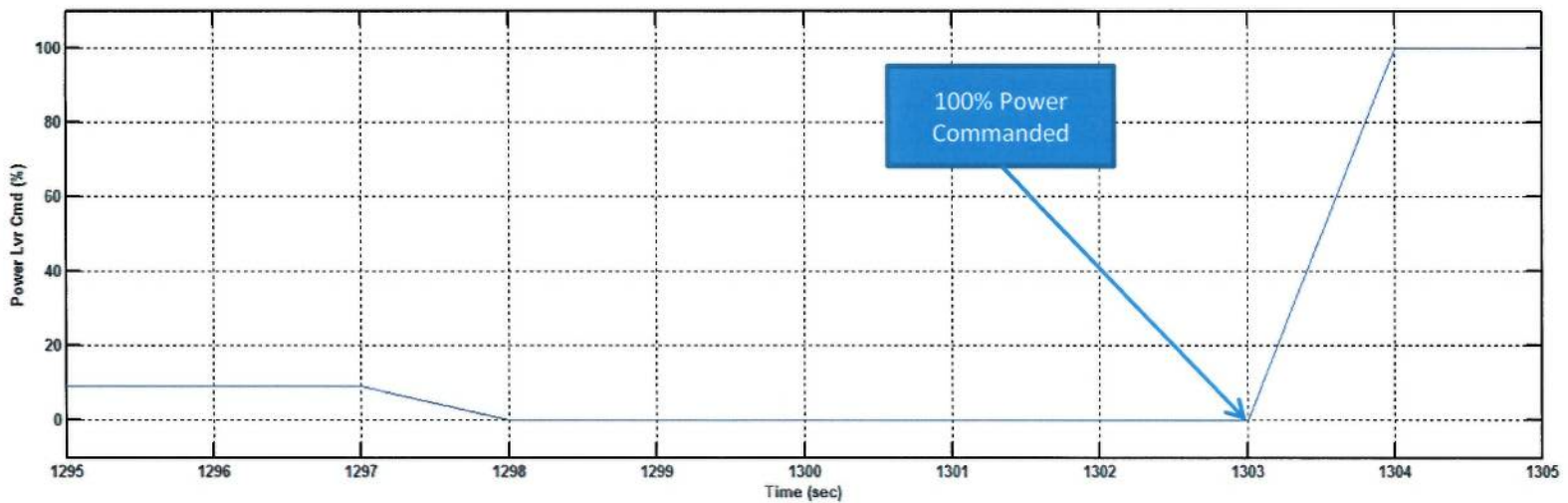
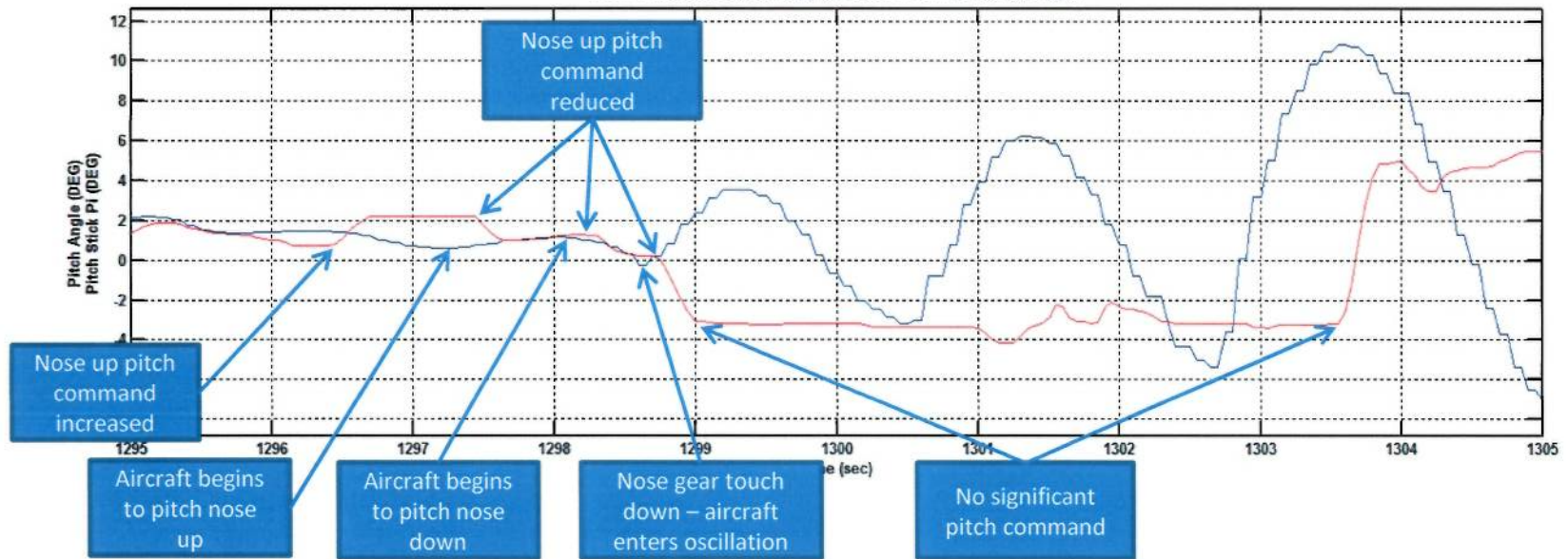
Horizon Angle: +00.0°

Zoom: 1X

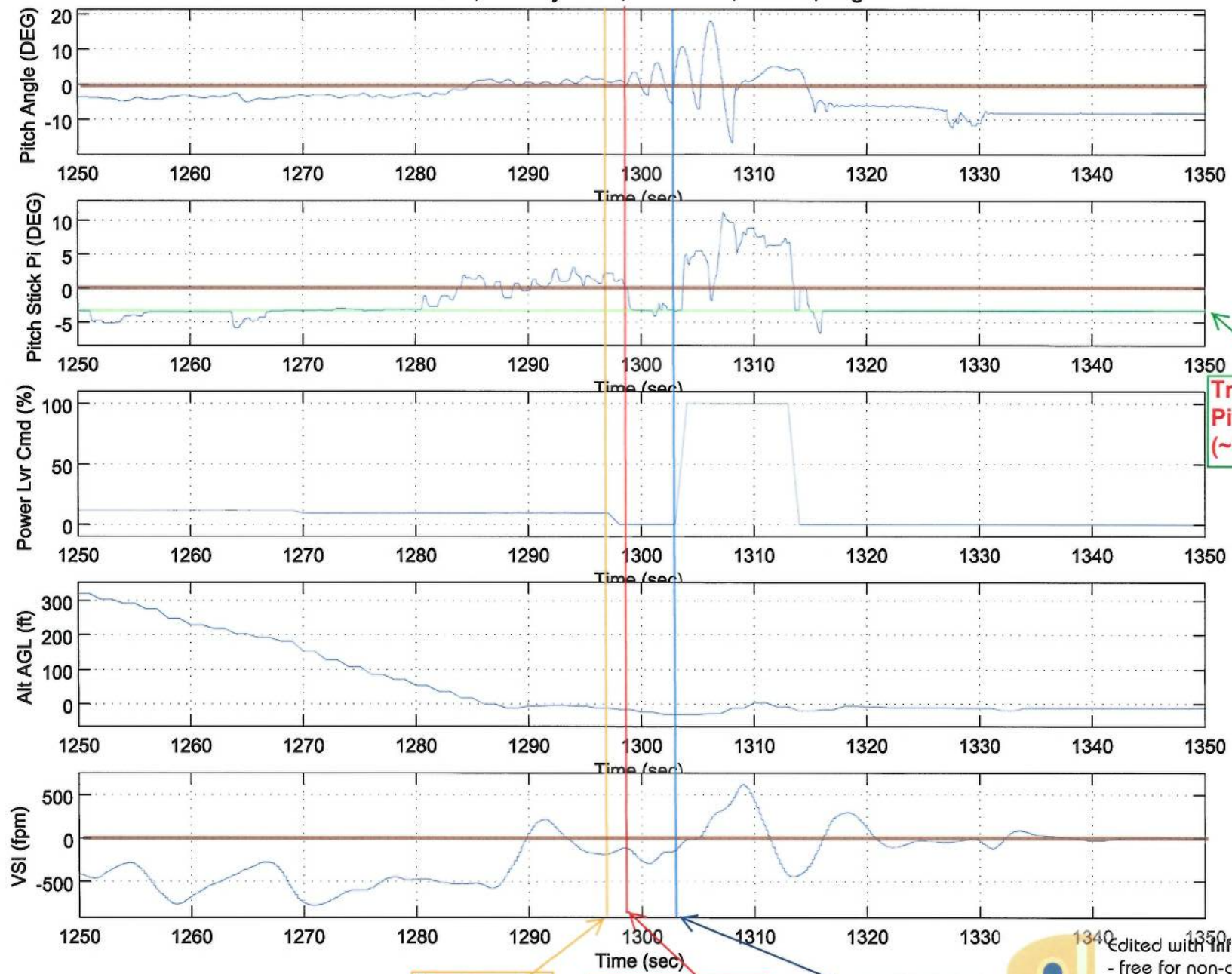




PRED B 10K #113, 10-May-2013, ver. 145R, Flt 236, Log 6



CBP113, 10-May-2013, ver. 145R, Flt 236, Log 6



Power
Reduction/
Flare

1st
Touchdown/
Pitch Relief

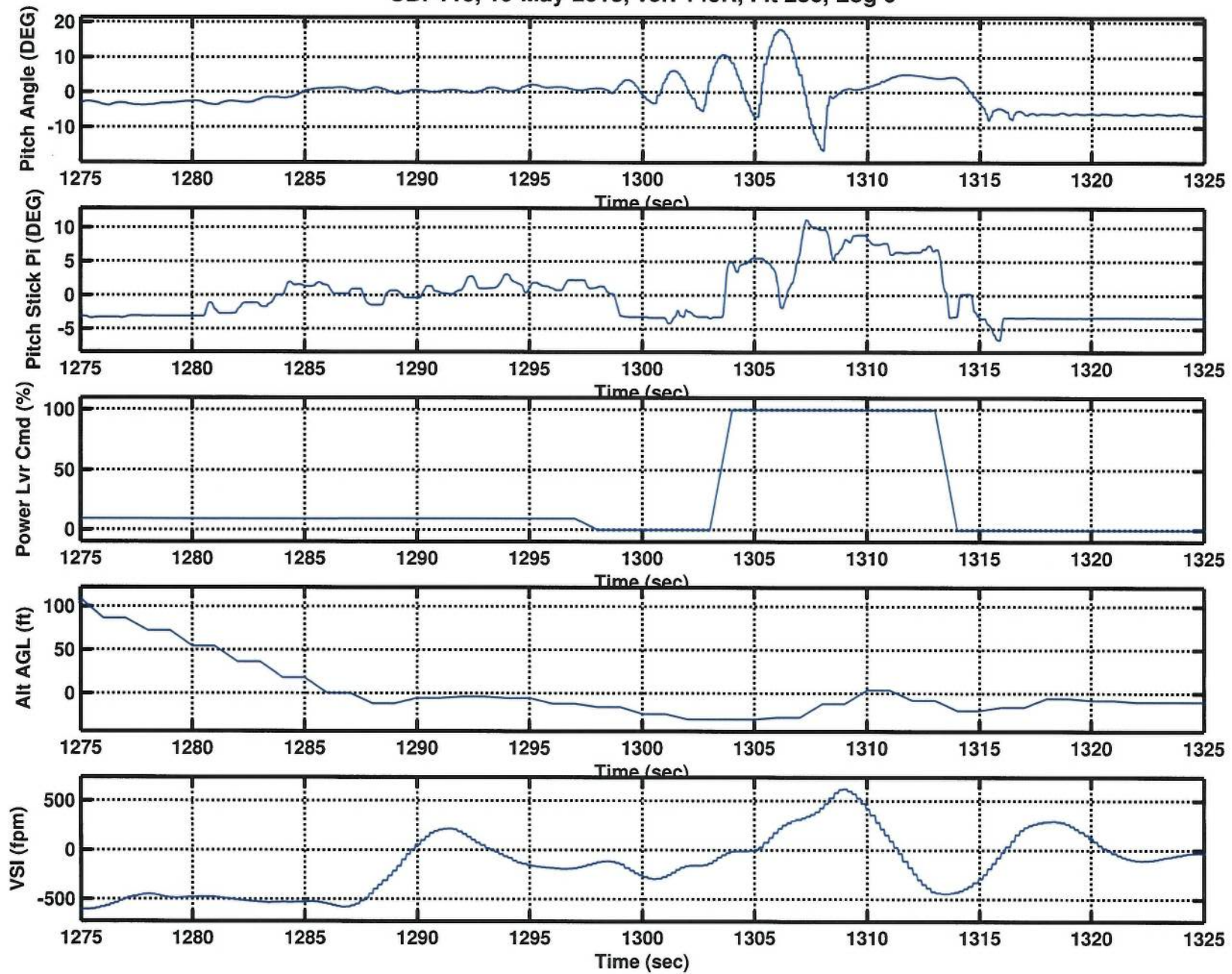
Full Power
Applied



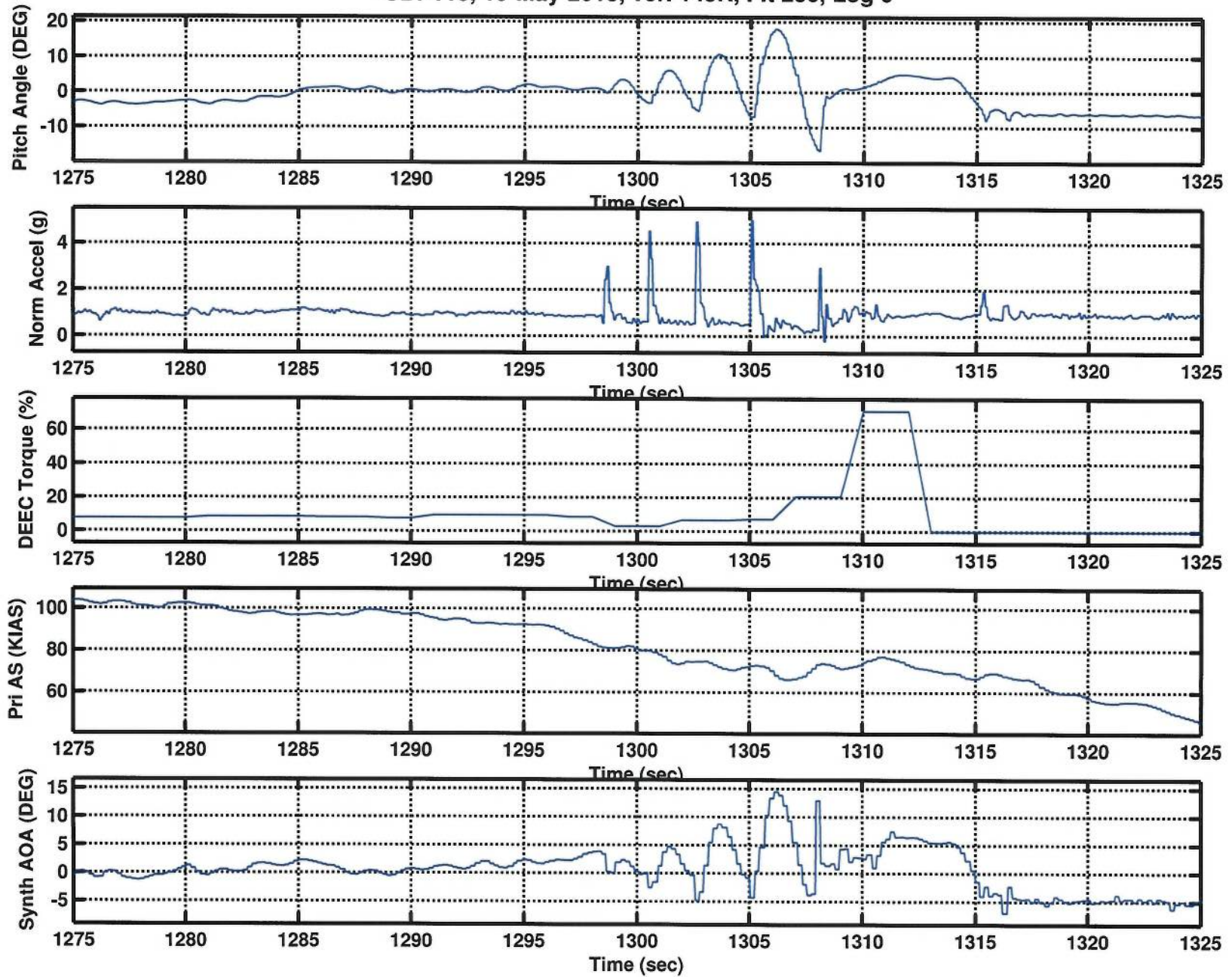
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www.iceni.com/unlock.htm

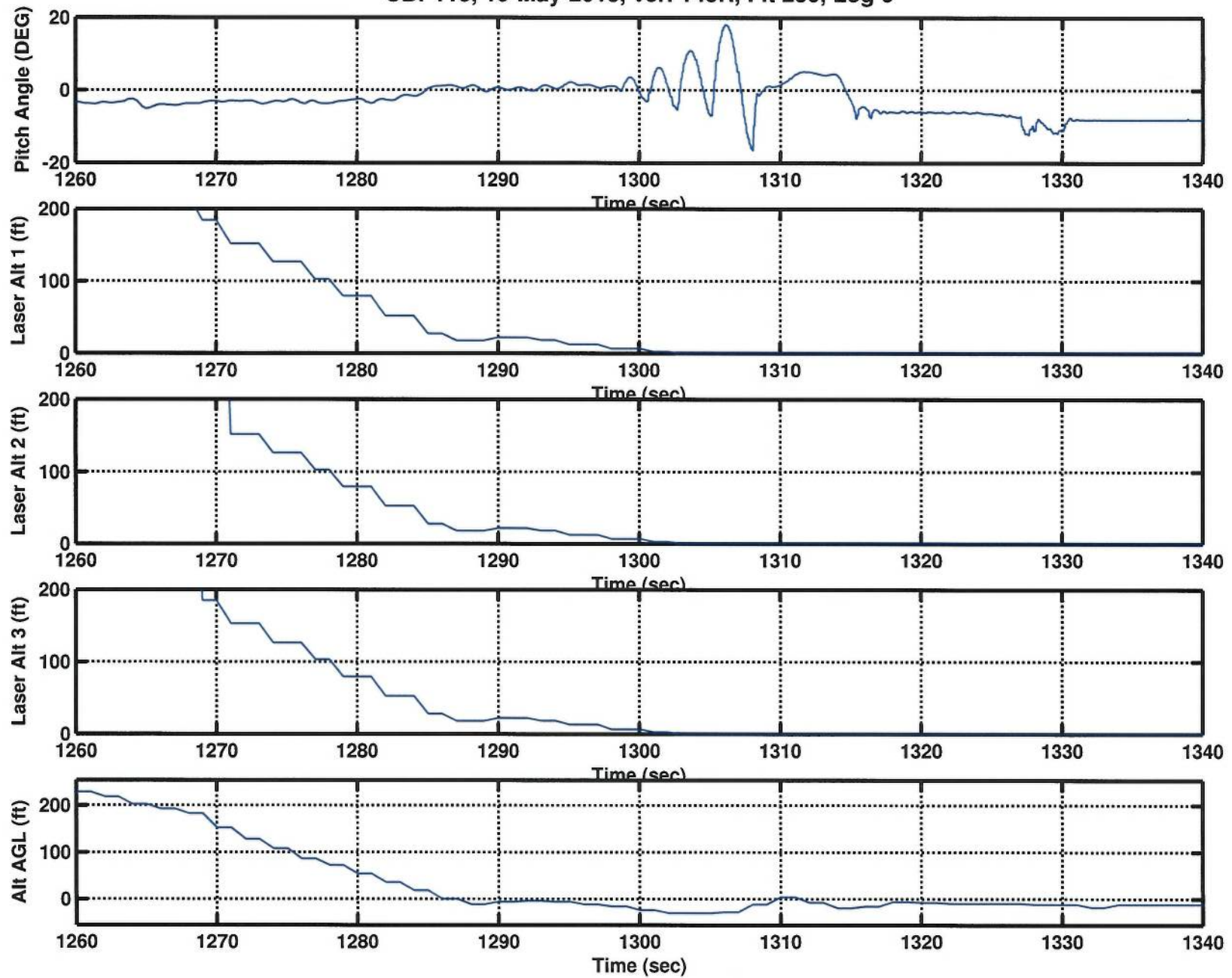
CBP113, 10-May-2013, ver. 145R, Flt 236, Log 6

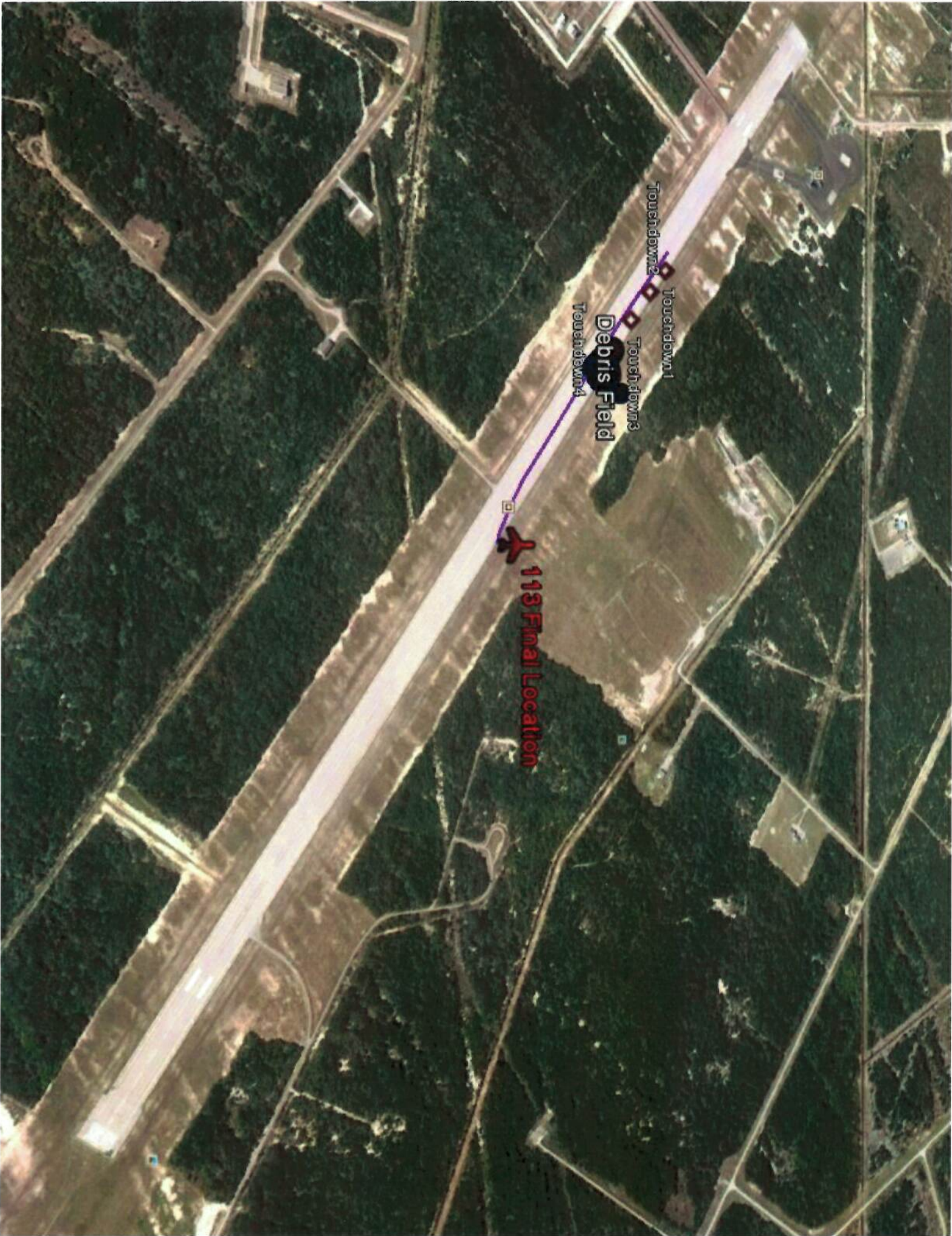


CBP113, 10-May-2013, ver. 145R, Flt 236, Log 6



CBP113, 10-May-2013, ver. 145R, Flt 236, Log 6





Touchdown 1

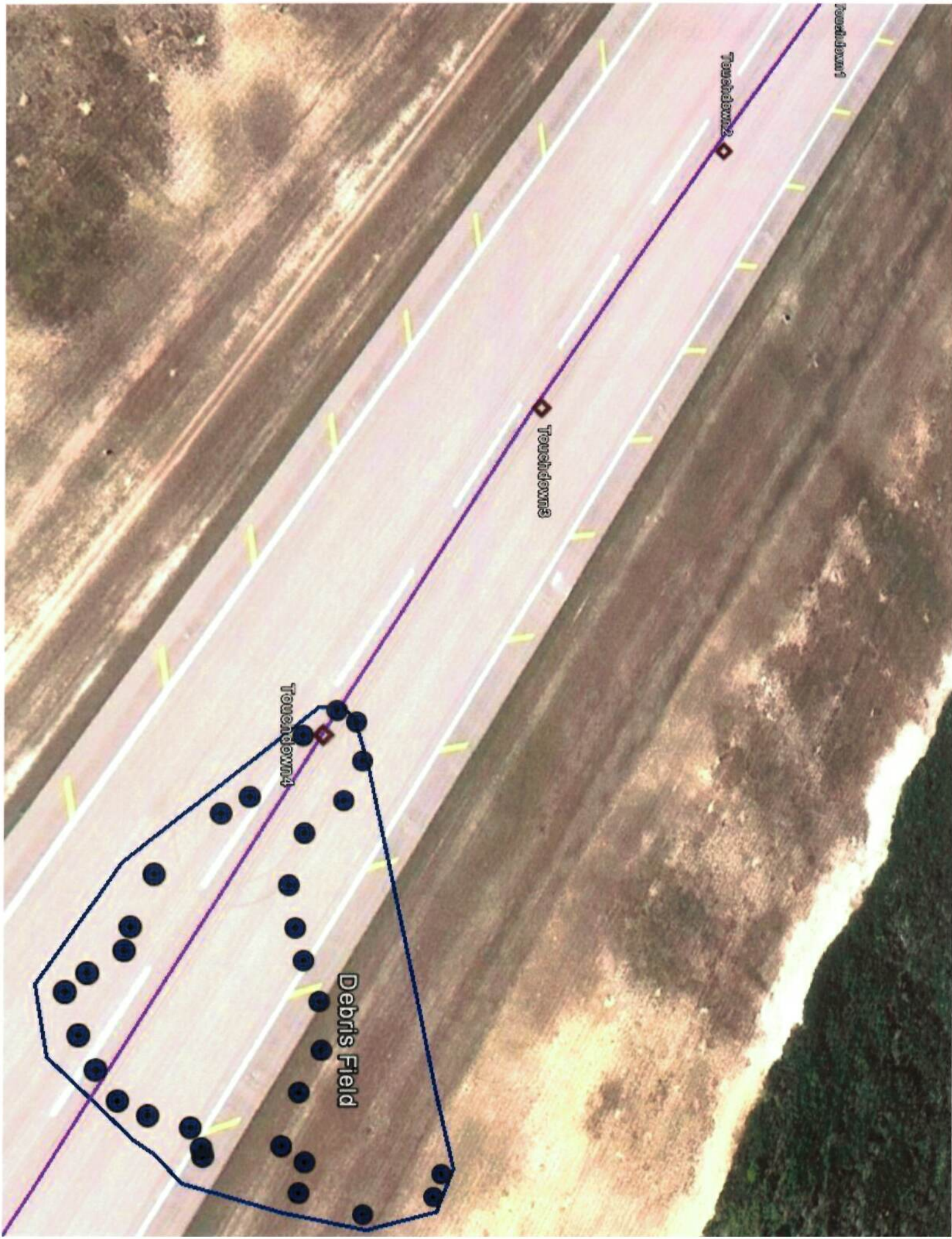
Touchdown 2

Touchdown 3

Touchdown 4

Debris Field

113 Final Location



Touchdown1

Touchdown2

Touchdown3

Touchdown4

Debris Field

10May2013

Aircrew statement for CBP113 landing at KXMR

Runway / Airport: Runway 13 KXMR

Local time: 1224 EST

Weather: winds estimated 140 at 1 lkts with gusts, no precip, temp 84' F.

VFR/DFR: IFR flight plan in VMC conditions

Pilot hours: MQ-9 hours = over 600

Aircraft weight: estimated: 73001b

Approach speed: 102

Brief narrative: The first pass was a go around. On the second pass the aircraft touched down with the main landing gear first, followed by the nose gear. The camera view showed the nose pitch up after touch down before coming down again indicating a nose bounce. The nose bounced a second time and I applied full power in an attempt to go around. I did not perceive the aircraft responding correctly and did not think it would leave the ground. I went to flight idle, the aircraft swerved to the left, I went into max reverse and applied full right brake. The aircraft departed the runway to the left. I shut down the engine with the condition lever, turned off the GCS ignition and completed the emergency shutdown checklist followed by the normal shutdown checklist

PHONE INTERVIEW NOTES:

AIA [REDACTED] PIC CBP 113 Hard Landing Incident Cocoa Beach

11MAY2013 @ 1017hrs AZ MST

A phone interview was conducted with AIA [REDACTED] in regards to a UAS accident involving CBP 113 on 10MAY2013. AIA [REDACTED] was performing duties as the Pilot In Command and was on the controls at the time of the event.

During the interview, the PIC noted that on the first pass, he conducted a go-around due to gusty winds. On the second attempt to land, tower stated that winds were "140@11 only estimate". The approach was continued with the PIC evaluating the approach as good, maybe a little fast, and near centerline. He continued the approach to landing and was surprised to feel the nose "bounce". After the nose contact, no go around was attempted due to the aircraft already being on the ground. Upon the second bounce of the UAS, the PIC retarded the throttle to idle, feathered the prop and completed an emergency shut-down once the aircraft started to veer off the runway.

No other information was discussed during the phone interview. A written statement was completed. The PIC was not available during the investigation for an "in person" interview due to being on military leave in Hawaii.

On 10 MAY 2013 I was sitting in the right Sensor Operator (SO) seat during the landing portion of the mission at KXMR airfield. Pilot AIA [REDACTED] was the Pilot in Command (PIC) in the left seat. All required checklist items were complete prior to the first landing attempt on KXMR Runway 13, to include mandatory calls through critical altitudes. KXMR tower reported winds at 140 degrees 11 knots. The first attempt to land involved me calling a "GO AROUND" from the right (SO) seat when I noticed that the landing speed was below the recommended landing speed of our aircraft weight and when I noticed that the plane was starting to float. PIC, AIA [REDACTED] acknowledged my call and we started our climb out to attempt a landing for a second time. Prior to our second attempt to land all required checklist items were complete, to include another visual inspection of the landing gear with the MTS-B, a landing gear and a visual "wiggle" confirmation of the nose landing gear. PIC, AIA [REDACTED] called KXMR tower when we were abeam of the field and KXMR tower was still reporting winds at 140 degrees 11 knots. From the right seat I made all of the mandatory calls prior to our final approach onto KXMR runway 13. UAS tail number 113's speed was on track and PIC, AIA [REDACTED] was lined up on center line. As UAS tail number 113 continued descend I noticed that the speed was falling below the recommended speed and I told the PIC that his speed was decreasing. We continued to descend and someone called "GO AROUND" over the radio the same time that I asked the PIC to acknowledge that we were going around. PIC said that we were already on the ground and that is when I lost all MTS-B video on the SO side. PIC made every attempt to maintain control of Tail number 113 through the time that the platform slid off of the runway and came to a complete stop. Upon stop the PIC and I completed emergency shutdown procedures and standard shutdown procedures per the checklist to the best of our ability as a crew.

[REDACTED] SDEO

PHONE INTERVIEW NOTES:

SDEO [REDACTED] SO, CBP 113 Hard Landing Incident Cocoa Beach

14MAY2013 @ 1350hrs FL EDT

A phone interview was conducted with SDEO [REDACTED] in regards to a UAS accident involving CBP 113 on 10MAY2013. SDEO [REDACTED] was performing duties as the Sensor Operator (SO) at the time of the event.

The SO has a statement on file and the interview was conducted for clarification on some points in the SO's statement.

The SO noted that the mission involved training for two additional SO's during the event but that both individuals had left the Ground Control Station (GCS) prior to the accident. SDEO [REDACTED] indicated that he had returned to the rights seat approximately one hour prior to the accident. The SO indicated that all operations were normal prior to the first approach to landing and that all checklists were completed and call outs were performed in accordance with local policy during the approach and landing phase. The SO noticed some line up issues and that speed had started to decay during the final portion of the first approach as the aircraft started to "float" and elected to call for a "Go Around". The SO stated that the "Go Around" was conducted without incident and the PIC indicated that he felt the winds were gusty. On the downwind for the second approach to landing the SO indicated that he made one call out to correct an altitude excursion. He then completed the appropriate checklists and checked the nose landing gear using the MTS-B camera prior to commencing the approach to landing. The SO stated that the PIC requested another wind check from tower and the winds were reported as "140 at 11 knots" with the caveat "Those are estimated."

The SO noted that as the aircraft continued the approach to landing he made one early call out for high airspeed on the approach which was corrected before the aircraft entered the landing phase. Over the landing threshold the SO reported that at approximately 25 feet he noticed airspeed of 90-92 knots and was preparing to initiate a "Go Around" when someone called for a "Go Around" over the General Atomics portable radio. The SO indicated that he asked the PIC if he was initiating a go around and the PIC responded "we are already on the ground". The SO shortly thereafter lost the picture from the MTS-B camera.

The SO stated that on the two days previous to the accident he had been in the GCS when the accident PIC had been conducting landing operations and AIA [REDACTED] had conducted one crew initiated "Go Around" on each day.

Additional information can be found in SDEO [REDACTED] statement. The interview was conducted by phone due to his being stationed at the OAM Jacksonville Branch.

MEMORANDUM FOR RECORD

FROM: [REDACTED]
Avionics Technician III
TalentScale Federal Services

SUBJECT: Personal Statement of Aircraft Mishap

On May 10, 2013, I came onto shift at 11:00am. When we received the notification that the aircraft (CBP113) was approximately 30 minutes out, I went into the ground control station for the recovery. The aircraft returned to the local area and circled for a landing on runway 13.

The aircraft continued along the glide path with no issues. When the pilot came to the final 200 feet of the glide path, the sensor operator notified the pilot of excessive speed. The pilot made corrections as he continued. The pilot attempted to land and touched down fairly hard. I heard the alert tone from the pilot station and looked at the VIT screen. The "g" indication was 3.6g. The sensor operation immediately called a go-around.

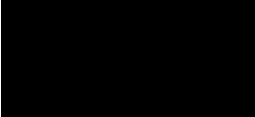
The pilot took the aircraft around the pattern for another attempt at a runway 13 landing. As the pilot brought the aircraft into the glide path, the sensor continually called out he was high in elevation and slow on speed. The pilot quickly adjusted and got the airspeed to the proper speed. At an altitude of approximately 200 feet, the aircraft was still showing high in the glide path. The pilot brought the aircraft down and "floated" at about 15-21 feet for what appeared to be about 500 feet. The pilot then attempted to set it down and touched down extremely hard, I looked at the VIT screen and the "g" indication was 5.0g. As he touched down, the sensor called for another go-around. At this time the video from the MTS-B was lost. Immediately following the recovery maintenance personnel, also called for a go-around. The sensor asked if we were in the air and the pilot responded that we were unable to take off and that we were on the ground.

At this point I looked at the pilot's heads-up display and saw the aircraft rolling towards the left side of the runway. The tower controller asked if everything was ok and the pilot responded by telling him to "roll the trucks". I watched as the aircraft left the paved surface and came to rest in the dirt off the left side of the runway. We continued to monitor the pilot's video until battery power was switched off. Shortly after the aircraft came to a complete stop, I noted the time to be 12:26 pm EST. Estimated touch-down time was 12:24 pm EST.

The Sensor Operator asked me which emergency checklist we should run. I responded by telling him to run the "loss of control while on the ground" checklist. The pilot had already completed the majority of the checklist and they finished the procedures very quickly. They then proceeded to run the normal shutdown procedures. I reminded them not to turn off the recorders or the data loggers until aircraft battery power was turned off. When battery power was turned off, the pilot and sensor operator stopped their data loggers and recorders.

 Personal Statement of Aircraft Mishap
May 10, 2013

The pilot and sensor operator gathered their things and left the ground control station as it was after landing. I immediately put the aircraft and ground control station maintenance records in the ground control station and locked the door to prevent access. I kept the key until the Maintenance Officer;  took control of all the ground control station keys.


Avionics
Technician III TalentScale
Federal Services

INTERVIEW NOTES:

AMO [REDACTED] Witness, CBP 113 Hard Landing Incident Cocoa Beach

15MAY2013 @ 0915hrs FL EDT

An interview was conducted with AMO [REDACTED] in regards to a UAS accident involving CBP 113 on 10MAY2013. AMO [REDACTED] was part of the recovery/tow team and adjacent to the runway at the time of the event.

The witness was located in a vehicle adjacent to the runway and witnessed the aircraft float past the two vehicles of the tow team that were parked adjacent to the runway. The witness indicated that after the aircraft passed his position he noted what appeared to be a relatively normal touchdown followed by a bounce. The witness stated that aircraft bounced a second time and after the third bounced the nose departed the aircraft. The aircraft bounced one more time before continuing down the runway and coming to rest on the left side of the runway.

The interview then ended.

[REDACTED] (GA Lead) and [REDACTED] (GA Tech); 15MAY2013 @ 9020

RE: Ground observation of CBP 113 landing

Interview conducted with GA techs [REDACTED] who were present near runway during both the initial landing attempt and the accident landing. Both gentlemen reported seeing the aircraft land "hard", bouncing back into the air and conducting a go-around during the first landing attempt. The aircraft conducted a wide traffic pattern and returned for a second landing.

During the second landing attempt, the GA techs reported seeing the aircraft touch down nose wheel first on the first runway contact and bounce back into the air. The second contact with the runway involved the nose wheel again touching down first and a slightly increased angle and bounce back into the air. On the third runway contact, the nose wheel touched down at an increased forward angle causing the front tire to blow and bouncing the aircraft back into the air at a high angle. On the 4th contact, the nose gear impacted the runway and sheared. The aircraft continued down the runway and eventually veered off the left side of the runway and stopped in the sod area.

[REDACTED] mentioned in this interview that GA tech [REDACTED] who was monitoring the GCS freqs, did call a go around based on his observations from the ground. During this interview, Mr. [REDACTED] also verified that this unit has had 3 hard landing events since opening with this event being the first that caused aircraft damage.

On 5/10/2013 at approx. 1220 Local, I [REDACTED] as the Operations Duty Office (ODO) and situated in the Predator Operations Center (POC) while viewing the Big Pipe Feed on the TV monitor, observed OM-13 on approach to Runway 13, during the approach, I observed OM-13 floating on the approach and heard the SO [REDACTED] call a go around. On the second approach, I observed the SO make 100ft altitude call and then I heard speed is slow and the pilot [REDACTED] acknowledged the slow call and observed a call of 25ft, I then looked up at the TV monitor and seen what looked like the aircraft nose do a porpoise 3 times and then I heard someone (unknown) call a go around. After the go around call the TV monitor went blank. I observed the Pilot call the tower and advise them to launch emergency vehicles.

45WS UAS MISSION EXECUTION FORECAST										Departure Station / ETD (Z)		Type of Aircraft / Call sign		DATE	
										KXMR /	1130	MQ-9 / Omaha	13	10-May-13	
TAKE OFF DATA															
VALID TIME (Z)		WIND (M /)		VIS (SM)		WEATHER		TMP (°C)		DP (°C)		SKY CONDITION		ALSTG PA	
1030 - 1230		15007		4		BR		+17		+17		BKN350		3011 -156 FT	
CLIMB WIND (KT)				WARNINGS / WATCHES / ADVISORIES											
SFC-030: 13005 030-080: 17005				NONE (CHECK FOR UPDATES)											
060-100: 26005 100-150: 28010				REMARKS											
150-200: 29015 200-300: N/A				NONE (CHECK FOR UPDATES)											
300-400: N/A 400-500: N/A															
ENROUTE DATA															
FLIGHT LEVEL WIND (KT) / TEMP (°C)				SPACE WEATHER		AFW-WEBS		LIGHT / NVG DATA		KXMR					
010 14005/+21 200 29020/-13				JAAWIN		NO IMPACT		BMNT 0939 Z		MR 1058 Z					
050 14005/+14 300 N/A				HF COMM		X		SR 1034 Z		MS 11/0048 Z					
100 27010/+06 400 N/A				UHF SATCOM		X		SS 11/0003 Z		ILLUM 1 %					
150 29015/-03 500 N/A				GPS ERROR		X		EENT 11/0059 Z							
FREEZING LEVELS / LOCATION				SEA STATE		20NM		120NM							
ABS HUM (g/m3) 14.55 SFC 5.75 FL050 1.34 FL100 .63 FL150 .64 FL200				1-2FT/+23C		2-3FT/+26C									
THUNDERSTORMS				TURBULENCE				ICING				PRECIPITATION			
MWA / WW NO. 26 OWS 10/09Z-21Z				CAT ADVISORY 26 OWS 10/09Z-21Z				NONE 26 OWS 10/09Z-21Z				RADAR / FORECAST			
NONE X AREA LINE X NONE				IN CLEAR IN CLOUD				RIME MIXED CLEAR				DRIZ RAIN SNOW ICE PELLETS			
X ISOLATED 1 - 2% MT400				LIGHT				TRACE				LIGHT			
FEW 3 - 15%				MODERATE				LIGHT				MODERATE X			
SCATTERED 16 - 45%				SEVERE				MODERATE				HEAVY			
NUMEROUS - MORE THAN 45%				EXTREME				SEVERE				SHOWERS X			
HAIL, SEVERE TURBULENCE & ICING, HEAVY PRECIPITATION, LIGHTNING & WIND SHEAR EXPECTED IN AND NEAR THUNDERSTORMS.				LEVEL(S)				LEVEL(S)				FREEZING LOCATION			
LOCATION SOUTHERN W-497B				LOCATION N/A				LOCATION N/A				SOUTHERN W-497B/ INLAND AFT 18Z			
AREA FORECAST															
AREA		CLOUDS		VIS (NM)		WEATHER		WIND (KT)		VALID TIME					
KXMR		030FEW035 060SCT070 350BKN400		5 IC		NSW		14011		1230 - 1800 Z					
				7 OC											
AREA		CLOUDS		VIS (NM)		WEATHER		WIND (KT)		VALID TIME					
W-497A		025FEW030 060SCT070 350BKN400		5 IC		NSW		14015		1200 - 1930 Z					
				7 OC											
AREA		CLOUDS		VIS (NM)		WEATHER		WIND (KT)		VALID TIME					
W-497B		010FEWCB400 020SCT040 060SCT-BKN090 350BKN400		1/2 IC		TSRA		15015		1200 - 1930 Z					
				3 OC											
AREA		CLOUDS		VIS (NM)		WEATHER		WIND (KT)		VALID TIME					
				IC										Z	
				OC											
AREA		CLOUDS		VIS (NM)		WEATHER		WIND (KT)		VALID TIME					
				IC										Z	
				OC											
RECOVERY DATA															
STATION		WIND (KT)		VIS (SM)		WEATHER		TEMP (°C)		SKY CONDITION		PA		ALSTG	
KXMR		14011 M		7		NSW		+27		SCT035 SCT060		-119		3006	
										CROSS WIND 2 G 2 KT				1800 - 2000 Z	
REMARKS (TSTMS IMPLY LLWS)															
For updates to brief, please contact:															
45th WS - DSN 467-8485/ COM (321) 853-8485															
26th OWS - DSN 781-4775/ COM (866) 223-9328															
25th OWS - DSN 228-6598/ COM (877) 451-8367															
PMSV LOCATION				FREQUENCY				PERSON(S) RECEIVING BRIEF				ATTACHMENT(S)			
KCOF				225.05											
BRIEFING DATA															
BRIEFED TIME (Z)				FORECASTER INITIALS				REBRIEF TIME (Z) / INITIALS							
E 10/1000 /				SL											

GELLERSON, DREW

From:
Sent:
To:

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E, JOSE R;
ON,

Subject: 10 May 2013 OMAHA 13 Flight Weather Briefing
Attachments: 10 MAY 13 OMAHA 13 DEBRIEF.xls; 10 MAY 13 OMAHA 13 DUE 0930Z.xls

Good Morning Gentlemen,

Attached is today's flight weather briefing. The high pressure ridge across central Florida will maintain a low level southeasterly flow for today. An increase in moisture will be a key ingredient for showers to form inland by mid afternoon and then shift back eastward as the evening progresses. I do not foresee any issues for your arrival. There are some thunderstorms and rain showers in the southern portion of W-497B though W-497A should remain workable throughout the mission. Turbulence and icing is not forecasted for today's mission.

KXMR: Winds will maintain from the southeast for the entire mission. Fog could be an issue for departure as we are pretty saturated and winds are relatively light. As mentioned above, showers will start forming inland but will not be a factor for arrival. Sky condition should remain scattered or less coverage except for the broken cirrus well above. Winds will maintain from the southeast so cross winds should not be an issue.

W-497A: Similar to KXMR; few to scattered low clouds with broken cirrus above.

W-497B: Rain showers and thunderstorms in the southern portion with improving conditions in the northern sector.

Bottom Line: Rain showers will start forming inland by mid afternoon but should not affect recovery. Southern W-497B will be unworkable; no other issues forecasted.

Tuesday's Outlook: A frontal boundary will have pushed through by Monday with high pressure ridging in on Tuesday. Winds will veer northeast pretty quickly and my concerns are cross winds as speeds will be between 10 and 20kts.

As always, please call me at [REDACTED] if you have any questions.

[REDACTED] Civ, DAF

[illegible]

[illegible]

5/10/2013 12:56 OMO	OMO KXMR 101756Z AUTO 14010KT 10SM CLR 29/22 A3010 RMK AO2 SLP193
5/10/2013 12:57 OMO	OMO KXMR 101757Z AUTO 14011KT 10SM CLR 29/22 A3009 RMK AO2 SLP192
5/10/2013 12:58 OMO	OMO KXMR 101758Z AUTO 14011KT 10SM CLR 29/22 A3010 RMK AO2 SLP193
5/10/2013 12:59 OMO	OMO KXMR 101759Z AUTO 14012KT 10SM CLR 29/22 A3009 RMK AO2 SLP192
5/10/2013 13:00 OMO	OMO KXMR 101800Z AUTO 14011KT 10SM FEW100 29/22 A3010 RMK AO2 SLP193
5/10/2013 13:01 OMO	OMO KXMR 101801Z AUTO 14010KT 10SM FEW100 29/22 A3009 RMK AO2 SLP192
5/10/2013 13:02 OMO	OMO KXMR 101802Z AUTO 14010KT 10SM FEW100 29/22 A3009 RMK AO2 SLP192
5/10/2013 13:03 OMO	OMO KXMR 101803Z AUTO 14010KT 10SM CLR 29/22 A3009 RMK AO2 SLP192
5/10/2013 13:04 OMO	OMO KXMR 101804Z AUTO 14011KT 10SM CLR 29/21 A3009 RMK AO2 SLP192
5/10/2013 13:05 OMO	OMO KXMR 101805Z AUTO 14009KT 10SM CLR 29/22 A3009 RMK AO2 SLP192
5/10/2013 13:06 OMO	OMO KXMR 101806Z AUTO 14010KT 10SM CLR 29/22 A3009 RMK AO2 SLP192
5/10/2013 13:07 OMO	OMO KXMR 101807Z AUTO 15010KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:08 OMO	OMO KXMR 101808Z AUTO 15010KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:09 OMO	OMO KXMR 101809Z AUTO 15010KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:10 OMO	OMO KXMR 101810Z AUTO 15010KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:11 OMO	OMO KXMR 101811Z AUTO 14010KT 10SM CLR 29/22 A3009 RMK AO2 SLP190
5/10/2013 13:12 OMO	OMO KXMR 101812Z AUTO 13011KT 10SM CLR 29/22 A3009 RMK AO2 SLP190
5/10/2013 13:13 OMO	OMO KXMR 101813Z AUTO 13011KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:14 OMO	OMO KXMR 101814Z AUTO 13010KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:15 OMO	OMO KXMR 101815Z AUTO 13011KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:16 OMO	OMO KXMR 101816Z AUTO 14011KT 10SM CLR 29/22 A3009 RMK AO2 SLP191
5/10/2013 13:17 OMO	OMO KXMR 101817Z AUTO 14011KT 10SM CLR 29/21 A3009 RMK AO2 SLP191
5/10/2013 13:18 OMO	OMO KXMR 101818Z AUTO 13011KT 10SM CLR 29/21 A3009 RMK AO2 SLP191
5/10/2013 13:19 OMO	OMO KXMR 101819Z AUTO 12011KT 10SM CLR 29/21 A3009 RMK AO2 SLP190
5/10/2013 13:20 OMO	OMO KXMR 101820Z AUTO 13010KT 10SM CLR 29/21 A3009 RMK AO2 SLP190
5/10/2013 13:21 OMO	OMO KXMR 101821Z AUTO 13009KT 10SM CLR 29/21 A3009 RMK AO2 SLP190