



Applied Marine Technology, Inc.

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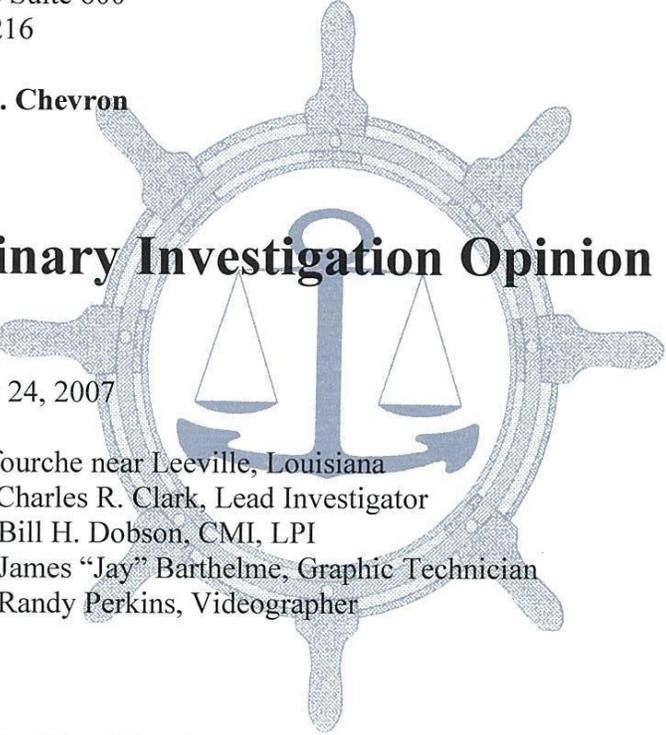
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October 21, 2010

Mr. Ron Salazar, Esquire
The Ron Salazar Law Firm, P.C.
The Amegy Bank Building
10001 Reunion Place Suite 600
San Antonio, TX 78216

Re: Lyons vs. Chevron

Preliminary Investigation Opinion Report



AMT Case #2018-09
Date of Incident May 24, 2007
Time; 15:36
Location: Bayou Lafourche near Leeville, Louisiana
AMT Investigators: Charles R. Clark, Lead Investigator
Bill H. Dobson, CMI, LPI
James "Jay" Barthelme, Graphic Technician
Randy Perkins, Videographer

Summary Brief of Incident

According to the reports completed by Chevron employees and the Louisiana Department of Wildlife and Fisheries, on May 24, 2007 between 15:00 and 16:00 hours a Chevron owned U206G seaplane attempted a waterborne takeoff in Bayou Lafourche near the Chevron Heliport Facility. The attempted takeoff path was generally in a southwesterly direction off center to the south/southeast side of Bayou Lafourche. According to witnesses as the seaplane traveled its path down Bayou Lafourche a small 16 foot fishing boat exited Bobby Lynn's Marina Bayou from the south/southeast side of Bayou Lafourche and began a starboard turn to proceed up the



southeast side Bayou Lafourche. The 16 feet fishing boat being operated by Mr. Lyons continued turning until impact was made just as the seaplane lifted off the water. The resulting collision delivered fatal injuries to Mr. Lyons with the three occupants of the seaplane escaping with relatively minor injuries.

Occupants of the floatplane were Chevron USA employees:

Gary Joseph Songy	Left Front Seat (Pilot)
James Parish, Jr.	Right Front Seat
James Ronald Hunter, II	Right Rear Seat

As a result of the impact, Mr. Lyons, the boat's sole occupant, was fatally injured. The pilot and passengers of the aircraft received minor injuries. Both Chevron's aircraft and Lyons' Sea Fox boat were substantially damaged in the accident.

NTSB Report DFW07LA120, www.ntsb.gov

Aircraft Data

N Number	N45WT
Serial Number	U20603846
Make/Model	Cessna U206G
Engine	Continental Motor 17032
Aircraft Year	1977
Owner Name	Chevron USA, Inc. 96 Runway Road Picayune, MS 39466
Airworthiness Certificate Type	Standard



Similar Aircraft



Actual Aircraft

Chevron's Seaplane Base Data

Name	Bayou Fourchon Seaplane Base
Airport Identifier	1LA4
Location	8 miles north of Leesville, Louisiana
Ownership	Chevron USA, Inc.
Elevation	0 feet msl
Airport Use	Private
Control Tower	None
Runway	06W/24W, 5,000 feet x 75 feet

N45WT Left Front Seat Pilot Data

Name	Gary Joseph Songy
Address	606 Kimberly Ann Drive Mandeville, LA 70471-6715
FAA	Airline Transport Pilot Airplane Single Engine Land Airplane Single Engine Sea Airplane Multiengine Land Airplane Multiengine Sea Commercial Privileges Rotorcraft-Helicopter Flight Instructor Airplane Single and Multiengine Instrument Airplane



Total Flight Hours 12,911
Flight Hours 206 4,550

Ground Instructor
Advanced
Instrument
Class 1 Medical

FAA Airmen Certification Data, www.faa.gov
NTSB Report DFW07LA120, www.nts.gov

Right Front Seat Passenger Data

Name James Parish, Jr.
Address 605 Lamar Street
Hattiesburg, MS 39402
FAA No certification held

Right Rear Seat Passenger Data

Name James Ronald Hunter, II
Address 5084 Ponitz Parkway
Pace, FL 32571-9530
FAA Airline Transport Pilot
Airplane Multiengine Land
Commercial Privileges
Airplane Single Engine Land
Rotorcraft-Helicopter
Instrument Helicopter
Class I Medical

Boat Operator Data

Name **Michael J. Lyons—Deceased**
Age 58
Date of Birth September 13, 1948
Last Address 41277 S. Preston Drive
Hammond, LA 70403-7241

Boat Data

Make Sea Fox
Manufacturer Sea Fox Boat Company, Inc.
2550 Highway 52
Moncks Corner, SC 29461
Serial Number LYGCA115D202
Year 2002



Model	160CC
Length/Beam	16 feet 1 inch/6 feet 2inches
Bridge Clearance	4 feet 6 inches (without Bimini Top)
Dry Weight	1,150 pounds
Draft	9 inches
Engine	50hp Johnson outboard
Serial Number	049B6964
Model Number	J50PLSNF
3 Blade Propeller	11.75 X 17" Pitch (Stainless Steel)
Fuel Capacity	21 gallons maximum
Boat Capacity	80 hp engine. 5 persons or 750 lbs. 1200 lbs, persons, motor and gear

Investigators with Applied Marine Technology use the established marine formula for equating propeller pitch to wide open throttle of a 50 horsepower Johnson Outboard Motor determine that the maximum speed of the Sea Fox 16' vessel was between 28 and 35 M.P.H. the equated W.O.T. (Wide Open Throttle), speeds would only apply while the vessel was traveling on plane at a constant velocity without experiencing deceleration or turning, both of which would cause slip to rise and reduce the speed of the boat. At the time of the examination by AMT Investigators, it was noted that the motor was in the negative trim position which would **not** allow for optimum performance. (*See photographs of boat attached hereto, tab #8.*) Investigators with AMT point out that the 16 foot Sea Fox boat was conservatively rated by the manufacturer with a 80 horsepower maximum capacity and the vessel was only powered with a 50 horsepower outboard motor. Investigators reason that this 16' Vee hull design boat powered with a 50 hp engine was not capable of hard over 90 degree turns while maintaining a constant forward speed.





Boat Capacity plate photograph



Hull I.D. No.



Actual Boat



The following has been reviewed and examined for this investigation:

1. Petition for Wrongful Death
2. Louisiana Department of Wildlife and Fisheries Boating Incident Report
3. Louisiana Department of Wildlife and Fisheries Photograph Log
4. Lafourche Parish Sheriff Complaint Report
5. Lafourche Parish Sheriff's Photos
6. Greater Lafourche Port Commission Harbor Police Complaint Incident Report
7. Greater Lafourche Port Commission Harbor Police Photos
8. National Transportation Safety Board Factual Report Aviation Report
9. Mary E. Donahue, FAA FSDO – Investigation Report & Statement
10. Chevron Maintenance Worksheets and Quality Control Report
11. Gary Songy – Deposition
12. James R. Hunter – Deposition
13. Thomas M. Kerlin – Deposition
14. James A. Parish – Deposition
15. Erik Rigler – Aircraft Investigation Report
16. Donald Sommer; Aeroscope, Inc. – Aircraft Investigation Report
17. Cessna U206G Seaplane Pilot Book
18. United States Coast Guard Navigation Rules
19. Autopsy Report – Michael J. Lyons
20. Weather Report on May 24, 2007
21. Map and Diagrams of Incident by AMT, Inc.
22. Scene Inspection, Boat Inspection, Aircraft Inspection by AMT rapid response team on October 11 and 12, 2010
23. Video of scene inspection on October 12, 2010 by AMT, Inc.

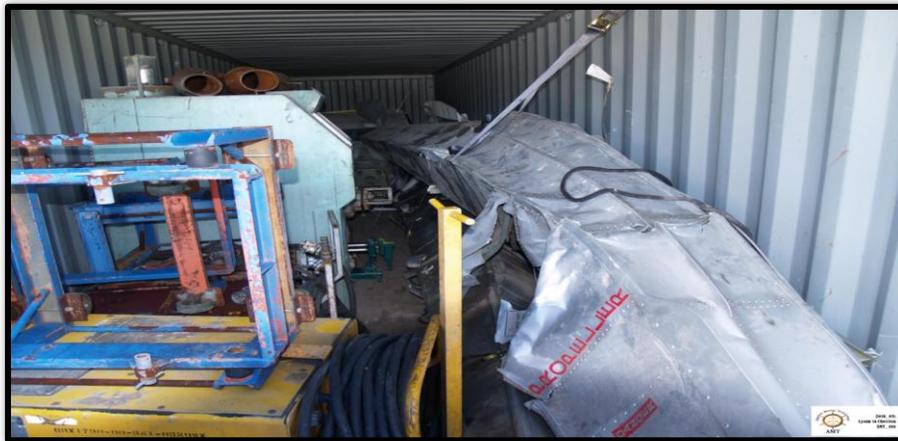
Analysis of impact damage

On October 11, 2010, a team of investigators from Applied Marine Technology, Inc., traveled to Bob's Self Storage 3200 General Degaulle Drive, New Orleans, Louisiana 70114 and examined the boat involved in this incident. The boat was removed from the storage unit at which time photographs and



measurements were taken along with the points of impact from the floatplane striking the port side of the boat. *(See AMT diagram of impact damage and measurements #2018-09-2 attached hereto, tab #4)*. Investigators with AMT found that the starboard pontoon struck the boat first on the port side just aft of the mid-ship point approximately 18” down from the gunwale of the boat on an angle of (38°-40°), or from 218° - 220° relative to ships heading, in line with the steering console. The second point of impact of the starboard pontoon was to the victim. *(See photographs of injury to victim numbers 28-31 taken by Mrs. Lyons at the funeral home that prepared the body for burial and attached hereto tab #7 (Caution very graphic))*. *(Also see Autopsy Report attached hereto tab #6)*. The third point of impact was noted on the center console of the boat. The fourth point of impact was noted on the top gunwale of the port side and is in the form of propeller strike marks, placed 14 inches apart which were caused as the boat (which evidence indicates was in a starboard turn at the time of initial impact), was rotating. This damage analysis is made by AMT investigators with a high degree of scientific certainty using standard marine accident reconstruction methodology.

On October 12, 2010, the AMT team traveled to the Chevron Air Operations facility at 96 Runway Road, Picayune, Mississippi and examined the float plane. It should be noted that the plane was stored within a metal container, the wings as well as the floats and propeller had been removed for storage. The examination was conducted in less than acceptable conditions due to the limited access to the aircraft. *(See photograph to follow below)*. The investigation by AMT investigators regarding to aircraft will be limited and also will rely on damage photographs taken by other agencies and investigators. All photographs used by AMT investigators are contained within this report. Damage to the floatplane was limited to the starboard float being separated from the struts, some damage to the engine cowling on the starboard side, damage to the starboard wing tip, and damage to each of the three propeller blades. *See photographs attached hereto tab #9*.



Aircraft storage unit Chevron facility Picayune, MS.



AMT *Analysis of injuries to victim Lyons:*

Investigators of AMT reviewed the Autopsy Report by the Lafourche Parish Coroner's Office (*attached hereto, tab #6*), for the purpose of identifying what caused the wounds on the victim's body, which shows extensive lacerations to the victims back. His left lateral back area shows severe lacerating injury with exposure of the chest contents. Several other lacerations are seen on the lateral left flank with incised areas measuring approximately 5x2cm and 3 m in length. Left upper leg shows laceration measuring approximately 10x1 cm. Some abrasions are seen on the left lower leg. The left femur shows fracture.

From the standing position of Mr. Lyons at the console of his boat, the wounds on his body match up with the starboard pontoon tip striking him in the left lower back and upper back, causing his body to be jammed against the steering wheel and console, and then lifted out of the boat, into the water. Evidence on the boat suggests to AMT investigators that the travel path of the floatplane's starboard pontoon would have passed through Mr. Lyons' standing position behind the steering console of his vessel as indicated by the directional bend in the operator's seat as well as the steering console which is representative of the direction of impact damage. (*See diagram #2018-09-4 by AMT attached hereto, tab #5*). (*Also see AMT photograph #21 and #86 attached hereto, tab #8*).





AMT Scene Examination and Analysis:

Note: Investigators with AMT, Inc. used diagrams and coordinates supplied by the FAA and Louisiana Department of Wildlife and Fisheries and by statements provided by witness Kerlin to identify the approximate scene of the incident.

A scene investigation by Investigators with Applied Marine Technology on October 12, 2010 revealed (*See AMT diagrams #2018-09-1 and 2018-09-3 attached hereto tab #2 & 3*).

The Louisiana Department of Wildlife and Fisheries Investigator placed the location of the Aircraft and Motorboat as follows:

Aircraft

Latitude	20°12.843 North
Longitude	90°13.617 West

Motorboat

Latitude	29°12.838 North
Longitude	90°13.699 West

The report indicates the impact point would have been slightly north of this position but did not provide additional details. (*See AMT diagram 2018-09-3 attached hereto tab #3*).

1. The Chevron Heliport is located on the east side of Bayou Lafourche approximately 3,650 feet from the north bank peninsula of Bobby Lynn's Marina Canal where it enters Bayou Lafourche.
2. Mr. Lyons route from Bobby Lynn's Marina launch to Bayou Lafourche would have taken him generally west into an approximate 3:30pm sun-glare before reaching a position where he could begin to observe traffic approaching from the south in Bayou Lafourche. This position is approximately 2,000 feet from the beginning of Bobby Lynn's Marina Canal and approximately 300 feet short of a position further to the west, into Bayou Lafourche that would allow Mr. Lyons to clear the peninsula (North Bank) to his starboard before gaining visual contact with a vessel traveling south in the center of Bayou Lafourche approaching his position.

*****Note*****

This position represents an angle that allows observation down the centerline and west side of Bayou Lafourche for a distance of approximately 2,500 feet. Pilot Songy stated that his takeoff path was on the east side of Bayou Lafourche which would have required Mr. Lyons to travel further west into Bayou Lafourche before gaining visual observation of the entire waterway.



3. Investigators observed that the canal from which Mr. Lyons was exiting was flanked on the south side by a shoal area and on the north side by an abandoned barge that was deteriorated to the water's surface. Travel by a boater exiting the area would require a path favoring the north side of the marina canal and traveling into Bayou Lafourche northbound in an arch to avoid the sunken barge off the land point to starboard.
4. Investigators ascertained that a vessel positioned in the center of Bayou Lafourche immediately west of the ramp area of the Chevron heliport facing south would encounter a blind spot to northbound traffic beyond the marina canal and crossing traffic from the northwest before reaching the marina canal.
5. Investigators observed that there was an approximate 2,400 foot straight line distance north of the Chevron heliport ramp in Bayou Lafourche.
6. Investigators did not observe any Chevron warning indicators for seaplane/floatplane traffic or any designators of speed, wake, or special notifications for mariners traveling in this area to alert them to the presence and risk of high speed air craft in the waterway.

Investigators with AMT, Inc. conducted a complete survey of the scene area on October 12, 2010 that included measurements taken with a Laser Lidar Unit as well as a Total Station. A diagram was made using the data obtained from the scene survey and is included hereto in AMT diagram number **2018-09-1, tab #2**. In addition, a diagram was made by AMT investigators that shows the approximate travel path of both the floatplane and the Sea Fox boat and is shown in diagram **#2018-09-3 and attached hereto tab #3** in accordance with FAA diagram of travel path of plane and vessel and includes eye witness statement of Thomas Kerlin.

Federal Aviation Regulations

Section 91.3: Responsibility and authority of the pilot in command

By regulation, the Federal Aviation Administration established the responsibility and authority of the Pilot In Command (PIC) of a flight through 14 Code of Federal Regulation 91.3 *Responsibility and authority of the pilot in command*:

- (a) *The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.*
- (b) *In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.*
- (c) *Each pilot in command who deviates from a rule under paragraph "b" of this section shall, upon the request of the Administrator, send a written report of that deviation to the Administrator.*



At all times, the Pilot in Command of the Chevron floatplane was Gary Joseph Songy with James Ronald Hunter, II, also a pilot, in the rear seat.

As Pilot in Command on the day of the accident, Gary Joseph Songy, a Chevron employee, was responsible for the safe operation of N45WT.

U.S. Coast Guard Navigation Rules

Rule 2 Responsibility

- (a) Nothing in these Rules shall exonerate any vessel, or the owner, master, or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.*
- (b) In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules necessary to avoid immediate danger.*

Rule 3 General Definitions

- (a) The word “vessel” includes every description of watercraft, including non-displacement craft and seaplanes, used or capable of being used as a means of transportation on water.*

Rule 6 Safe Speed

Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances.

In determining a safe speed the following factors shall be among those taken into account:

- (a) By all vessels*
 - i. the state of visibility;*
 - ii. the traffic density including concentration of fishing vessels or any other vessels;*
 - iii. the maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions;*
 - iv. [night]*
 - v. the state of wind, sea, and current, and the proximity of navigational hazards.*

Rule 7 Risk of Collision

- (a) *Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.*
- (b) *Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.*
- (c) *Assumptions shall not be made on the basis of scanty information, especially scanty radar information.*
- (d) *In determining if risk of collision exists the following considerations shall be among those taken into account:*
 - i. *Such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change.*
 - ii. *Such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.*

Rule 9 Narrow Channels

- (a) *[Inld] A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.*
- (b) *Notwithstanding paragraph (a)(i) and Rule 14(a), a power-driven vessel operating in narrow channels or fairways on the Great Lakes, [Western Rivers](#), or [waters specified by the Secretary](#), and proceeding down-bound with a following current shall have the [right-of-way](#) over an up-bound vessel, shall propose the manner and place of passage, and shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding up-bound against the current shall hold as necessary to permit safe passing.*
- (c) *A vessel of less than 20 meters in [length](#) or a [sailing vessel](#) shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway.*
- (d) *A vessel [engaged in fishing](#) shall not impede the passage of any other vessel navigating within a narrow channel or fairway.*
- (e) *A vessel shall not cross a narrow passage or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway. The latter vessel may use the sound signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.*
- (f) *A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).*



(g) Any vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.

Rule 15 Crossing Situation

...When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.

Rule 16 Action by Give-Way Vessel

Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

Rule 18 Responsibilities between Vessels

Except where Rules 9, 10 and 13 otherwise require:

... (d) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with the Rules of this Part.

Weather, Water and Lighting Conditions

At the time of the accident, winds in the area were reported as:

Galliano Airport	090° 9 knots with gusts to 17 knots
New Orleans Naval Air Station	110° 15 knots with gusts to 23 knots
NTSB Report	110° 13 knots with gusts to 20 knots

According to the U.S. Naval Observatory, sunset in south Louisiana on May 24, 2007 would have occurred at 7:55p.m. Civil twilight would last until 8:22 p.m.

Based upon the above wind reports, smoother water would be found to the east side of the bayou, with visibility and ambient light not contributing factors.

According to the NTSB factual report the weather conditions at the time of the incident were: Ceiling 3,900 feet broken, visibility 10 statute miles, winds from 110 degrees at 13 knots with gusts to 20 knots. Temperature 27°C (81°F), dew point 17°C (63°F), and the altimeter setting was 30.16. Weather was not considered a contributing factor in this incident. ***Note: Except that Pilot Songy stated that one of the reasons he was traveling the east side of the channel was because of calmer water.***

Tide/Current Predictor Page 1 of 1

[Pick a different site](#) | [Frequently Asked Questions](#)
 Web interface by Dean Pentcheff, calculations and graphics by David Flater's XTide Program

NOT FOR NAVIGATION. This program is furnished in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of merchantability or fitness for a particular purpose. Do not use this program as a basis for any decisions that could result in harm to people, other organisms, or property. Check these predictions against officially sanctioned tables. Agencies like NOAA exist because there is a need for certifiably correct tide predictions. Do not rely on these predictions if you need guaranteed results. There is NO WAY we can get certified data on a zero budget. We rely on users like you to tell us when something is wrong. Please continue to do so.
 Remember that weather conditions affect tidal ranges and current speeds, sometimes very strongly.

Port Fourchon, Belle Pass, Louisiana

23 May 2007 - 25 May 2007

29.1133° N, 90.2000° W

2007-05-23	12:42 CDT	Moonrise
2007-05-23	14:05 CDT	1.01 feet High Tide
2007-05-23	16:02 CDT	First Quarter
2007-05-23	19:50 CDT	Sunset
2007-05-24	01:52 CDT	Moonset
2007-05-24	02:12 CDT	0.27 feet Low Tide
2007-05-24	06:04 CDT	Sunrise
2007-05-24	13:36 CDT	Moonrise
2007-05-24	14:04 CDT	0.80 feet High Tide
2007-05-24	19:50 CDT	Sunset
2007-05-25	00:40 CDT	0.49 feet Low Tide
2007-05-25	02:19 CDT	Moonset
2007-05-25	06:04 CDT	Sunrise

Port Fourchon, Belle Pass, Louisiana

24 May 2007 - 26 May 2007

29.1133° N, 90.2000° W

2007-05-24	13:36 CDT	Moonrise
2007-05-24	14:04 CDT	0.80 feet High Tide
2007-05-24	19:50 CDT	Sunset
2007-05-25	00:40 CDT	0.49 feet Low Tide
2007-05-25	02:19 CDT	Moonset
2007-05-25	06:04 CDT	Sunrise
2007-05-25	09:42 CDT	0.73 feet High Tide
2007-05-25	14:29 CDT	Moonrise
2007-05-25	18:06 CDT	0.48 feet Low Tide
2007-05-25	19:51 CDT	Sunset
2007-05-26	02:45 CDT	Moonset
2007-05-26	06:03 CDT	Sunrise

FINDINGS in accordance with Inland Navigation Rules:

Through our training, knowledge and experience Investigators with Applied Marine Technology are of the following opinions in review of the Coast Guard Navigation Rules:

- (1) That the operator (Mr. Lyons) of the 16' Sea Fox Vessel was operating his vessel in conformance with all U.S. Coast and State of Louisiana Regulations pertaining to recreational boating on May 24, 2007 while traveling northbound in Bayou Lafourche. Specifically Investigators recognize that Mr. Lyons was in compliance with the "Narrow Channel Requirements" prior to and at impact and that Mr. Lyons



took proper action by attempting to maneuver his vessel starboard to prevent the collision.

(2) That the pilot (Mr. Songy) of the Seaplane (Vessel) violated the “U.S.C.G. Inland Navigation Rules” as follows:

⚙ **Rule 9** Narrow Channel by not proceeding along the course of the channel as near to his starboard outer limit of the channel as is safe.

- Traveling on the outer right of a narrow channel is of particular importance because of the blind turns for which vessels are required to sound signals or engage in bridge to bridge radio conformations. Seaplanes do not sound signals and in our experience do not communicate radio navigation intentions making the requirement of travel to the starboard of center in a channel critical to safety.
- Mr. Lyons was denied the earliest warning of the presence of the Seaplane by the selected flight path being east of the waterway centerline.

⚙ **Rule 6** Safe Speed & **Rule 7** Risk of Collision:

- Pilot Songy states that the Seaplane identifies Mr. Lyons’ Vessel while at 50 knots (57.5 mph) over the grass in the Marina Canal while still under full throttle acceleration. Pilot Songy would not have known the intended direction of travel of Mr. Lyons vessel, but he should have understood that it could legally turn northbound. The Risk of Collision Assessment demands special consideration when approaching a vessel at close range and demands speed limitations that will allow the vessel to be stopped within a distance appropriate to the prevailing circumstances. Although Pilot Songy was traveling on the wrong side of the channel and would achieve a velocity of nearing 75 mph at impact, his decision was to attempt to fly. The U.S. Coast Guard Inland Navigation Rules does not recognize “deciding to fly” as an option to avoid collision between two vessels. Reductions of speed and maneuvering would have been the only options recognizable to Mr. Lyons that would have allowed him to take counter actions. In the opinion of Investigators it would have been reasonable for Mr. Lyons to assume that because the Seaplane was not slowing down, that it was going to maneuver and that the maneuver would be to the planes’ starboard side as the law requires. In our opinion Pilot Songy fails to recognize the risk of collision and fails to make the appropriate speed reduction and bold maneuvering action that would have been apparent to Mr. Lyons as he entered Bayou Lafourche.



⊗ **Rule 2 Responsibility:**

- That the Seaplane Pilot (Mr. Songy) and Chevron were negligent in their responsibility to Mr. Lyons by failing to recognize the special circumstances associated with designating a public waterway supporting high vessel traffic density and blind ingress/egress points and landing path for high speed craft. It is reasonable to assume that Chevron Officials knew, or should have known that the proximity of Bobby Lynn’s Marina and Launch Facility to the Bayou Lafourche takeoff path represented a potential risk of collision in and of itself, especially when a southbound landing or takeoff occurs. Vessels exiting the Marina Canal have a responsibility to through traffic headed northbound on the east side and through traffic southbound when merging and traveling southbound across the centerline on the west side of the waterway. Seaplanes leaving or entering the water travel at speeds not recognizable by the average boater and or not represented as the “norm” in this location. As such Federal Regulations (Rule 18) requires a seaplane on the water, in general, to keep well clear of all vessels and avoid impeding their navigation. Investigators with Applied Marine Technology would reason that Chevron approved of the takeoff and landing path used by Pilot Songy on May 24, 2007 and that the approved southeast path lead directly into the area of highest probability of encountering vessels.

Statements made by Witnesses which Investigators feel are Relevant to this Accident

Statements from Mr. Gary Songy

- ⊗ The flight path width, “That’s up to the discretion of the pilot” (page 9)
- ⊗ The ground speed of the floatplane is at 55 knots (63.25 mph) when the pilot first sees the boat. (page 11)
- ⊗ If he would have aborted he would have run the risk of collision. (page 11)
- ⊗ When I first saw him he was entering my take off path. (page 12)
- ⊗ Mr. Lyon’s boat fish tailed real bad. (page 12)
- ⊗ First sees him (Mr. Lyons) behind peninsula. (page 14)
- ⊗ Doesn’t know what the boats intentions are. (page 21)
- ⊗ You have a canal that turns. (page 23)
- ⊗ Probably 4 or 5 foot off the water at impact. (page 53)
- ⊗ Speed at impact is 60-65kts (69-75 mph). (page 54)
- ⊗ Nothing was wrong with the plane. (page 54)
- ⊗ He was at my 45 degrees headed eastbound. (page 65)



- ⊗ He would have hit the bulkhead if he would have continued. *(page 113)*
- ⊗ Said the last time he saw the boat it was at a constant rate of speed. *(page 112)*
- ⊗ There was one other big boat heading down the Bayou. *(page 141)*
- ⊗ He completely understood the limitations of this plane. *(page 143)*
- ⊗ Extreme care is you'd be very due diligent. *(page 145)*
- ⊗ I've indentified areas that don't have any cross canals and with this turbine Beaver now, you'll be able to take off in an area that's – if there's no boat's in that area. *(Page 161)*
- ⊗ Pilot Songy stated that he chose the east side of Bayou Lafourche for his takeoff path because of a big boat headed down the Bayou, and that the east side was calmer and protected from the wind. *(page 141, 254-257)*

Statements from Mr. James Parish

- ⊗ We went south from the ramp. *(page 37)*
- ⊗ I would say we were left of center in the canal. *(page 58)*
- ⊗ States that the boats speed was extremely fast with Mr. Lyons hanging on to the steering wheel, and skidded around the curve and came into the canal. *(page 42)*
- ⊗ He has no recollection of distances or times between aircraft and boat. *(throughout entire deposition)*
- ⊗ All I can say is the collision took place off of peninsula #2 somewhere. *(page 81)*
- ⊗ Does not know of a root cause analysis performed by Chevron. *(page 103)*

Statements from Mr. Thomas Kerlin

- ⊗ He was on the east side facing Bayou Lafourche in the bridge of a supply boat and watched the seaplane travel from his right to his left. *(page 18-19)*
- ⊗ Time from the boat entering Bayou Lafourche to collision was seconds. *(page 21)*
- ⊗ Estimates speed of Mr. Lyons boat at 25kts. (approx 29mph). *(page 21)*
- ⊗ Another vessel was coming northbound in the Bayou not in the path of the seaplane. *(page 23)*
- ⊗ This is a very high traffic area. *(page 25)*
- ⊗ Only a few water planes in the years he worked here. *(page 25)*
- ⊗ The boat continued in a right hand turn. *(page 32)*
- ⊗ You can't see the traffic coming out of that Bayou when you are southbound. Northbound you can. *(page 46)*

Statement of Mr. James Hunter II, passenger in the rear starboard seat of the seaplane

- ⊗ Believes that it is important for Chevron to tell the pilots what the hazards are for a particular base. *(page 38)*



- ⊗ A few seconds after hearing Jim Parish ask Pilot Songy if he had that boat he heard “Oh my gosh he is turning back into us, next thing I know we impacted. (page 47)
- ⊗ Pilot Songy never ask him how much he weighed. (page 54)
- ⊗ As you are facing the front of the aircraft, I was on the right directly behind the front passenger, behind Mr. Parrish. (page 55)
- ⊗ After moving into the center of the Bayou from the ramp pilot positions plane for the southwest run. (Exhibit 4 blue dot)
- ⊗ Says he never saw the boat. (page 67) Statement of May 24, 2007 says he saw the boat out of left front windshield moving from right to left, statement to Mary Donahue – Then saw boat in middle of take off path.
- ⊗ Says he saw Mr. Lyons from about his shoulders up and the two pieces of metal that constituted the bimini top that was on it. (page 77) Can’t tell you what direction it was going, I don’t know. (page 77)

General Observations Made by Investigators with Applied Marine Technology

1. Pilot Songy is unable to give any approximation of distance at the first sighting of Mr. Lyon’s boat which would serve as a critical factor in determining his decision to continue to accelerate. At the moment of sighting he puts his velocity at approximately 92.7 feet per second and climbing. Investigators believe it would be unreasonable for Pilot Songy not to consider this to be at least a close quarter’s situation and serve as cause to abort the takeoff.
2. Investigators believe it is reasonable to assume that Mr. Lyons would not have known immediately if the floatplane would have been landing or taking off in Bayou Lafourche or if the floatplane would need to steer starboard (West) to continue its path.
3. Investigators view Mr. Lyons 16 foot Sea Fox modified Vee Hull as a design that tracks well in turns and is very responsive, especially with the under rated horsepower application and continuous dead rise of the hull.
4. Pilot Songy readily admits that he was traveling on the east side of Bayou Lafourche and that he attained speeds between 69-75 mph while approaching an intersecting waterway. The Chevron Company knew or should have known that the operation of floatplanes in a user shared environment under these conditions without forewarning to the other users was inherently dangerous.
5. Upon Mr. Lyons first observation of the floatplane it would be reasonable to assume that he would not have been able to see the propeller movement, Mr. Lyons would not have had a shoreline backdrop to perceive speed and did not receive signal of intentions from the pilot through maneuvering or speed reductions.
6. Pilot Songy clearly states in deposition (Pilot Songy depo page 105) that he was trained in aborted floatplane takeoffs and that he had received training on how to make a turn while on the step (Pilot Songy depo page 106). Pilot Songy states through a correct



errata sheet to his deposition, “Could I have aborted, yes. Should I have...”

Investigators review of the Chevron Pilots’ Operating Handbook Supplement for the N45WT show, Take off; Normal Climb out 70-80 kts (80.5-92.1 mph), Pilot Songy, (depo page 54) states that his speed impact was approximately 60-65kts (69-75mph). It would be reasonable for investigators to conclude that because Pilot Songy had not reached the acceptable takeoff speed and should have known back at 55kts at first sighting that he would not be able to achieve takeoff speed if Mr. Lyons turned northbound should have been justification to aborted the takeoff. Investigators would reason that the aborted takeoff could have demonstrated the floatplanes intentions to Mr. Lyons and Mr. Lyons may have been able to maneuver more precisely and he certainly would have had more time to move further away from the floatplane.

7. The damage evidence in the collision reveals that Mr. Lyon’s vessel was in a hard starboard turn at impact and that the initial point of impact of the starboard float occurred between 218°-220° relative to the bow of the Sea Fox vessel. (See Diagram AMT 20-18-09-4). The relationship between the seaplane and vessel at impact was 38°-40° short of the vessel moving directly away from the seaplane and 50° to 52° behind the port beam of the vessel traveling toward the vessels starboard quarter. The scene pictures taken by Wildlife and Fisheries Enforcement Agents (WLF #1,2,3) of the vessel shows the outboard /motor positioned for a hard starboard turn and would indicate a low performance trim setting of the outboard motor. Investigators with AMT would interpret this information to conclude:
 - (a) Mr. Lyon’s vessel traveled approximately 218°-220° from his original direction of initial sighting (starboard) in an attempt to prevent this collision.
 - (b) At impact Mr. Lyons vessel was not moving perpendicular to the aircraft nor was his course of travel constant.
 - (c) The crash analysis would not support Pilot Songy’s statement that had Mr. Lyons continued on his course of travel he would have hit a bulkhead a few seconds later. The analysis would reasonably support an attempt by Mr. Lyon’s to turn away from the seaplane.
 - (d) Based upon the observed down trim setting of the outboard motor, Investigators would conclude that peak performance (maximum speed) could not be achieved and that skidding, if that meaning references stern skidding, by witnesses would be extremely difficult to achieve.
8. The damage analysis and witness statements would confirm that the seaplane was airborne at the time of impact and as such would be subject to both navigation rules and FAA regulations.
9. Investigators with AMT would have reason to believe that all of Bayou Lafourche would be considered waters of joint-jurisdiction by the Federal Government and State of Louisiana and that a “Memorandum of Understanding” exists that outlines the responsibilities of each party in waters of joint-jurisdiction and application of pertaining



regulations. Investigators would also reason that all United States Coast Guard Regulations relevant to navigation regarding the Federal Definition of Seaplanes on the water, specifically those that apply to Risk of Collision, Speed, Actions to Avoid Collision and the Narrow Channel Rule would have applied in this collision. Investigators are not aware of any State of Louisiana or Federal Regulations that would have given Pilot Songy a privileged status in this incident.

Opinions

- ⊗ Chevron was negligent in not providing a safe location that considered due regard to the exposure to danger of navigation and collisions between seaplanes and vessels utilizing the same waterway in close proximity.
- ⊗ Chevron was negligent for not posting warning signs along the take-off route to warn maritime traffic of the possible presence of seaplanes; this is more pronounced due to the fact that a marina outlet/inlet is in the take-off and landing path used by Chevron Seaplanes.
- ⊗ Chevron was negligent in not providing guidance to their pilots regarding maritime traffic, and the avoidance thereof, in the Leeville area.
- ⊗ Chevron and Mr. Songy were negligent in not taking actions to ensure the departure path was clear of maritime traffic before and during the take-off maneuver.
- ⊗ Mr. Songy was an employee of Chevron and was acting on their behalf and under their direction.
- ⊗ Mr. Songy was qualified and experienced in the seaplane involved in this incident.
- ⊗ Mr. Songy was attempting the take-off from the left side of the waterway, which is opposite of the side he should have been on.
- ⊗ Mr. Songy violated the Federal Rules pertaining to Inland Navigation (USCG-COREGS), Title 33 CFR as well as Federal Aviation Rules that pertain to Seaplanes while taking off.
- ⊗ Mr. Lyons was operating his vessel in accordance with the Inland Rules of the United States Coast Guard and the State of Louisiana at the time of this incident.
- ⊗ Mr. Lyons, even though he was the privileged vessel, took proper action in an attempt to avoid the collision.



Methodology

The methodology used by AMT investigators is based in part on the guidelines established by the National Association of State Boating Law Administrators (NASBLA), The International Association of Marine Investigators (IAMI), and Underwriters Laboratory manuals for marine accident investigation and reconstruction which are widely recognized as an authority for investigating marine incidents and accidents throughout the world by government agencies and private accident investigators. All of the methods of investigation and of forming opinions are consistent with the well accepted procedures in the UL and NASBLA manuals.

The opinions expressed in this report are based on our review of the material and the application of our knowledge, training and experience to that material.

We would appreciate the opportunity to review any additional material which might be made available, and reserve the right to amend our opinion, and/or this report, if that should become the case.

Respectfully submitted;

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References:

Title 33 United States Code
Title 46 United States Code
Title 33 and 46 Code of Federal Regulations
USCG Boating Safety Manual State Edition (COMDTINST M1670.5B)
Louisiana Boating Regulations Title 34 of the Revised Statutes
MapTech software systems
DeLorme mapping v 8.0
Google Earth Pro



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