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STATE OF HAWAI'I

v.

CURTIS RYAN BEKKUM

**Declaration of
Daniel L. Regard II**

March 19, 2023

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Summary

1. The complainant, "LA", alleges Dr. B committed 2 acts of Sexual Assault in the fourth degree. This is a misdemeanor, and the most minor form of Sexual Assault. The 2nd act is alleged to have occurred September 30, 2017. Basically, she alleges he touched her inappropriately while giving a shot on September 29th and returned the following day and pressed his erection against her while her back was turned, and doing the dishes.
2. In support of her claims, she provided numerous screenshots of text messages allegedly exchanged between her and CRB.
3. For reasons provided in this declaration, I find those exhibits to be altered and unverifiable. I find that they demonstrate hidden content, missing content, new content, manipulation, a lack of proper provenance, and potential fabrication.

Qualifications

4. I am President and CEO of iDiscovery Solutions, Inc. ("iDS"), an expert services and consulting firm that provides independent expert testimony and analysis, original authoritative studies, and strategic consulting services to the business and legal communities. I am an electronic technology specialist with more than twenty years of experience advising on such issues as electronic discovery, computer forensics, database development, and application software and data analysis. I have a degree in Computer Science from the University of Southwestern Louisiana. I have a Master of Business Administration and a Juris Doctorate from Tulane University. I have a certificate in European Legal Practice from Tulane University.
5. I have extensive experience and expertise in the examination of computer data, smart phones, laptops, and digital evidence in a litigation context.

6. I have over 30 years of experience working with email, including developing industry leading techniques for the management of emails in e-discovery, the analysis of emails for validation purposes, and the comparison of emails to the requirements RFC 5322.
7. I have over 30 years of experience working with barcodes, including developing industry leading applications for barcodes, programming applications for the inclusion of barcodes, and the licensing of barcodes for commercial products.
8. I have served as a Special Master for e-discovery, databases, and digital forensics on several occasions. I am currently serving as Special Master for ESI Discovery in the United States District Court for the Eastern District of Pennsylvania, and I have testified and/or issued declarations on numerous occasions on issues concerning ESI, electronic discovery, computer forensics, data analysis, and technology. My qualifications are also contained in more detail in my curriculum vitae attached as Exhibit A.
9. This report is based on my education, training and years of experience, and the information provided to date. These opinions provided herein are given to a reasonable degree of professional certainty. These opinions are based on work conducted by me and by others working at my direction. iDS assesses \$850 per hour for my work. I am paid by salary from iDS. My compensation does not depend on the outcome of this matter.
10. In addition to my own work, I was assisted by members of iDS's Forensics Team in performing analysis in this matter. When I state 'I,' 'Myself,' or 'iDS' I mean this work was done by myself, or by people working at my direction within iDS.

Assignment

11. I was retained by counsel for Curtis Bekkum to analyze various exhibits reflecting alleged iPhone screenshots of text messages.

Exhibits

- A. Resume of Daniel L. Regard II
- B. State Exhibits 11-21 text messages from 2CPC-22-0000240
- C. Exhibit 2 text messages

Materials Relied Upon

- 12. State of Hawai'i v. Curtis Ryan Bakkum, Complaint, February 10, 2022 (document 2DCW-22-0000197).
- 13. State of Hawai'i v. Curtis Ryan Bakkum, Juror Questions of the Witnesses (with Exhibits), July 14, 2022 (document 2CPC-22-0000240) (Dkt. 73 JQ)
- 14. State of Hawai'i v. Curtis Ryan Bakkum, Jury Instruction Working Copy / Withdrawn / Refused, July 14, 2022 (document 2CPC-22-0000240) (Dkt. 75 JIWR)
- 15. State of Hawai'i v. Curtis Ryan Bakkum, Jury / Court Communication, July 14, 2022 (document 2CPC-22-0000240) (Dkt. 79 JCO)
- 16. State of Hawai'i v. Curtis Ryan Bakkum, Exhibit List, July 14, 2022 (document 2CPC-22-0000240) (Dkt. 81 ELP)
- 17. State of Hawai'i v. Curtis Ryan Bakkum, State's Exhibits, July 14, 2022 (document 2CPC-22-0000240) (Dkt. 83 EXH)
- 18. 2020-10-08 bekkum other C.pdf
- 19. Transcript of Body-Cam Video Proceedings Interview of LA Conducted on May 11, 2018

Tools Relied Upon

- 20. I relied upon the following tools during my engagement and for the analysis contained within this report:
 - a. Apple Preview Version 11.0 (1043)

b. Apple iPhone 12 Pro, iOS 16.2

Analysis

21. I inspected pages 118-122 of “2020-10-08 bekkum other C.pdf” These pages are originally labeled as “Exhibit 2” and are independently numbered as pages 1-5. These 5 pages purport to present one long text message thread from August 4, 2016 through October 8, 2017. I will refer to them as “Exhibit 2 from Discovery.”
22. My analysis shows that this is actually made up of at least 2 different sets of screenshot captures, made at least 2 different times, from at least 2 different devices.
23. These 5 pages are attached as Exhibit C.

A. Analysis of “Exhibit 2” text message thread

24. The message thread presented starts on August 4, 2016 at 10:29 AM. The first message is preceded with “Text Message” on the face of the message. This is indicative of being (a) the first message in a thread or (b) a change in communications from iMessage to SMS.

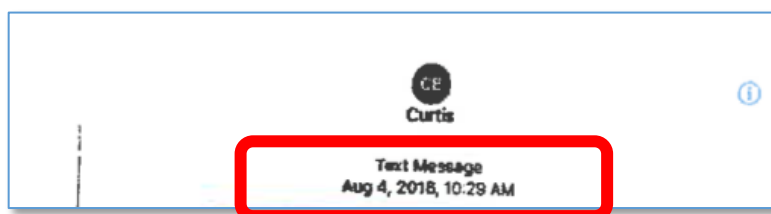


Exhibit 2 from Discovery from Discovery, pg. 1, 1st message

25. All messages presented by LA are in an Apple Messages app format, so I can conclude that she has an iPhone. CRB has confirmed that he used an Android phone at this time. Therefore, the only option for communications was SMS. Therefore, this indicates the start of the thread as opposed to a change in the communication format.
26. However, on Ex. 2 pg. 2 there is a second thread initiation as indicated here:

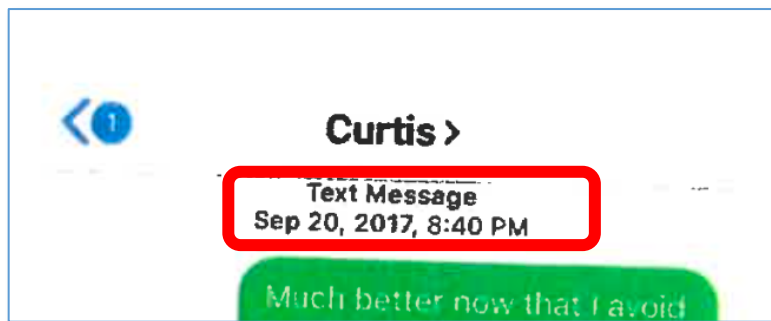
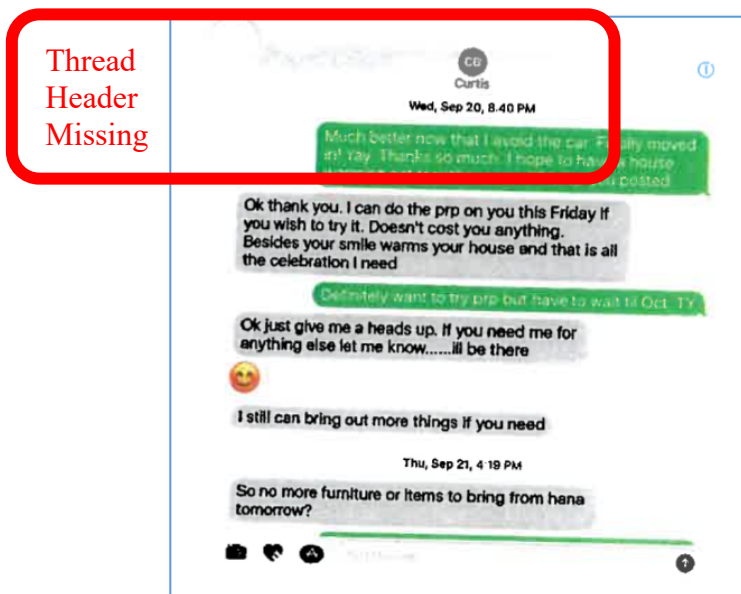


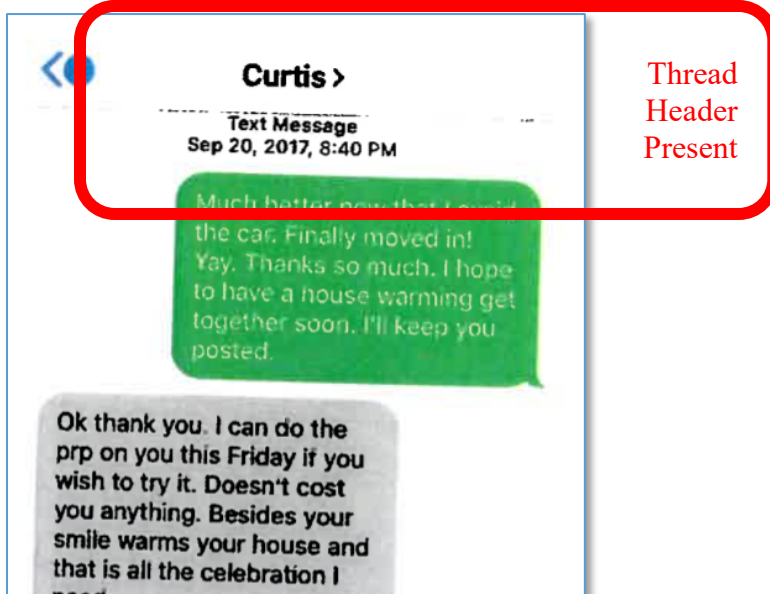
Exhibit 2 from Discovery, pg. 2, 2nd Column, 1st message

27. According to formatting rules of the Apple Messages app, “Text Message” only occurs when the very first text message is exchanged between parties, or when the communication mode changes between Apple-to-Android and Apple-to-Apple. In the evidence I inspected, the reference to “Text Message” occurs twice, which violates this rule and indicates that the text message thread before September 20, 2017 is separate and distinct from the text message thread on and after September 20, 2017. This unexplained rule violation is another reason why these screenshots cannot be authenticated.
28. Based on this “Text Message” thread header string, this is the start of a new thread. Moreover, this indicates that first thread is not even present on the device used to make the second thread. This is inconsistent with the way the Apple ecosystem (i.e., interoperative collection of devices and operating systems) operates and cannot be explained based on the evidence presented. This is another reason why the State’s Exhibits cannot be authenticated.
29. Further, this “initial text” is inconsistently presented between Ex. 2 pg. 2, 1st column, and the Ex 2 pg. 2, 2nd column.



Thread
Header
Missing

Exhibit 2 from Discovery, pg. 2, 1st Column

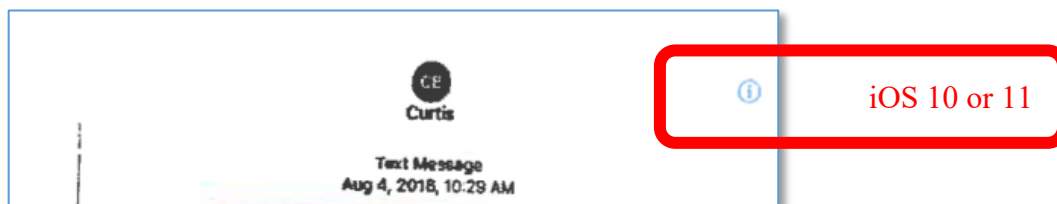


Thread
Header
Present

Exhibit 2 from Discovery, pg. 2, 2nd Column

B. iPhone Operating System (iOS)

30. The message header indicates a blue lowercase “i” in a blue circle. This is an “information” icon indicative of iPhone iOS 10 or 11.



iOS 10 or 11

Exhibit 2 from Discovery, pg. 1, 1st message

31. Knowing the iOS installed on a device can help date artifacts from that device.

32. iOS 10 and 11 were released on September 13, 2016 (iOS 10) and September 19, 2017 (iOS 11). They were replaced with iOS 12 on September 17, 2018.

33. Other screens presented a “greater than” symbol (“>”) next to the contact name. This is a contact “more information” icon first released in iOS 12 that replaced the i-in-a-blue-circle icon from iOS 10 and 11. For example:

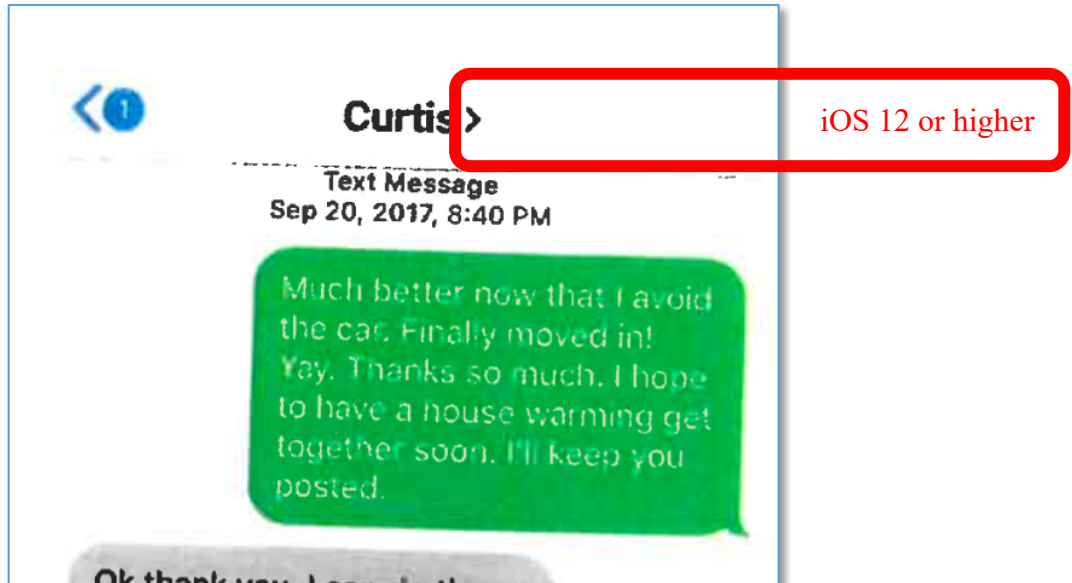


Exhibit 2 from Discovery, pg. 2, 2nd Column, with Greater-Than symbol (“>”)

34. This symbol, and the corresponding iOS indicates that these screenshots were made (at the earliest) only after iOS 12 was released. According to Apple, iOS 12 was released on September 17, 2018.¹
35. The presence of this symbol means that the screenshots in Exhibit 2 were likely partially captured before September 17, 2018, and partially captured after September 17, 2018. Or they were captured on separate devices after September 17, 2018, where one device was updated to the new iOS 12 and the other device was not updated. This is assuming that they are authentic. Other anomalies, inconsistencies, missing text, and added text, detailed in this declaration, indicates that they cannot be authenticated.

¹ Apple Newsroom, “iOS 12 is available today”, see <https://www.apple.com/newsroom/2018/09/ios-12-is-available-today/> last visited on March 19, 2023.

C. Screenshot Incomplete: Cropping

36. All of the screenshots exhibit some form of modification. They have been cropped or edited such that, at a minimum, the status bar reflecting the time, connection, carrier, WiFi and or other device settings and conditions are not visible.
37. “Cropping” is the editing of a graphic by cutting away content from the edges (top, bottom, left or right). In the case of these screenshots, the cropping has removed information as to when the screenshots were made, and symbols that would detail the condition (and possible identification) of the device used to make the screenshot.
38. This information is also sometimes available in graphic metadata, but here that metadata has also been deleted and lost by presenting the screenshots as PDFs instead of original screenshots.
39. Based on this, the screenshots are incomplete.

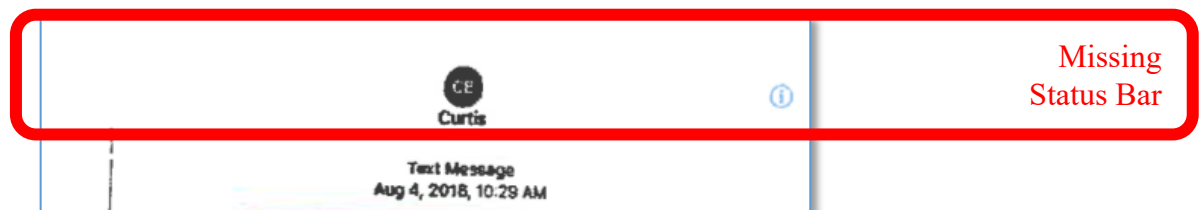
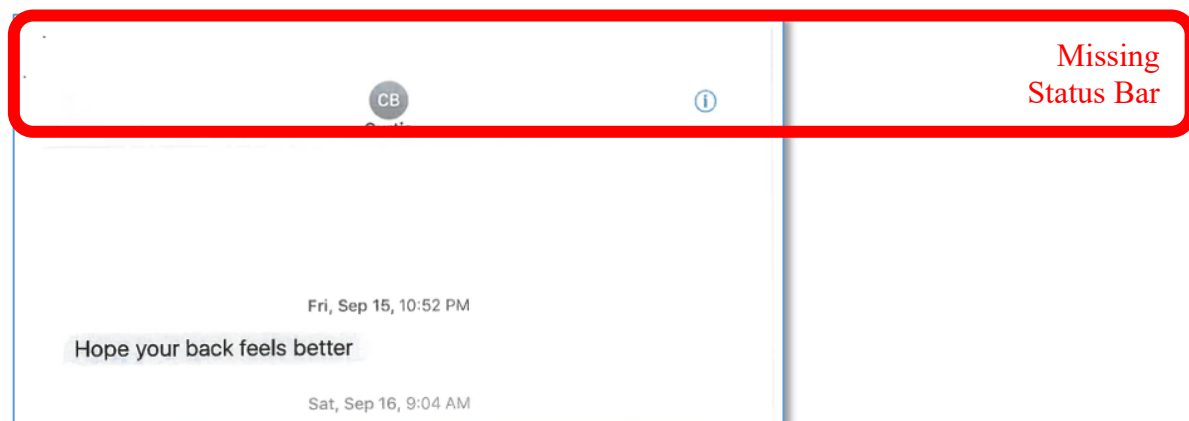


Exhibit 2 from Discovery, pg. 1, 1st message



State's Exhibit 15, pg. 1

D. Text Thread Incomplete: Continuity of Text Content

40. There is no text overlap from image to image. Therefore, it is not possible to determine if the entire thread is complete (for a significant example of this unmarked omission, see State's Exhibit 15, *infra*).
41. Nonetheless, while it cannot be determined if this set of text messages reflects the full thread, I did compare the contents in Exhibit 2 from Discovery to the State's Exhibits to identify inconsistencies.

E. Date Formats

42. Apple has very particular methods for formatting dates in the Messages app. If a text message shows the year, then the message being displayed is at least 11 months old. In other words, a screenshot taken of text messages at least 11 months old will show the year.
43. The messages in Exhibit 2 from Discovery vary in that some show the year (e.g., 2016, 2017), some do not show the year, and then later messages, again, show the year. Assuming that the screenshots are showing a continuous thread from August 4, 2016 through October 8, 2017, then the appearance and absence of the year indicates that these screenshots were not made in a single session but were made at different times.

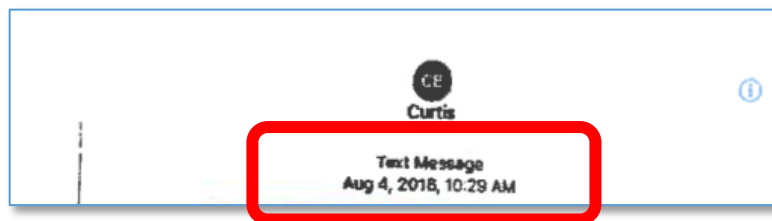


Exhibit 2 from Discovery, pg. 1, 1st message with YEAR

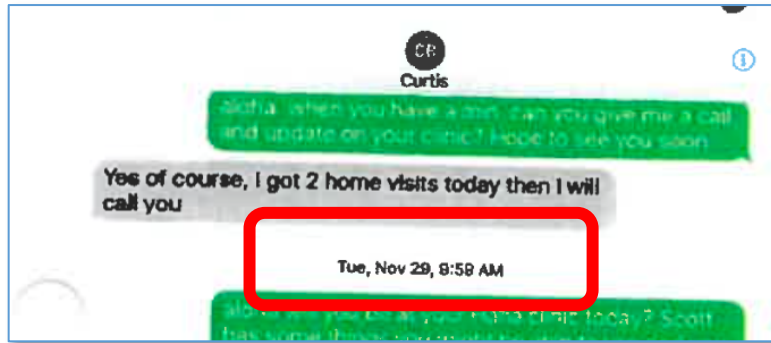


Exhibit 2 from Discovery, pg. 1, 1st Column, without YEAR

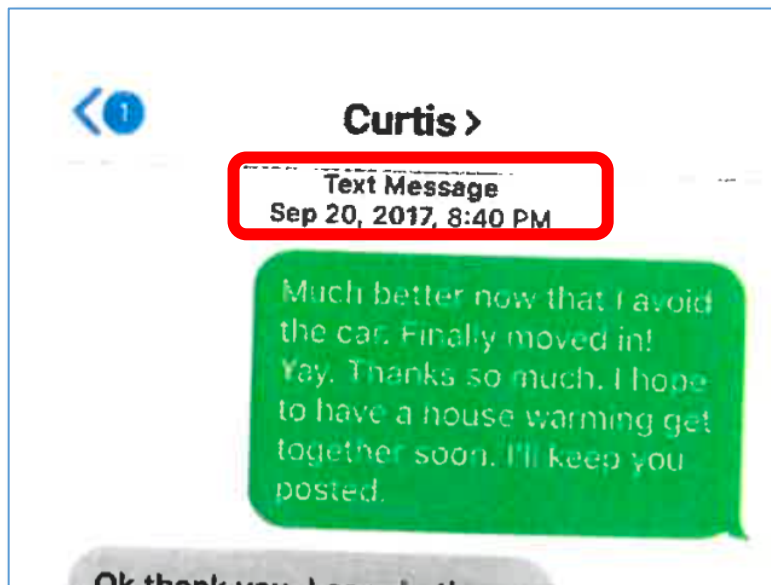


Exhibit 2 from Discovery, pg. 2, 2nd Column, with YEAR

44. The first series has the “YEAR” reflected for messages from August and September 2016, but not for messages on and after November 2016. The second series has the “YEAR” reflected on every message from September 2017 through October 2017. This indicates that the first series of screenshots were made in September 2017, but that the second series of screenshots were made at some time after October 2018. This is also consistent with the multiple iOS indicators, and the conclusion that these screenshots were made at different times, on different devices, with different iOS systems. This, combined with the unexplained inconsistencies between the various versions is why these screenshots and text messages cannot be authenticated.

F. Text Formatting

45. The screenshots reflect messages formatted at different widths. Although formatted in Exhibit 2 from Discovery with similar widths, the content of the early screenshots (Ex 2, pg. 1, and Ex 2, left column of pg. 2) accommodate more characters per line, indicating that they came from a different device or different process. I tested the formatting of the Apple Messages app on an iPhone 12 Pro running iOS 16.3.1. I recreated examples containing the exact same words as appear in some of the text messages presented in the State's Evidence. I then tested every font size available. I was unable to replicate the width presented in the State's Exhibits. Every font size resulted in fewer characters per line than the State's Exhibits. This indicates that the State's Exhibits and parts of Exhibit 2 were not made on an iPhone.

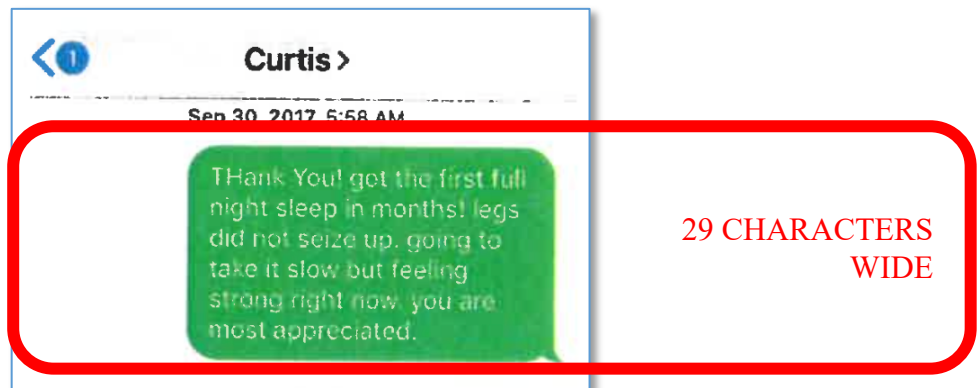
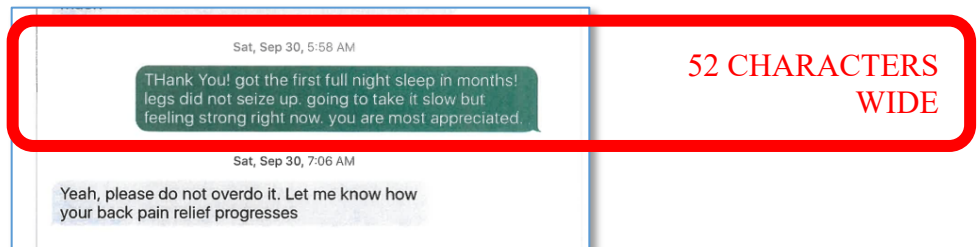
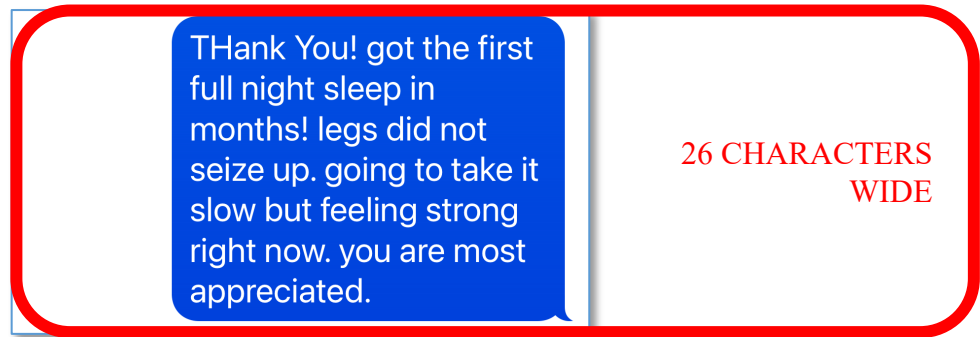


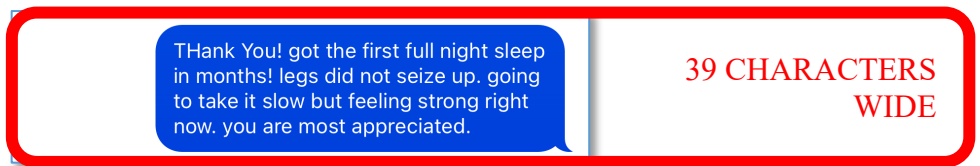
Exhibit 2, pg. 3, 2nd Column



State's Exhibit 18, pg.1



iPhone 12 Pro, Largest Font Setting



iPhone 12 Pro, Smallest Font Setting

46. In my opinion, these first screenshots in Exhibit 2 were made from an Apple computer (desktop or laptop) or an iPad, or a text message simulator, but not on an iPhone. Based on the screen width and text formatting, the subsequent messages were made on an iPhone. This is further indication that these pages were created from screenshots made at different times on different devices, at best.

47. The undocumented use of multiple devices for the creation of these screenshots in another reason why these screenshots have not been properly authenticated.

G. Provenance of the text messages

48. The text messages screenshots are all presented as a 5-page PDF of cut, pasted, and cropped screenshots. There are missing headers, footers, a lack of PNG metadata, a lack of text message metadata. The messages are of low resolution compromising other analysis techniques (such as font analysis). Thus, is it impossible, on this alone, to verify that these messages are authentic.

H. Transparency Settings

49. In the Apple Messages app, text messages are presented as a continuous feed of a given thread that can be scrolled up or down on the screen to see prior or subsequent messages. When the thread is scrolled, the underlying messages are displayed “under” the header and footer section of the display. When the underlying messages are “under” the header and footer, they are typically blurred. This means that they are discernable, but not legible. Here is an example of a screenshot displaying a blurred text under the header of the Messages app:

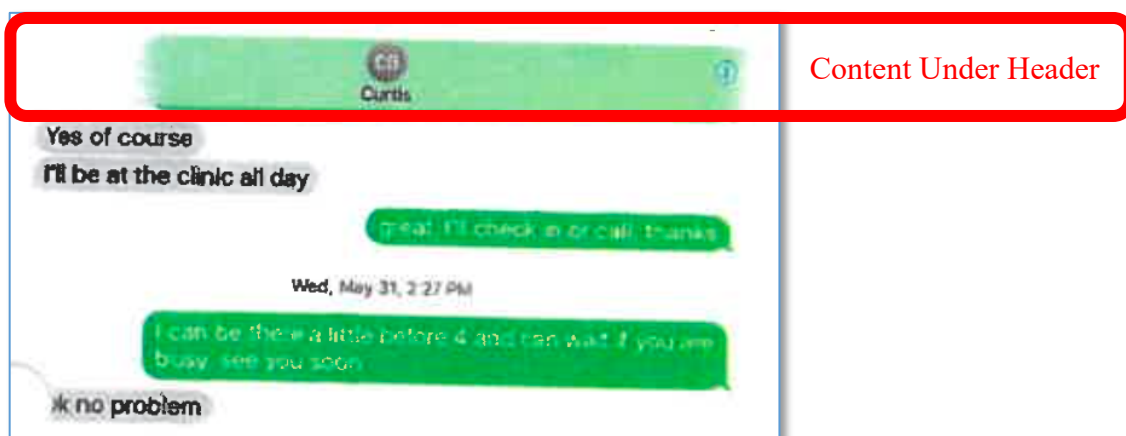


Exhibit 2 from Discovery, pg. 1, 1st Column

50. In multiple screenshots in the second series, the underlying message is not blurred. This is unusual in my experience and is indicative of an unexplained formatting setting or anomaly:

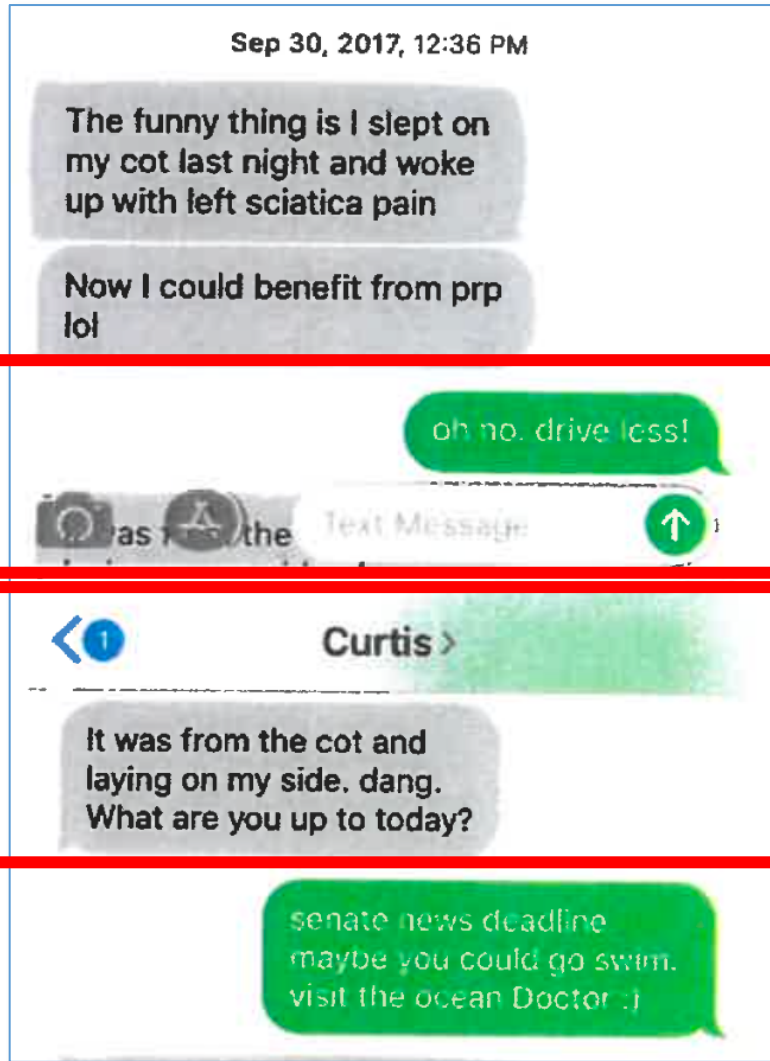


Exhibit 2 from Discovery, pg. 3, 2nd Column

I. Missing Content

51. The last screenshot in the first series contains a smiley face emoji. The first screenshot in the second series shows the same text messages, but no emoji. This inconsistency indicates that the second series is incomplete and unreliable, at best.
52. This is not just a missing emoji. The emoji is a text message that consists of a single emoji. However, that entire text message is missing.

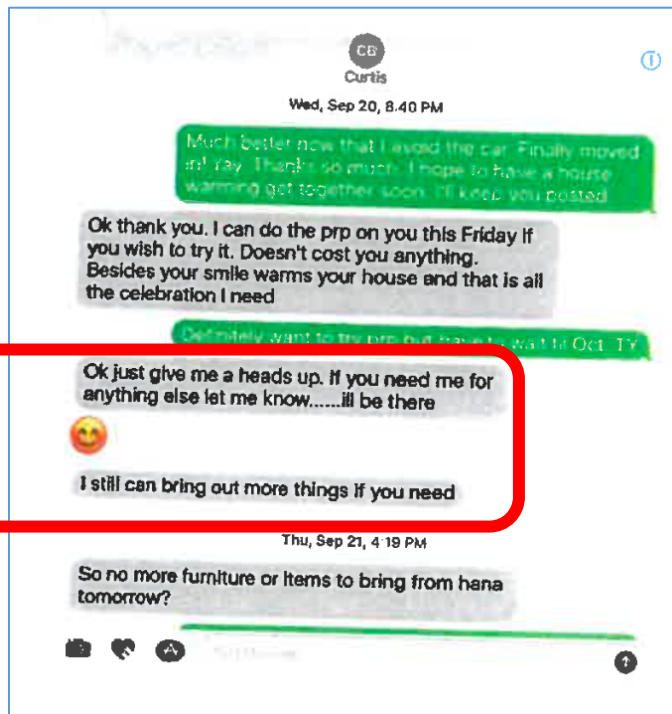


Exhibit 2 from Discovery, pg. 2, 1st Column

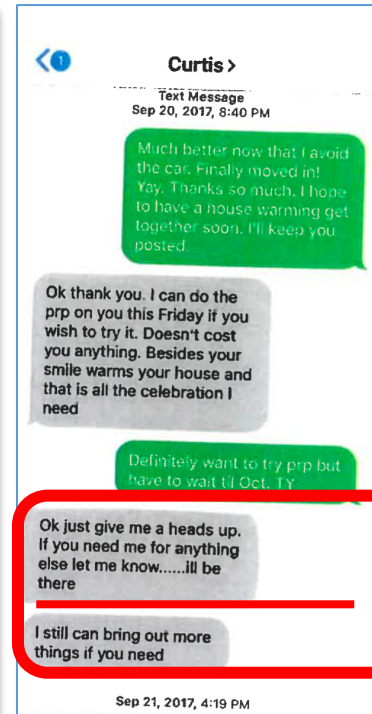


Exhibit 2 from Discovery, pg. 2, 2nd Column

Exhibits in the Criminal Proceeding

53. I then inspected State's exhibits 11-21 from State of Hawai'i v. Curtis Ryan Bekkum, State's Exhibits, July 14, 2022 (document 2CPC-22-0000240) (Dkt. 83 EXH). This subset of exhibits is attached as my own Exhibit B.

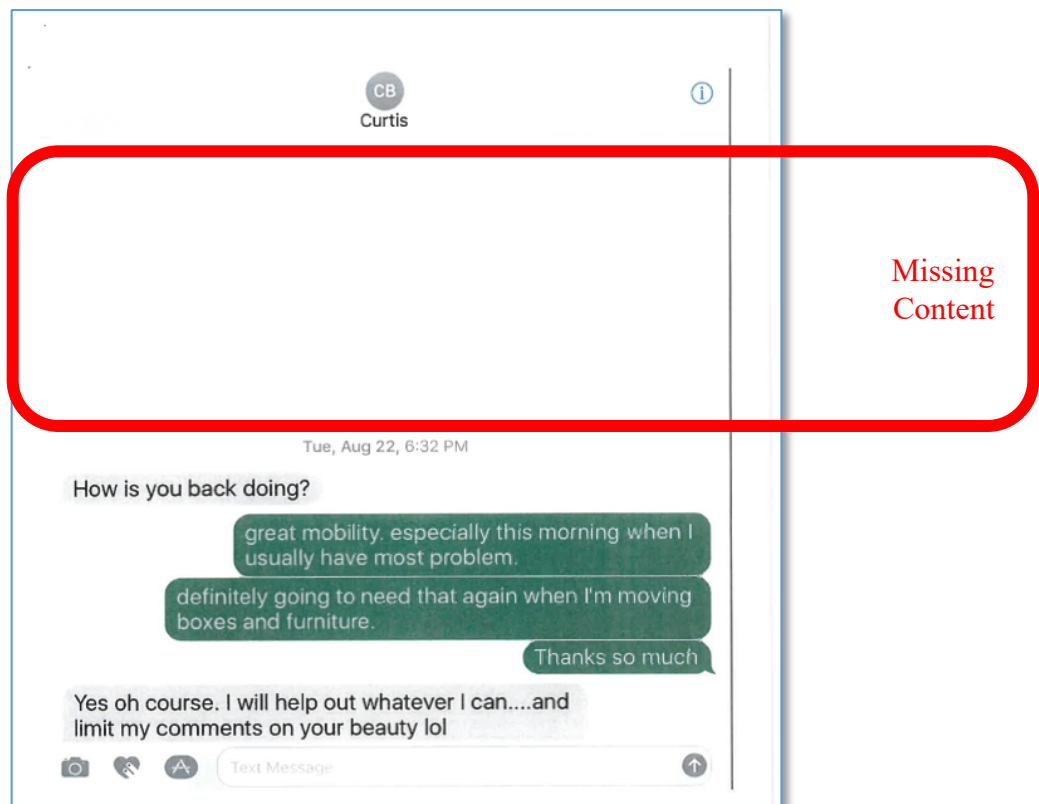
54. In these exhibits presented in the Criminal matter, I identified additional anomalies that render the text messages unreliable as presented. Every exhibit presented by the State has anomalies, missing content, or content that conflicts with Exhibit C.

J. State's Exhibit 11

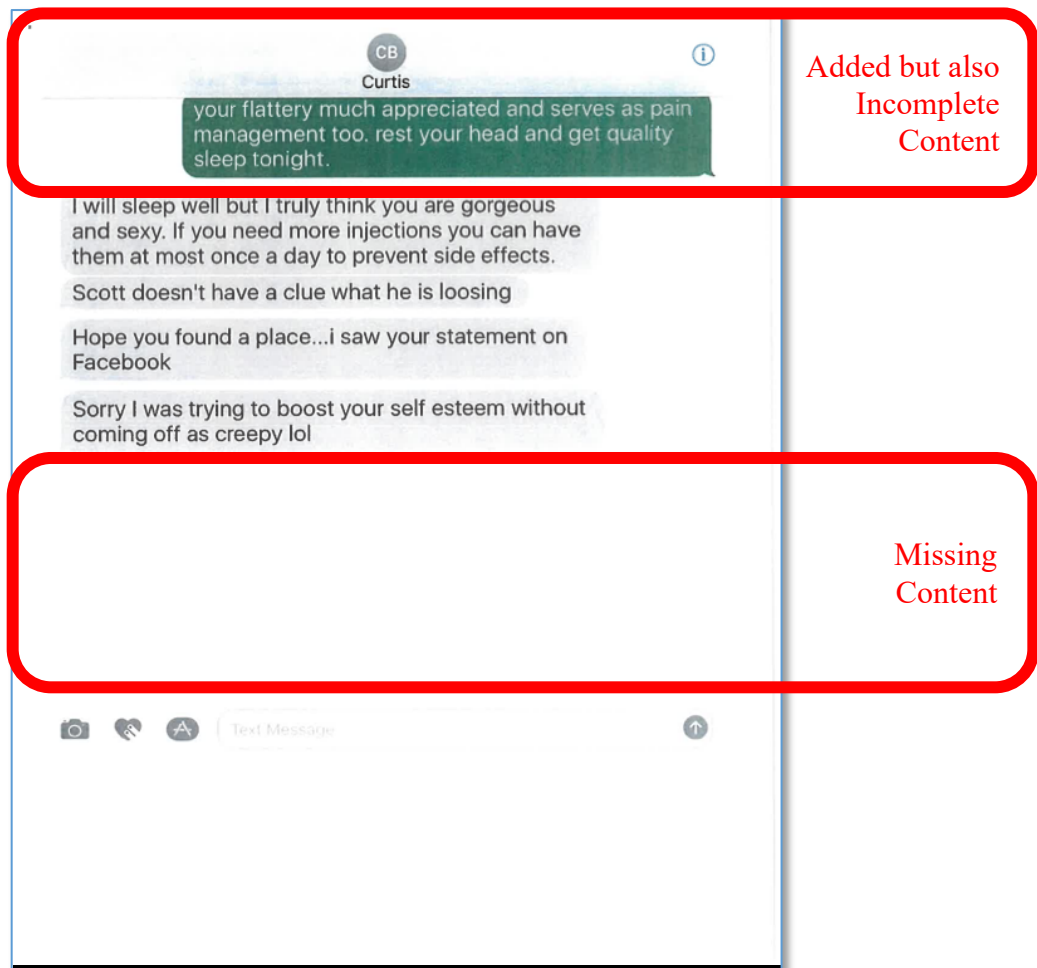
55. State's Exhibit 11 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. There is missing content. There is also obscured content. Many timestamps are missing. The exhibit

demonstrates that Exhibit 2 is incomplete. The exhibit also demonstrates that itself is incomplete.

56. State's Exhibit 11 presents two screenshots. Both pages have unexplained blank areas indicating missing content. The second page shows a portion of a text that is incomplete. This indicates that the text messages, presented as a continuous thread, is incomplete and there is contextual information missing.

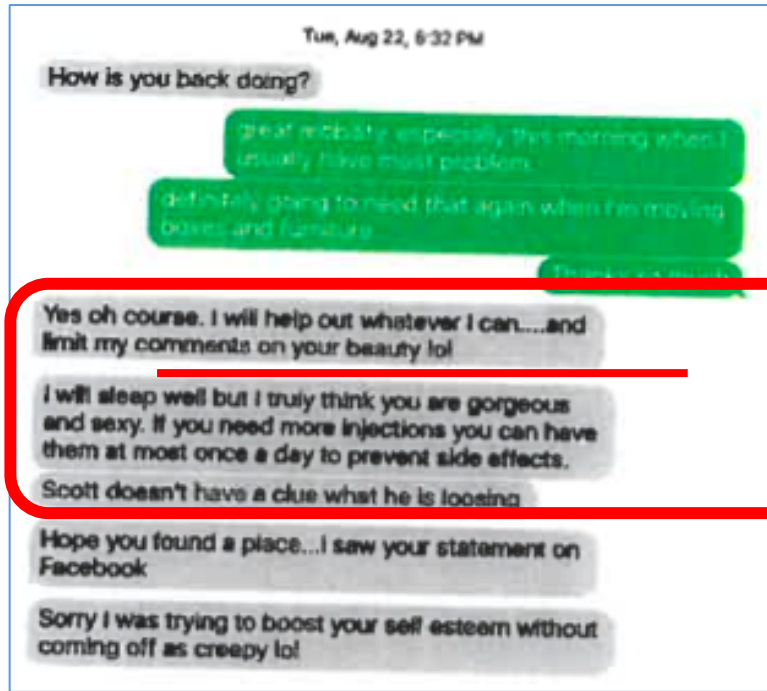


State's Exhibit 11, pg. 1



State's Exhibit 11, pg. 2

57. At the same time, the prior production of this same portion of this thread indicates that this text was inexplicably omitted from the prior production:



Content
Missing from
Exhibit 2

Exhibit 2 from Discovery, pg. 1, 2nd Column

58. The missing content, although incomplete, can be partially read. It says “your flattery much appreciated and serves as pain management too. rest your head and get quality sleep tonight.”

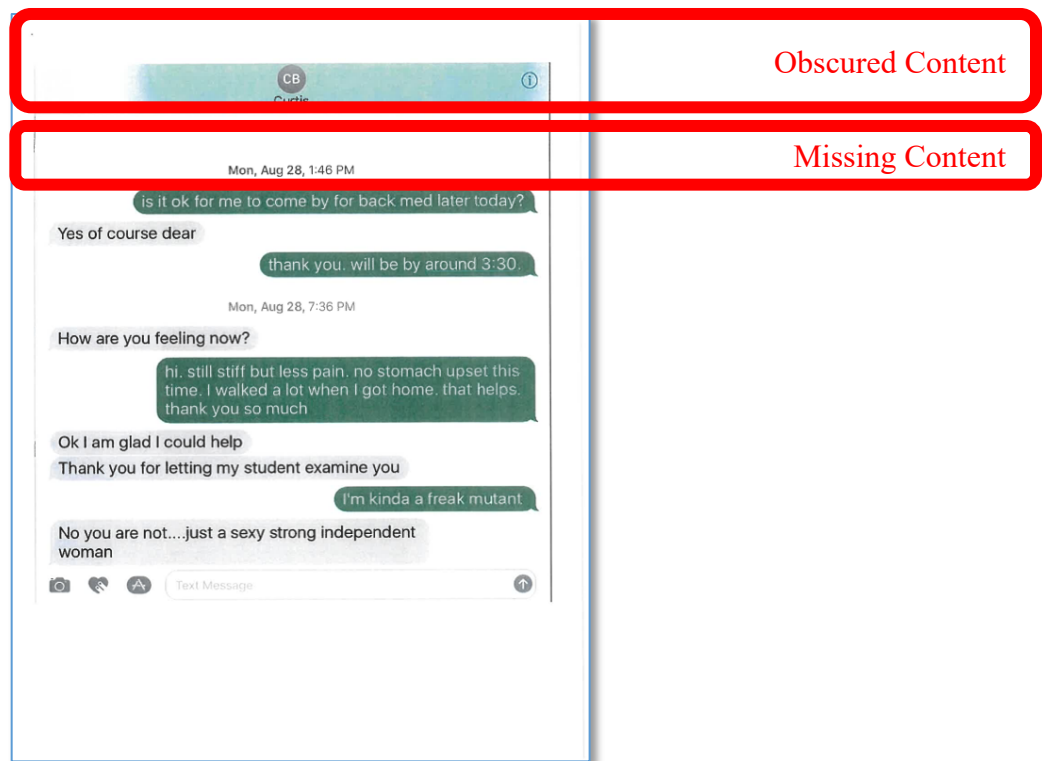
59. State’s Exhibit 11 shows that Exhibit 2 from Discovery is incomplete in an otherwise non-detectible manner. At the same time, State’s Exhibit 11 also demonstrates that it is, itself, incomplete. And it is unknown if it is incomplete for part of a single message, or if many messages are missing.

K. State’s Exhibit 12

60. State's Exhibit 12 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. There is missing content. There is also obscured content. Many timestamps are missing.

61. State’s Exhibit 12 shows two screenshots. These screenshots are made in such a manner that there is no overlap between the two of them. Inspection of page 1 indicates a text

message discernable under the header, but then an unexplained gap between the header and the first message. Close inspection of Exhibit 12, page 2 indicates the blur of a preceding text message that is missing from Page 1. This additional content has been omitted from the thread between the two screenshots and they have been manipulated to appear to be a continuous conversation thread.



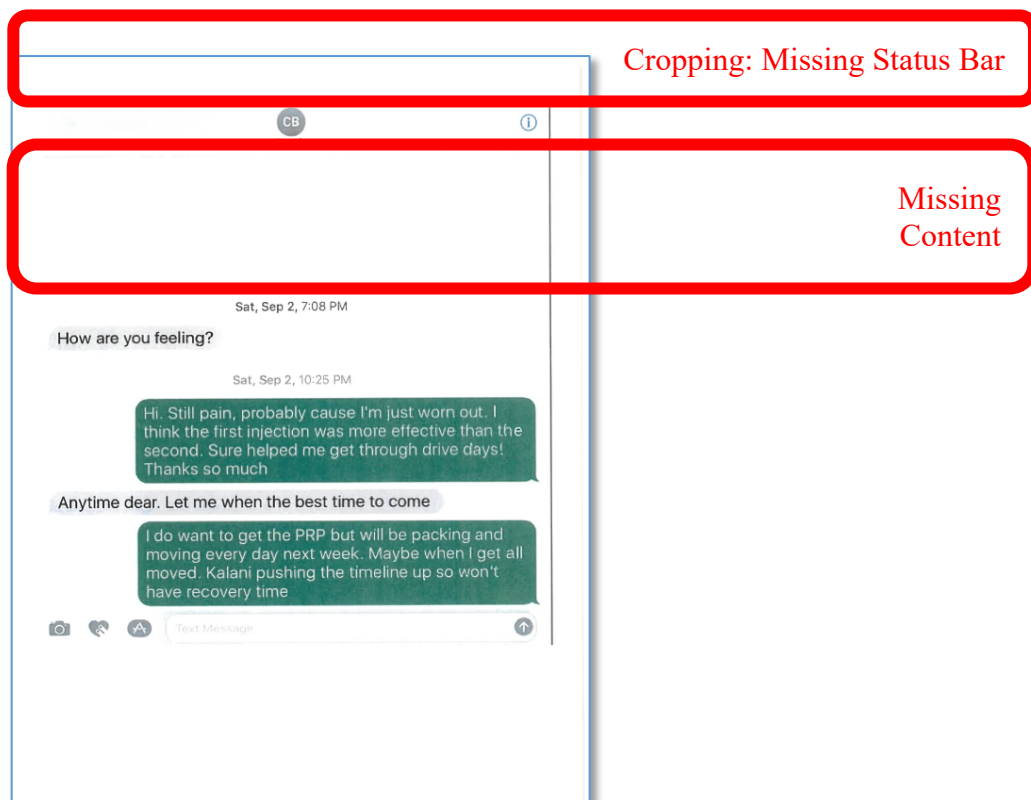
State's Exhibit 12, pg. 1

L. State's Exhibit 13

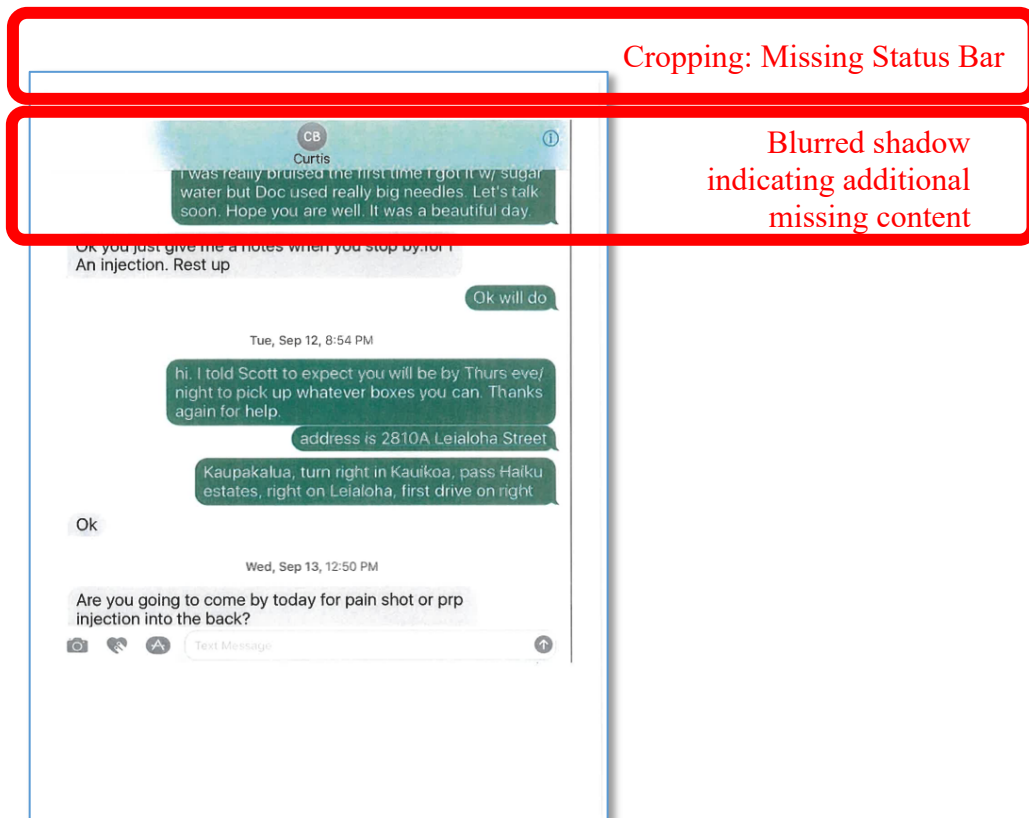
62. State's Exhibit 13 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. There is missing content. There is also obscured content. Many timestamps are missing.

63. State's Exhibit 13 shows four screenshots. These screenshots are made in such a manner that there is evidence of missing content between page 1 and page 2. Inspection of Exhibit 13, page 2 indicates the blur of a preceding text message that is missing from

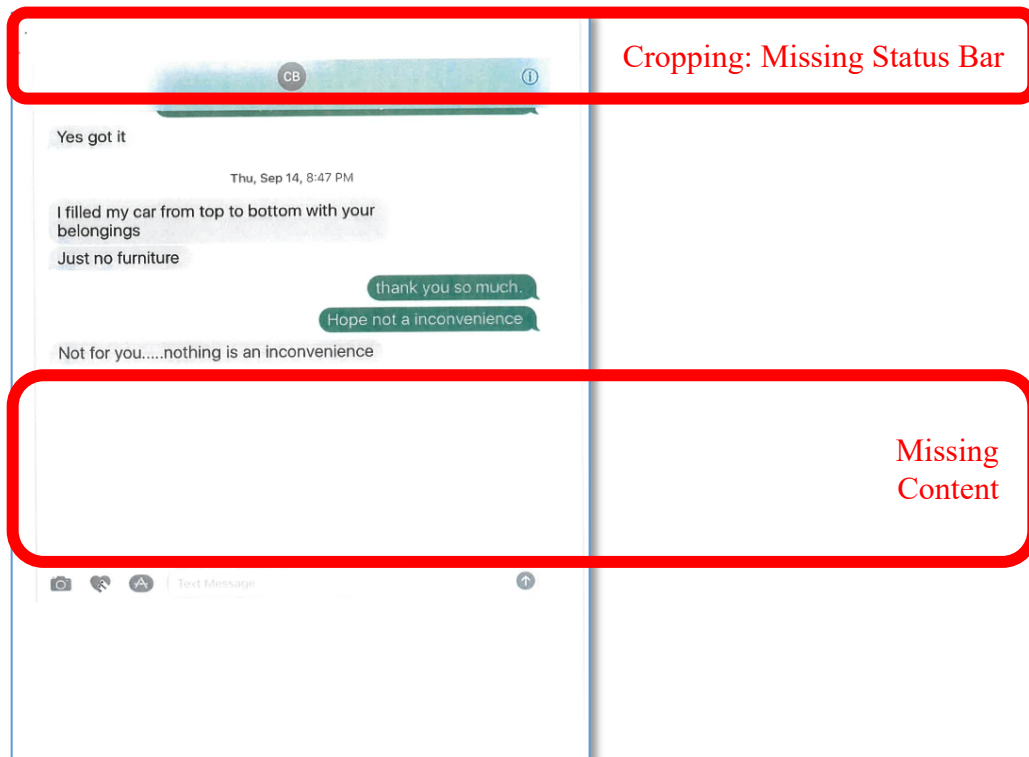
Page 1. This additional content has been omitted from the thread between the two screenshots and they have been manipulated to appear to be a continuous conversation thread.



State's Exhibit 13, pg. 1



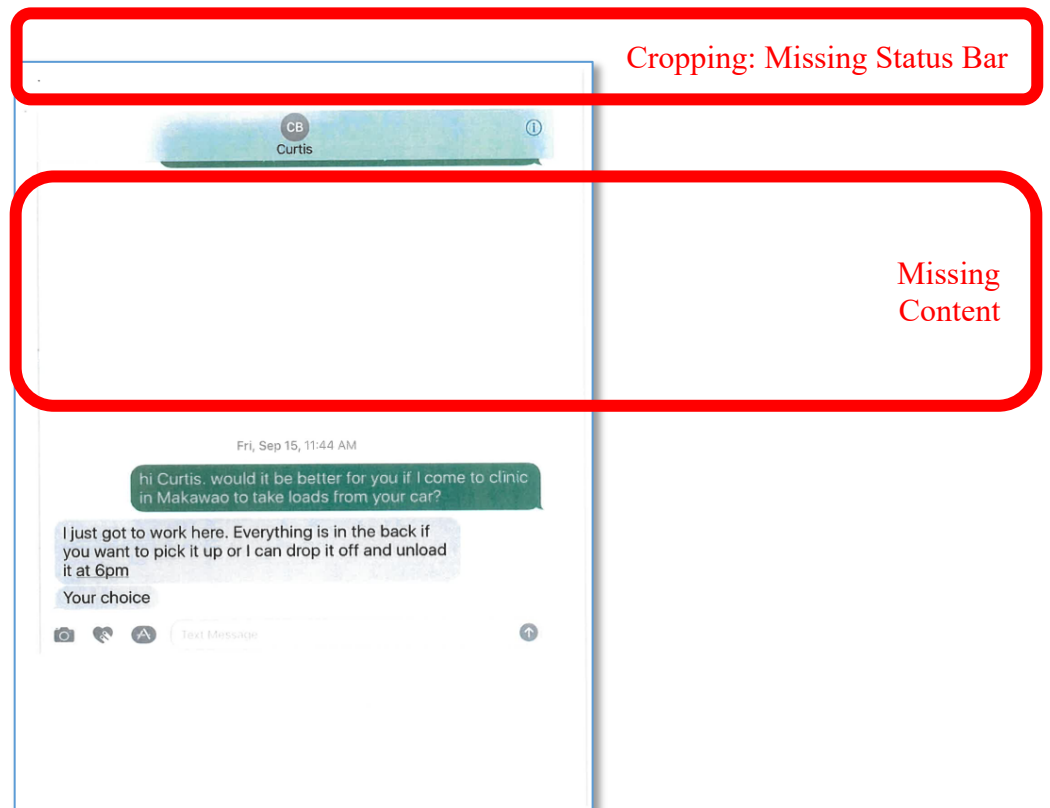
State's Exhibit 13, pg. 2



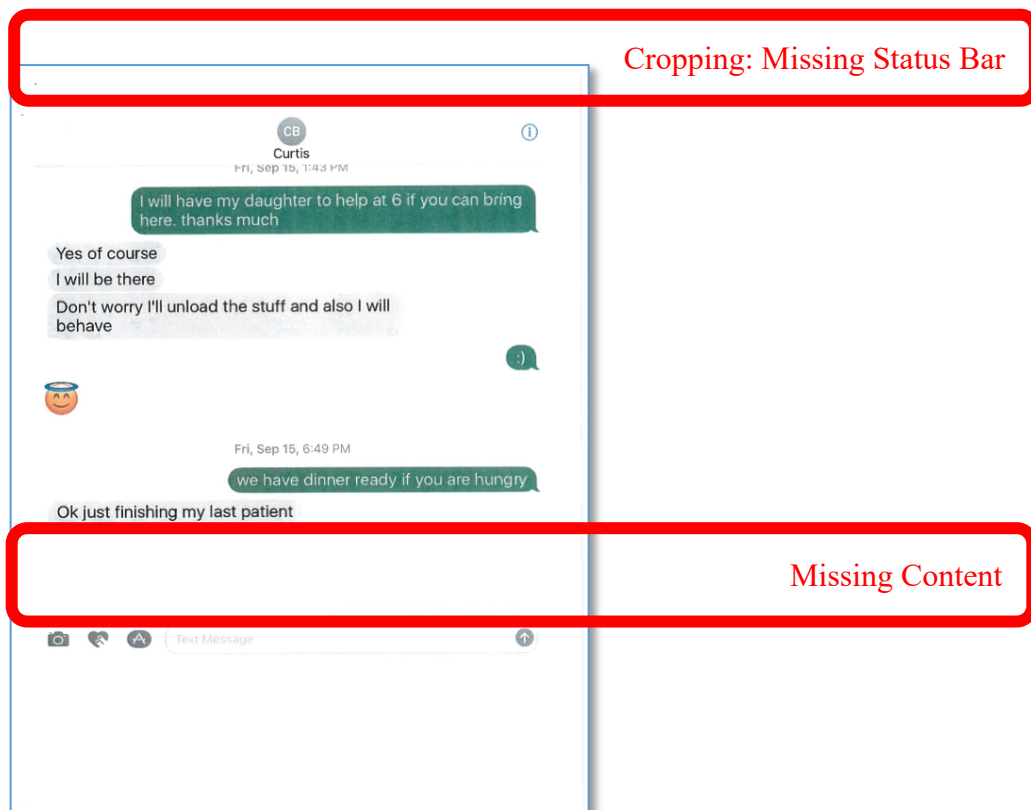
State's Exhibit 13, pg. 4

M. State's Exhibit 14

64. State's Exhibit 14 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. There is significant missing content. There is also obscured content. Timestamps are missing.
65. State's Exhibit 14 presents three screenshots of text messages. The second page contains an Emoji. This demonstrates that the capture of screenshots and the content of text messages in Apple Messages on this particular device could and did include Emojis.
66. This further indicates the inconsistencies identified by the missing Emoji in the original Exhibit 2 from Discovery (*supra*).
67. State's Exhibit 14 also has content missing on each page.



State's Exhibit 14, pg. 1



State's Exhibit 14, pg. 2



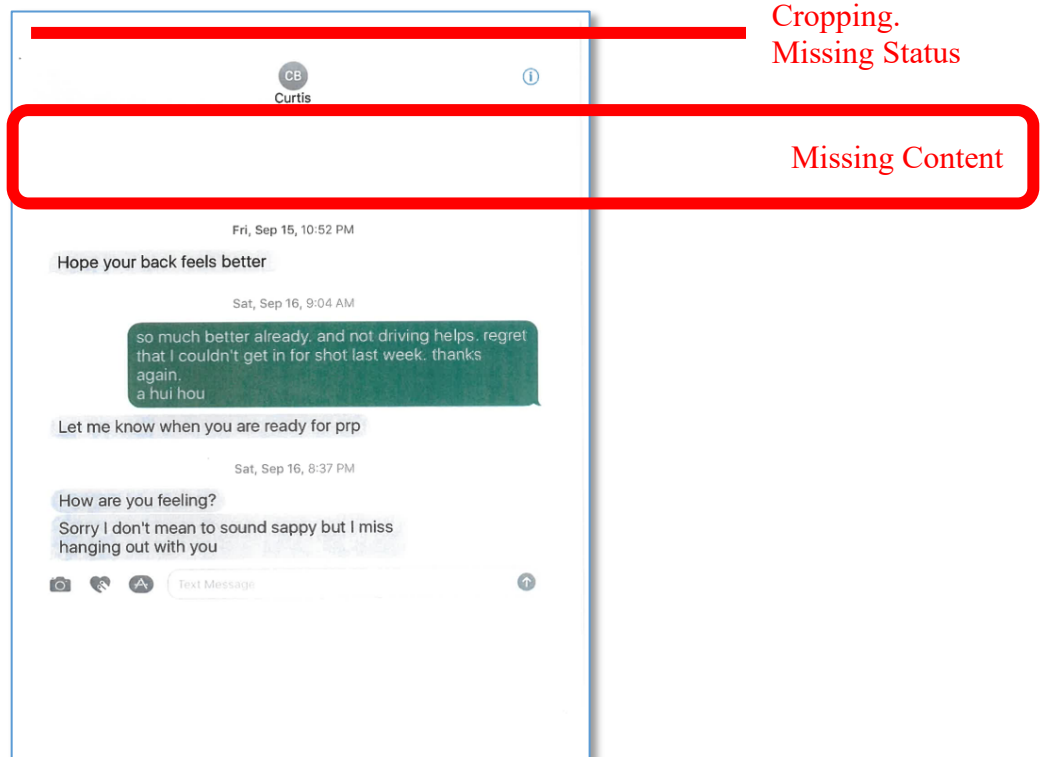
State's Exhibit 14, pg. 3

N. State's Exhibit 15

68. State's Exhibit 15 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. There is significant missing content. There is also obscured content. Timestamps are missing.

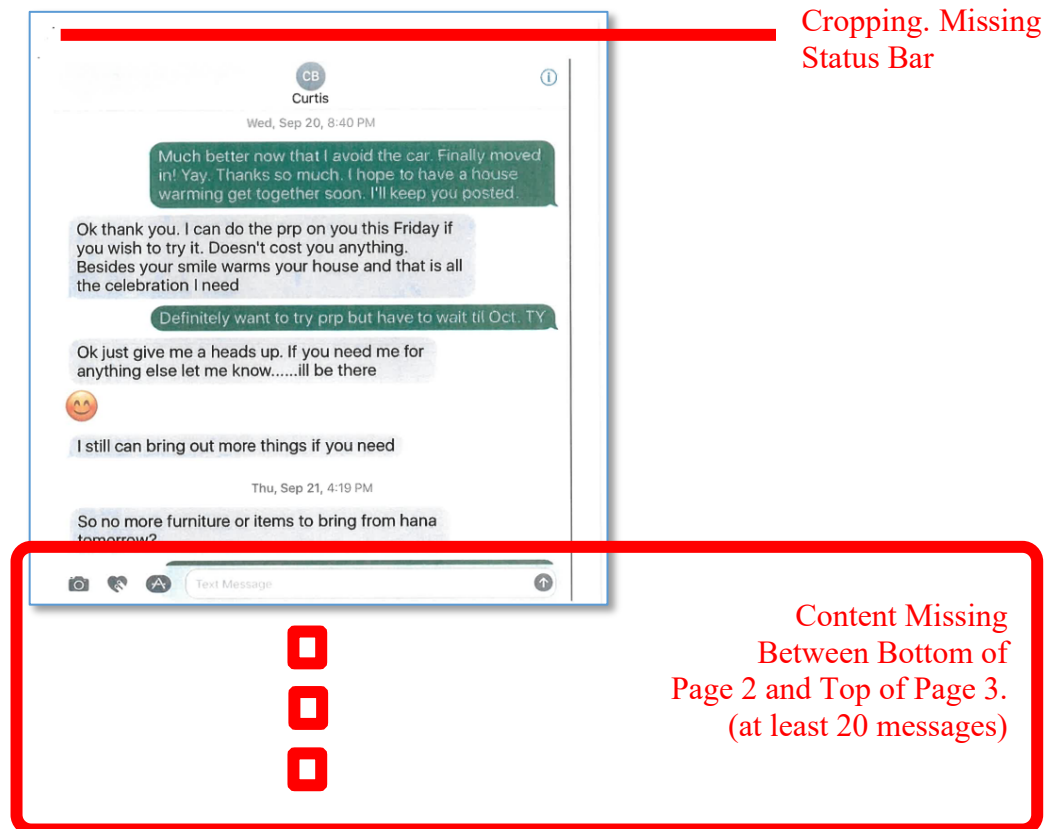
69. State's Exhibit 15 presents three screenshots of text messages as a single continuous portion of the conversation thread. State's Exhibit 15 is of particular interest, because it diverges from Exhibit 2 from Discovery in the total per-page format. It also lacks the "YEAR" in the text message date format that starts to appear in Exhibit 2 from Discovery. This indicates that State's Exhibit 15 was possibly made from the same device as the prior State's Exhibits, and at the same time frame (October or November 2017), whereas in Exhibit 2 from Discovery these same portions were made at least one year later.

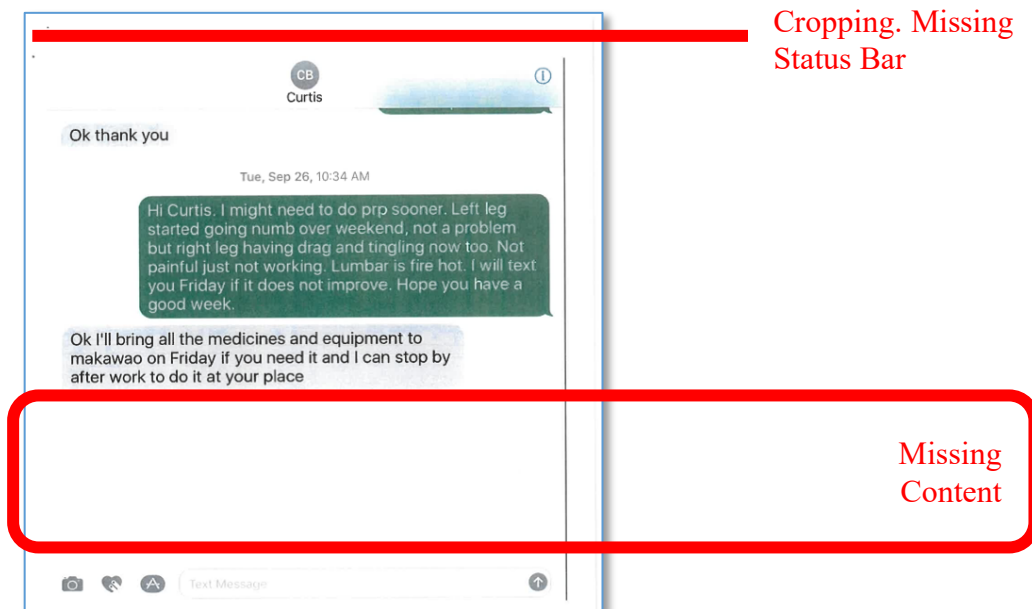
70. The first page of State's Exhibit 15 is missing content.



State's Exhibit 15, pg. 1

71. When compared to Exhibit 2 from Discovery, I found that State's Exhibit 15 is missing many texts. Specifically, State's Exhibit 15, pg. 2 ends with a text from Thursday, September 21 at 4:19 PM. State's Exhibit 15, pg. 3 starts with a text from Tuesday September 26 at 10:34 AM. Comparison to Exhibit 2 from Discovery shows that Exhibit 2 from Discovery presents at least 20 additional text messages that are omitted without indication from States Exhibit 15.

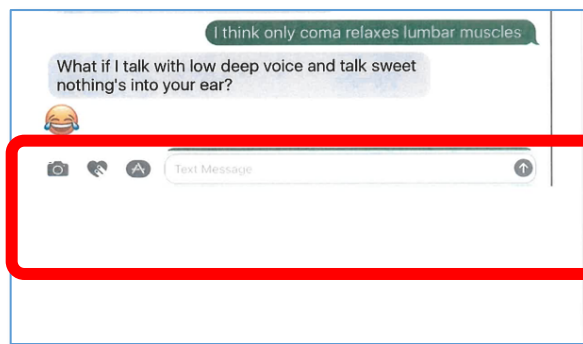




State's Exhibit 15 pp. 2-3

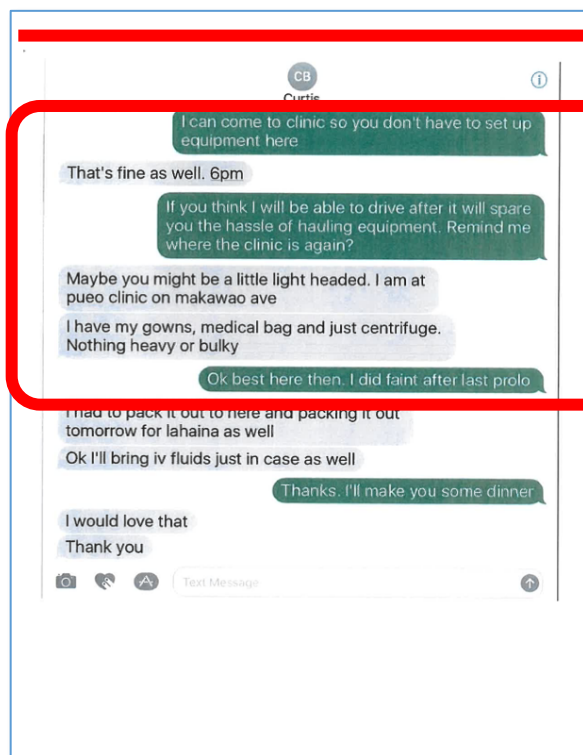
O. State's Exhibit 16

72. State's Exhibit 16 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshot of page 1 has unmarked redactions. There is missing content. There is obscured content. There is content that does not match Exhibit 2. Timestamps are missing.
73. State's Exhibit 16 presents three screenshots of text messages as a single continuous portion of the conversation thread. However, it also presents content that is missing from Exhibit 2 from Discovery. Here are the bottom of State's Exhibit 16, pg. 2, and the top of State's Exhibit 16, pg. 3, compared to the same time frame from Exhibit 2 from Discovery.



Additional but
Obscured Content

State's Exhibit 16, pg. 2 (bottom)



Cropping. Missing
Status Bar

Added
Content

State's Exhibit 16, pg. 3

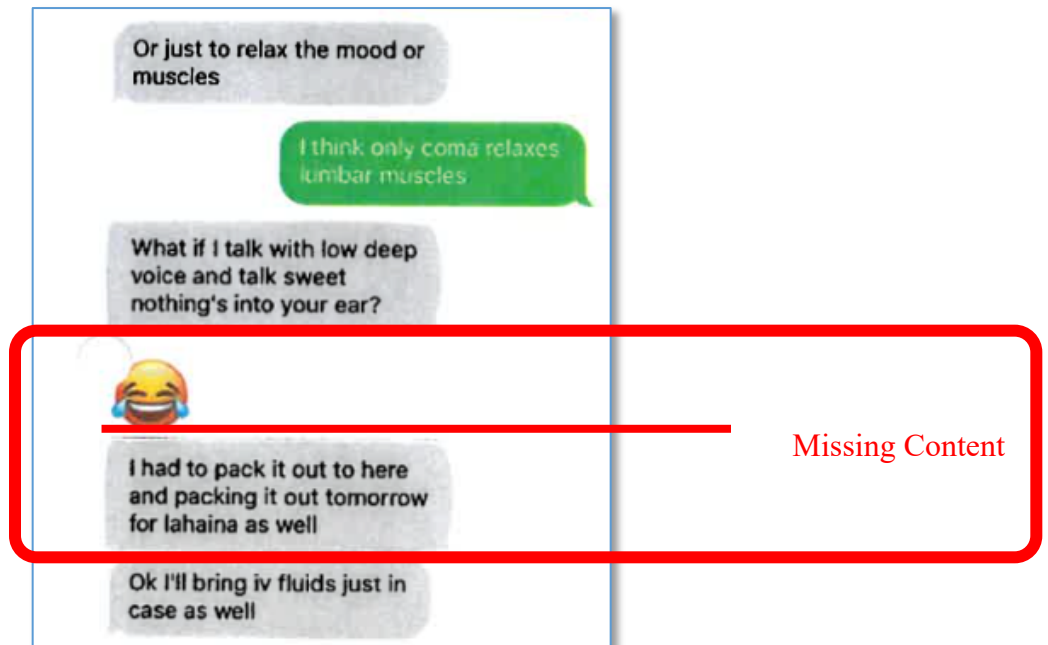


Exhibit 2 from Discovery, pg. 3, 1st Column

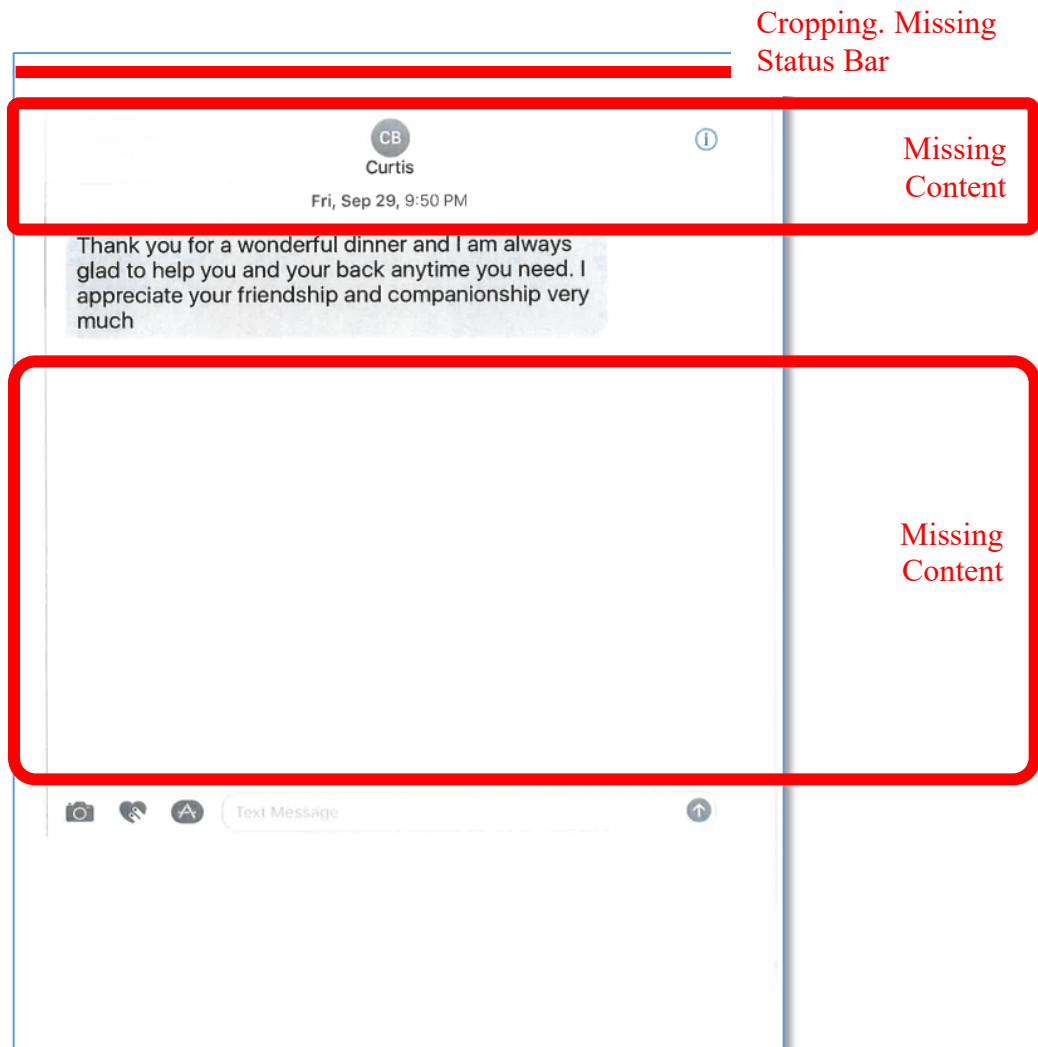
74. This indicates that there are times when the State's Exhibits are missing content, even though they are presented as being complete and continuous, and there are also times when Exhibit 2 from Discovery is missing content, even though Exhibit 2 from Discovery is presented as being complete and continuous. As a result, neither the State's Exhibits nor Exhibit 2 from Discovery are complete or reliable. Both show indicia of being manipulated in an undisclosed manner.

P. State's Exhibit 17

75. State's Exhibit 17 is altered. It has been cropped (cut) such that the screenshot is not a complete screenshot. The screenshot has unmarked redactions.

76. State's Exhibit 17 presents a single screenshot of a single text message from September 29, 2017 at 9:30 pm. In Exhibit 2 from Discovery there is marginalia that presents this text as subterfuge to "pretend friendship/companionship". However, the message is presented out of context with no ability to confirm whether there were preceding or following messages. Without the ability to confirm whether or not there

are preceding or following messages, and given the findings that other messages have been omitted from both State's Exhibits and Exhibit 2 from Discovery, this single page cannot be verified or validated, or considered to be complete.

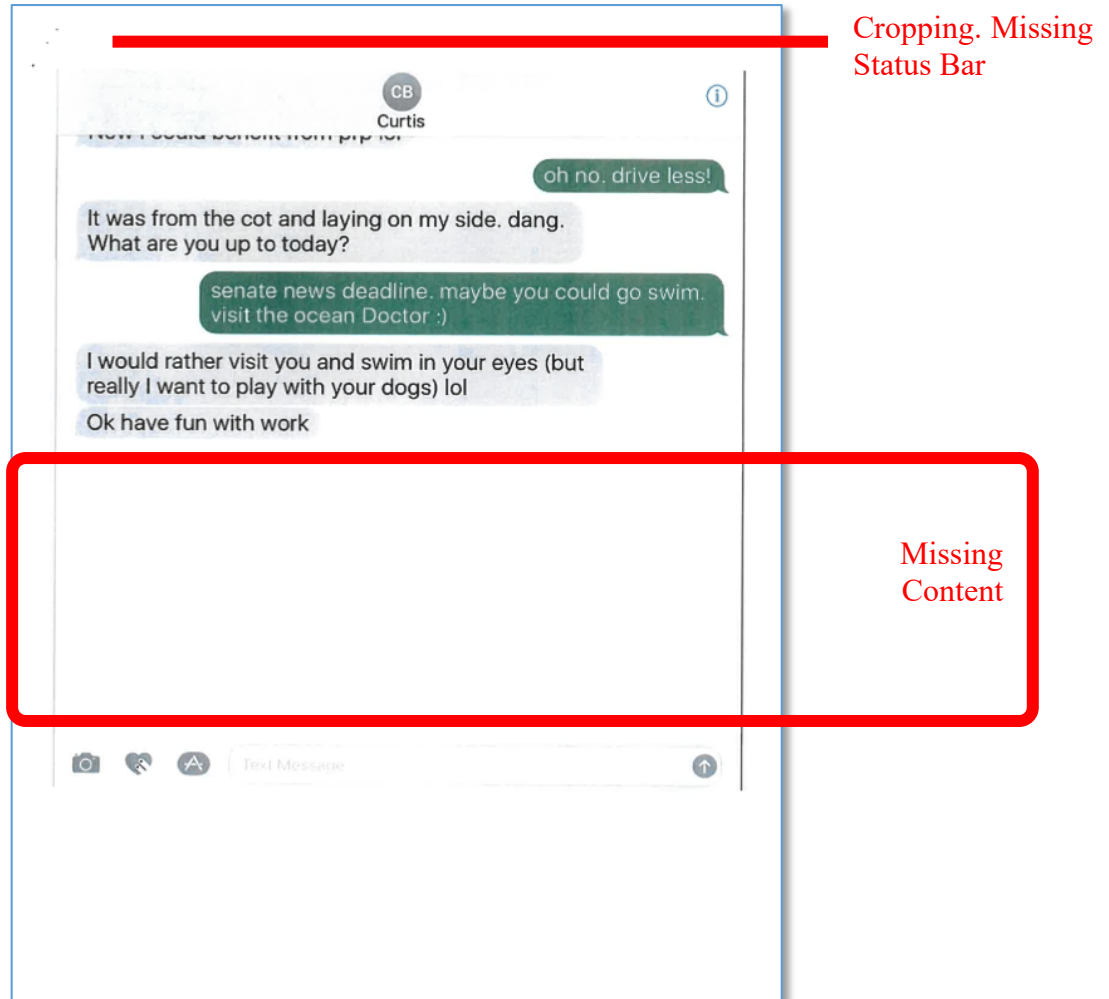


State's Exhibit 17

77. However, based on Exhibit 2 from Discovery, there should be messages preceding the message in State's Exhibit 17. And there is no indication of such appearing as a shadow under the header of State's Exhibit 17 – an area that is otherwise intact. Therefore, State's Exhibit 17 exhibits missing content that should be discernable if it were genuine.

Q. State's Exhibit 18

78. State's Exhibit 18 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. Timestamps are missing.
79. State's Exhibit 18 presents two screenshots of text messages as a single continuous portion of the conversation thread. However, the bottom half of page 2 is blank giving the impression that the conversation is finished. Subsequent State's Exhibits, and Exhibit 2 from Discovery, show that it is not. Subsequent screenshots of text messages from Oct 1, 2017 are non-sequitur, "is he ok?" which indicate that there is some other topic being discussed that is otherwise not reflected in the screenshots. This is another indication that there is contextual content missing.



State's Exhibit 18, pg. 1

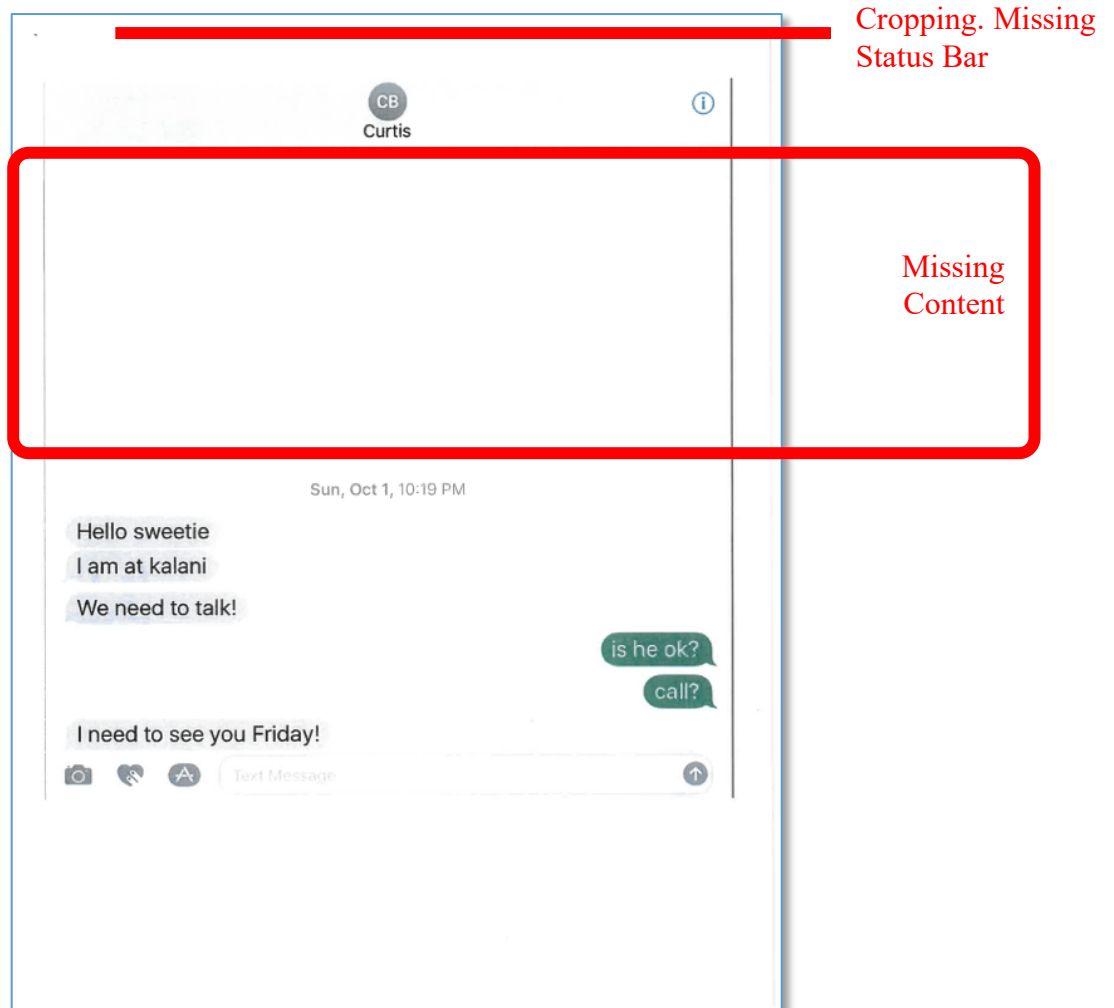
80. As indicated previously, Exhibit 2 from Discovery can be referenced for content that may be missing, but due to its own omissions, it cannot be relied up to confirm if the State's Exhibits are complete. This exhibit, State's Exhibit 18, is one more example that the State's Exhibits are altered and are not complete.

R. State's Exhibit 19

81. State's Exhibit 19 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions.

82. State's Exhibit 19 presents three screenshots of text messages as a single continuous portion of the conversation thread. However, the top half of page 1 is blank giving the

impression that the conversation is just starting. Exhibit 2 from Discovery and prior State's Exhibits show that it is not.

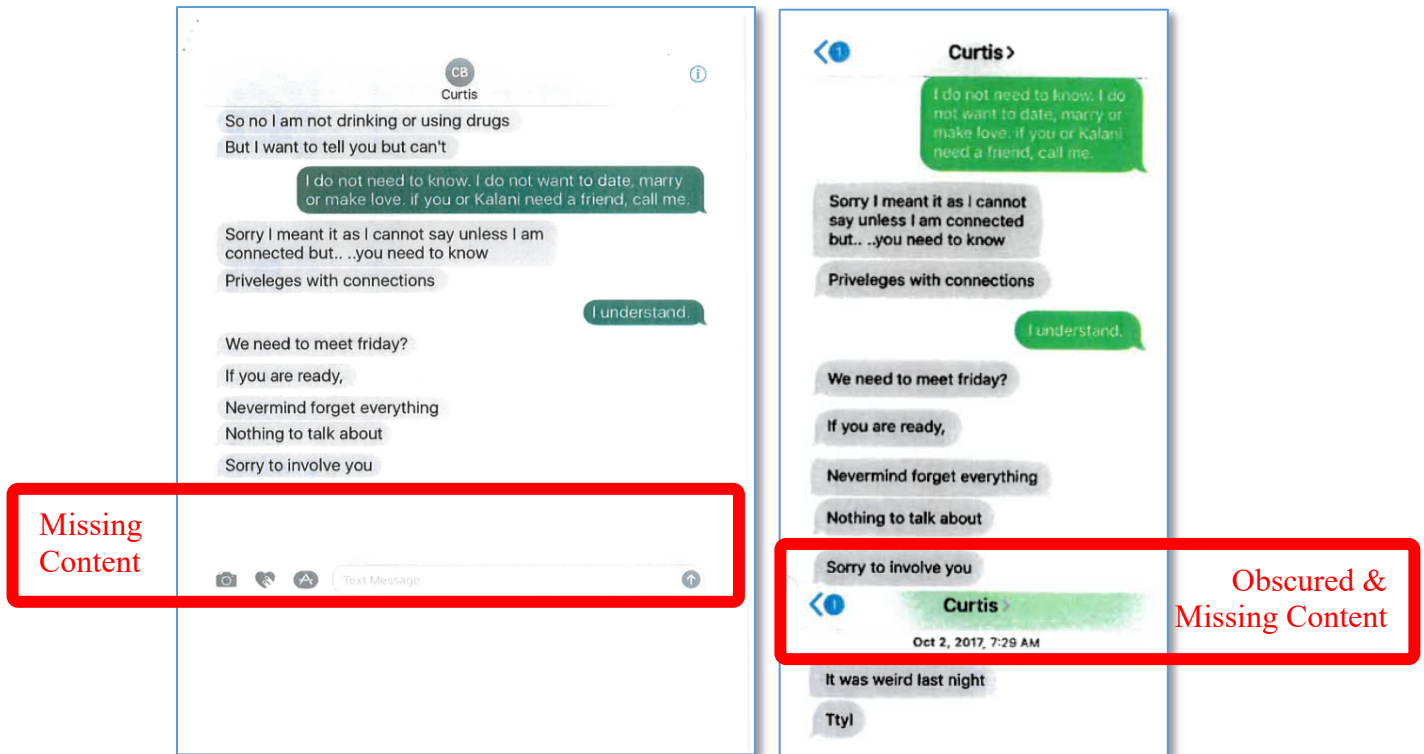


State's Exhibit 19, pg. 1

83. Similarly, the bottom of page 3 is blank, giving the impression that the entire conversation thread is finished. Exhibit 2 from Discovery and subsequent State's Exhibits show that it is not.

84. Exhibit 2 from Discovery, which presents texts from October 1 and 2, 2017, shows an obscured message that follows the content of State's Exhibit 19. While discernable as

a message from LA to CRB, it is not legible. State's Exhibit 19 has omitted this contextual text.



State's Exhibit 19, pg. 3

Exhibit 2 from Discovery, pg. 4, 1st Column

85. Further, it is impossible to discern from State's Exhibit 19 or Exhibit 2 from Discovery what has been omitted and how much additional conversation thread has been omitted.

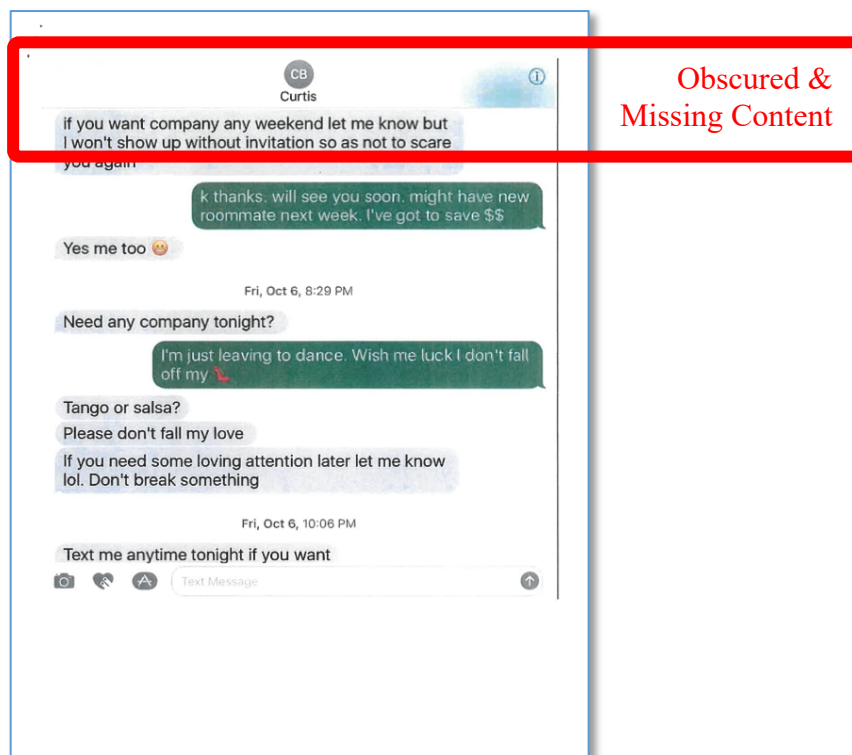
86. Therefore, both Exhibit 2 from Discovery and State's Exhibit 19 are incomplete and not reliable.

S. State's Exhibit 20

87. State's Exhibit 20 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. Timestamps are missing.

88. State's Exhibit 20 presents one screenshot of text messages as a single continuous portion of the conversation thread.

89. The top of the page shows a text from LA that is discernable but not legible. This text might correspond to the “you too” on Exhibit 2 from Discovery, but it is not possible to confirm this. Therefore, the exhibit is an incomplete snippet of the thread.



State's Exhibit 20

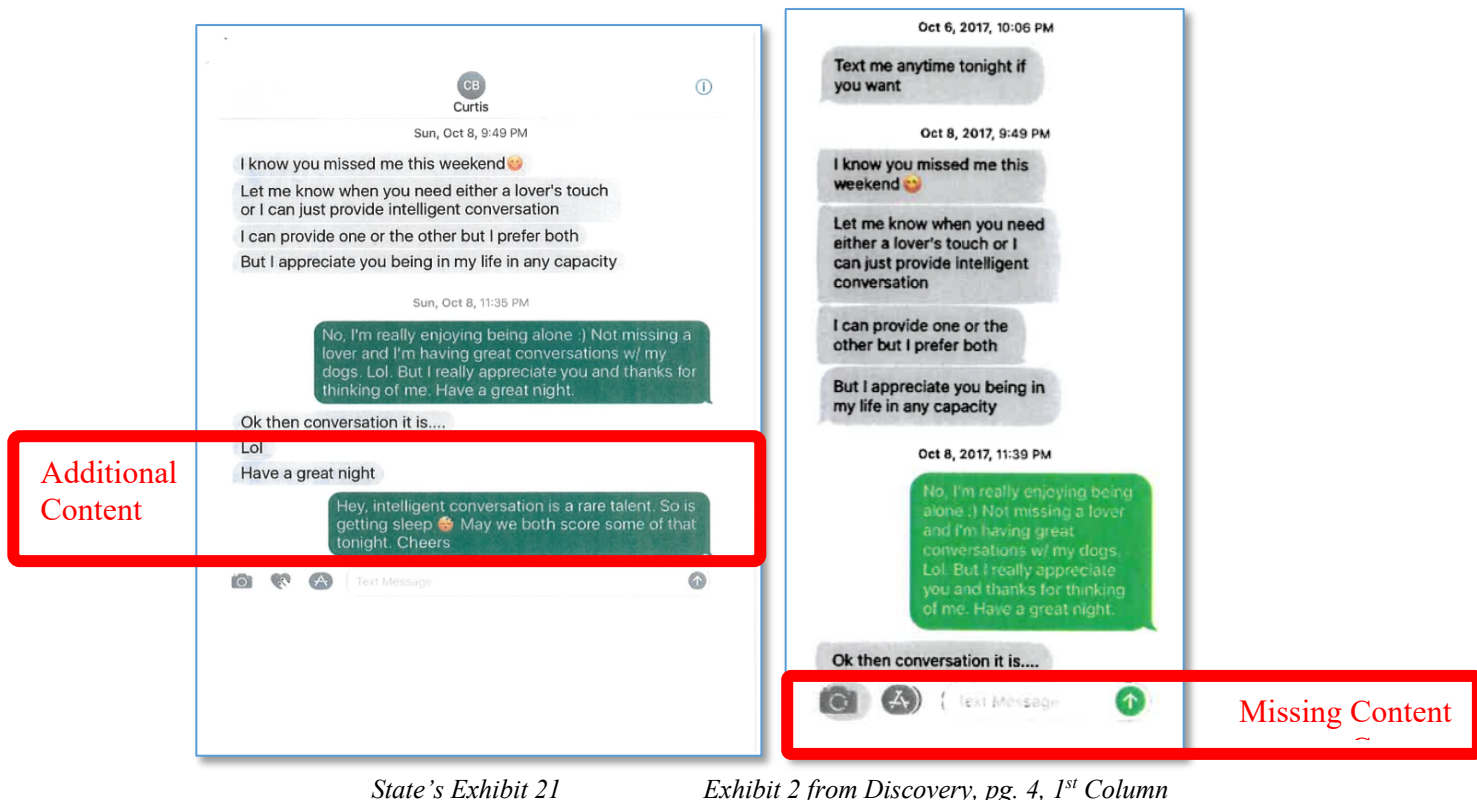
90. The rest of the content corresponds to Exhibit 2 from Discovery, but because Exhibit 2 from Discovery has been extensively cropped, cut, and pasted, it is not possible to confirm that Exhibit 2 from Discovery is complete. Therefore, it is not possible to confirm if State's Exhibit 20 has additional missing content.

T. State's Exhibit 21

91. State's Exhibit 21 is altered. It has been cropped (cut) such that the screenshots are not complete screenshots. The screenshots have unmarked redactions. There is also content that conflicts with Exhibit 2. Timestamps are missing.

92. State's Exhibit 21 presents one screenshot of text messages as a single continuous portion of the conversation thread.

93. However, the conversation thread at the bottom of the page is presented as if it is the end of the conversation (no page 2), which is impossible to confirm in the manner in which the exhibit is presented. Therefore, the completeness of Exhibit 21 is not reliable.



94. When comparing State's Exhibit 21 to Exhibit 2 from Discovery, I find that State's Exhibit 21 shows additional text at the end of the thread that Exhibit 2 from Discovery is missing. This is also the last screenshot in Exhibit 2 from Discovery. Therefore, the completeness of Exhibit 2 from Discovery is also not reliable.

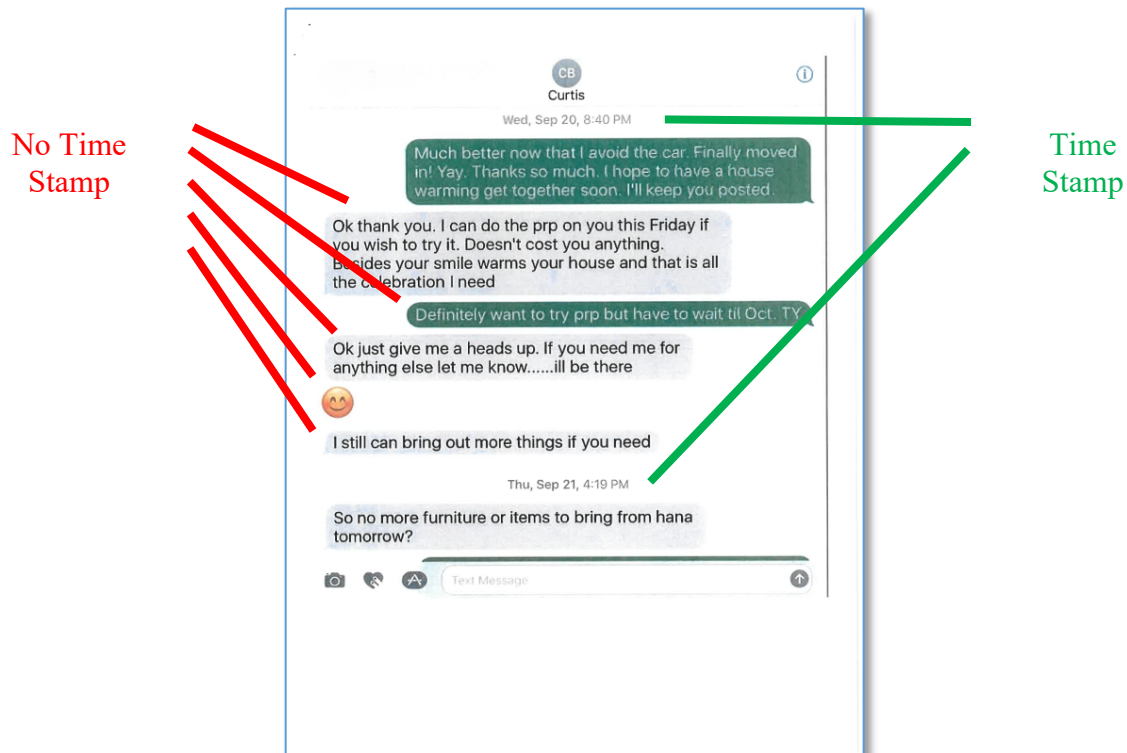
U. Other Alterations

95. In addition to the missing content and inconsistencies in the State's Exhibits 11-21, there are other problems with the exhibits including missing time stamps, inconsistent capitalization, and undocumented redactions.

i. Time Stamps

96. The vast majority of the messages in the State's Exhibits show no timestamps for individual messages therefore the parties cannot confirm exactly when most of the purported messages actually occurred, and the reader cannot judge how much time elapses between messages.

97. By way of example, State's Exhibit 15, page 3, presents 7 text messages, of which only 2 have time stamps.



State's Exhibit 15, pg. 2

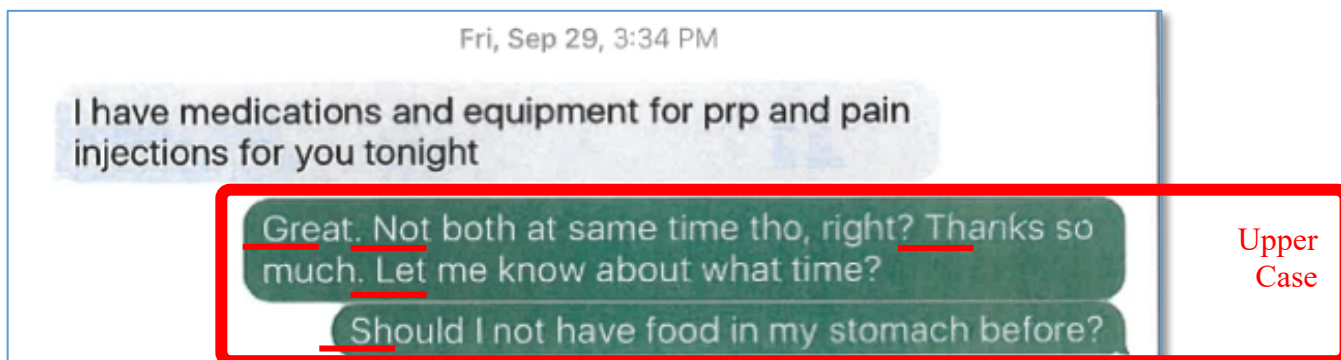
98. When text messages are exchanged, each one has a time and date value. The Apple Messages app receives and maintains that same time and date information for each text message. However, it is missing from these exhibits. The missing metadata and the lack of temporal context is another manner in which the State's Exhibits are altered and are incomplete

ii. Inconsistent Capitalization

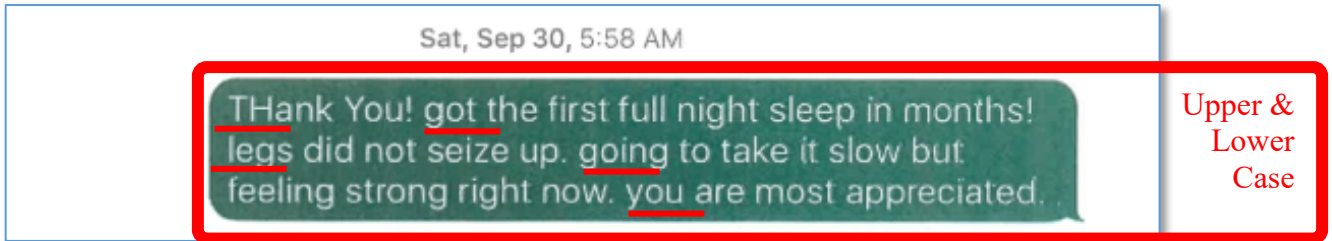
99. By default, iPhone text messages auto-capitalize the first letter typed, and the first letter after the end of a sentence, and certain words, such as "I". In order to type text messages that begin in lowercase, one has to make at least one additional preliminary key stroke – to turn off the caps-lock. As a consequence, in my experience most iPhone text messages start with a capital letter rather than expend the effort to turn off caps.

100. The iPhone has a setting that can be used to turn off auto-capitalization. This is under Settings > General > Keyboard > Auto-Capitalization. However, testing shows that this turns off all automatic capitalization, including the first person "I" and the capitalization after the end of sentence ".".

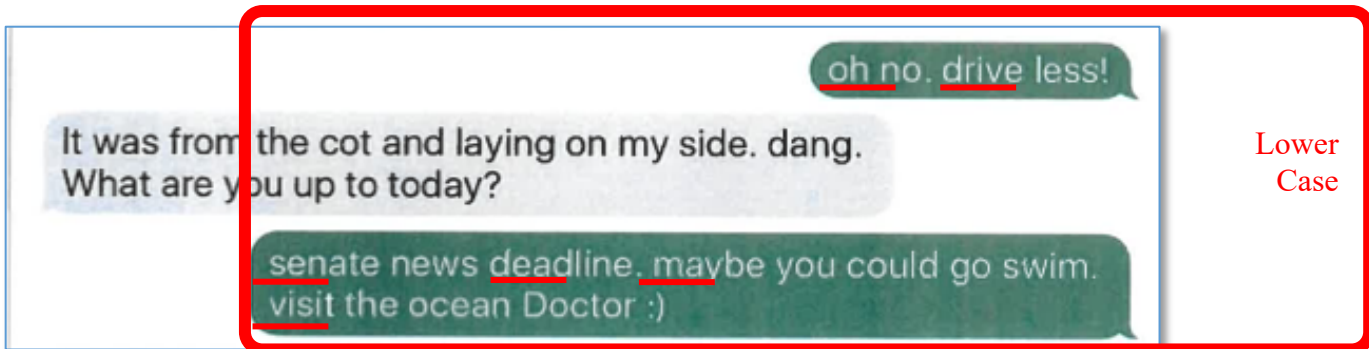
101. This is not what I observe, however, when I examine the State's Exhibits. I observe an inconsistent pattern of mixed upper and lower-case characters in different messages.



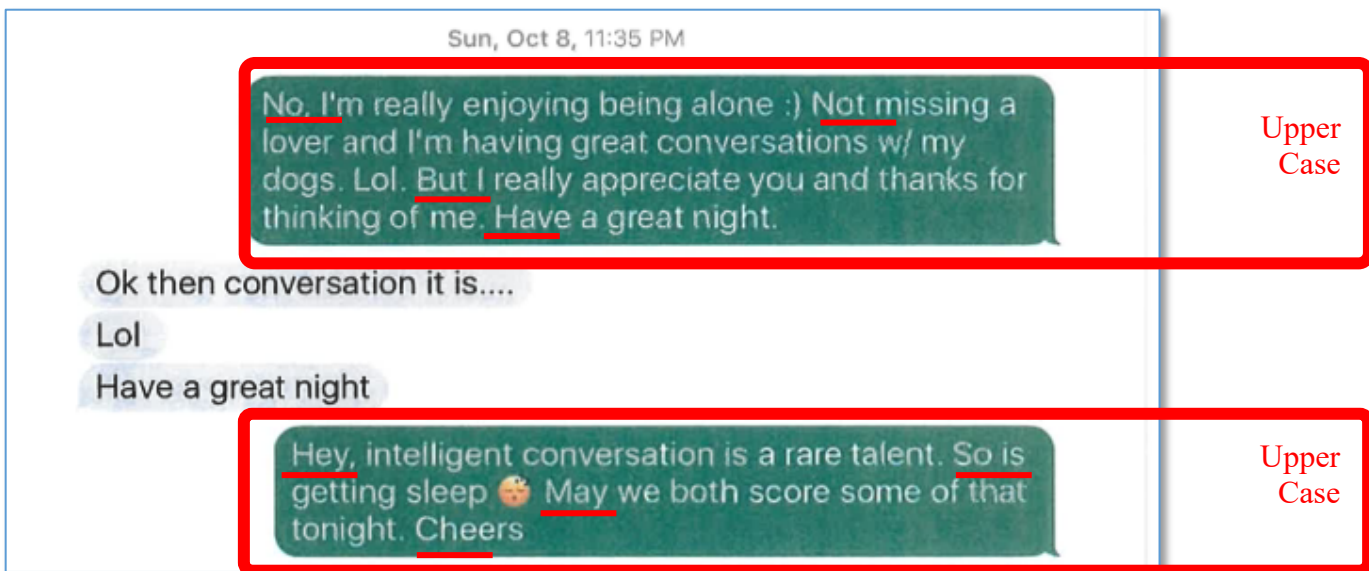
State's Exhibit 16, pg. 1



State's Exhibit 18, pg. 1



State's Exhibit 18, pg. 2



State's Exhibit 21

102. This is indicative of editing or manipulation, either when the messages are composed, or after the fact.

103. Alternatively, this is due to using multiple undisclosed devices with varying settings, which may result in further confirmation of LA using a hybrid environment of iPhone and iPad indiscriminately.

104. The use of different devices with different settings is significant because, in addition to capitalization settings, different devices can have different retention settings. Assuming for a moment that even some of these text messages are authentic, two devices can have non-identical copies of messages because a message deleted on one is not necessarily deleted on the other. And complete discovery from both can expose text deletions and manipulations. Given that there are inconsistencies demonstrated by the analysis in this declaration, full and complete discovery and production would be appropriate to start to address those inconsistencies. To my understanding, that was not done in this case.

iii. Redactions

105. To the extent that any of these screenshots have undocumented redactions, that is not indicated on the screenshots, which is highly unusual and presents a distorted interpretation of the content.

Conclusions

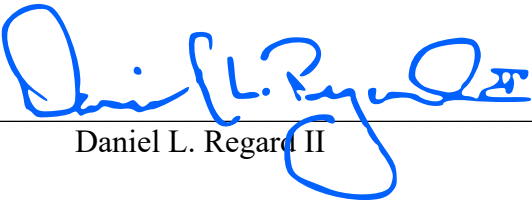
106. Based on the totality of these findings, it is my opinion that the State's Exhibits 11-21 each have a combination of alterations and flaws. These include misleading information about the threads due to the manner in which they are presented, hidden content, missing content when compared to other sources, novel content that does not appear in other sources, a lack of time and date metadata, and cropping. They all are cropped in a manner that deletes information crucial to establishing their provenance. The formatting of the documents, the variable capitalization, and the presence or absence of the year in the dates that are presented establish that these messages were likely made on multiple devices, were collected from multiple devices, and were collected at different times. However, in the records I reviewed, I have not seen a proper chain-of-custody. With these anomalies, and without a proper chain of

custody, these messages (and the State's Exhibits 11-21) cannot be verified and are unreliable as evidence as to what text messages, if any, were exchanged between LA and CRB.

* * * *

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Signed on the 19th of March, 2023, at Malvern, PA.



Daniel L. Regard II