

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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ALABAMA GAS CORPORATION (ALAGASCO) *

NATURAL GAS RELEASE WITH IGNITION * Docket No.: DCA-14-MP-001

BIRMINGHAM, ALABAMA *

DECEMBER 17, 2013 *

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Telephonic Interview of: CAMERON HYCHE

NTSB Headquarters
Washington, D.C.

Thursday,
September 4, 2014

The above-captioned matter convened, pursuant to notice.

BEFORE: MATTHEW NICHOLSON
Investigator-in-Charge

APPEARANCES:

MATTHEW NICHOLSON, Investigator-in-Charge
National Transportation Safety Board
Washington, D.C. 20594

RAVI CHHATRE, Accident Investigator
Pipeline Division
National Transportation Safety Board

KALU KELLY EMEABA, Investigator
National Transportation Safety Board

DAVID GALLAGHER, Customer Service Manager
Birmingham Metro, Alagasco
(Telephonically)

BOB GARDNER, Director, Quality Assurance and Compliance
Alabama Gas Corporation (Alagasco)
(Telephonically)

MIKE BELL, Esq.
(Representative on behalf of Mr. Hyche)
(Telephonically)

WALLACE JONES, Administrator, Gas Pipeline Safety
Alabama Public Service Commission
(Telephonically)

KEITH BLACKWOOD, Pipeline Safety Investigator
Alabama Public Service Commission
(Telephonically)

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I N T E R V I E W

1
2 MR. NICHOLSON: We are on the record. Good morning.
3 Today is Thursday, September 4, 2014. My name is Matthew
4 Nicholson and I'm an investigator with the National Transportation
5 Safety Board. We are conducting this teleconference interview
6 from the NTSB headquarters in Washington, D.C. This interview is
7 being conducted in regard to case number DCA-14-MP-001 in the
8 investigation into the natural gas distribution release and
9 ignition that occurred in Gate City, Birmingham, Alabama on
10 December 17, 2013.

11 This interview is being recorded and may be transcribed
12 at a later date. A copy of the transcript will be provided to the
13 interviewee for review prior to being entered into the public
14 docket.

15 Mr. Hyche, you are permitted to have one other person
16 present during this interview. This is a person of your choice:
17 supervisor, counsel, friend, family member, or nobody at all.
18 Please state for the record who you have selected to be with you.

19 MR. HYCHE: Mike Bell.

20 MR. NICHOLSON: Terrific. Now I'd like to have each
21 person on the phone today state your name with spelling, your
22 title and the agency or organization you are representing. The
23 NTSB members will start followed by Alagasco and then the PSC.

24 We're going to stop here for a second. Off the record.
25 We've got something to discuss here.

1 (Off the record.)

2 (On the record.)

3 MR. NICHOLSON: On the record. Back on the record.
4 Matthew Nicholson, spelled M-a-t-t-h-e-w, N-i-c-h-o-l-s-o-n. My
5 e-mail is matthew.nicholson@ntsb.gov.

6 MR. CHHATRE: Ravi Chhatre. That's R-a-v-i,
7 C-h-h-a-t-r-e. I'm with National Transportation Safety Board,
8 Pipeline Division.

9 MR. EMEABA: Kalu Kelly Emeaba, spelled K-a-l-u,
10 K-e-l-l-y, E-m-e-a-b-a. I'm an investigator with NTSB.

11 MR. NICHOLSON: Go ahead Alagasco.

12 MR. HYCHE: Cameron Hyche, spelled C-a-m-e-r-o-n,
13 H-y-c-h-e, Assistant Specialist.

14 MR. GARDNER: Bob Gardner, G-a-r-d-n-e-r, Director of
15 Quality Assurance and Compliance for Alagasco.

16 MR. GALLAGHER: David Gallagher, D-a-v-i-d,
17 G-a-l-l-a-g-h-e-r, Customer Service Manager of Metro.

18 MR. BELL: Mike Bell, attorney representative for
19 Cameron Hyche. Bell is B-e-l-l.

20 MR. JONES: Okay. Wallace P. Jones, Alabama Public
21 Service Commission, Administrator, Gas Pipeline Safety. That's
22 spelled W-a-l-l-a-c-e, J-o-n-e-s.

23 MR. BLACKWOOD: Keith Blackwood, K-e-i-t-h,
24 B-l-a-c-k-w-o-o-d, Gas Pipeline Safety Investigator, Alabama
25 Public Service Commission.

1 MR. NICHOLSON: Okay, that's everyone. All right.

2 INTERVIEW OF CAMERON HYCHE

3 BY MR. NICHOLSON:

4 Q. Cameron, to begin with, maybe just go ahead and give us
5 a little bit of background for the record, when did you start at
6 Alagasco, what jobs you've held and bring us up-to-date.

7 A. I started in September 17, 2012, entry-level position as
8 a crewman. About a year and a half later I started -- or accepted
9 a position as assistant specialist and have held that title since.
10 I've been there 2 years now.

11 Q. And can you talk to us a little bit about what an
12 assistant specialist does, what kind of responsibilities you have?

13 A. An assistant specialist aids in helping journeymen on
14 the truck and on the jobsite, making sure the job gets done in a
15 safe manner. And if the journeyman is off, he will take the
16 responsibilities of running the truck for that day.

17 Q. Okay. And what group are you -- what do you -- who do
18 you report to, what group are you in? Are you in construction or
19 operations?

20 A. Construction.

21 Q. So who do you report to? Who's your supervisor?

22 A. Todd Harmon.

23 Q. Can you spell that, please?

24 A. T-o-d, H-a-r-m-o-n. All right, Todd has two D's in his
25 name, so it would be T-o-d-d.

1 Q. Okay, terrific. Who else was on the truck on the day of
2 the accident with you?

3 A. My journeyman that morning was Dan Ingram, and we had
4 Adolphus Griggs and Jason Lawrence on the truck that morning.

5 Q. Can you spell Adolphus -- was it Griggs?

6 A. Yes, sir.

7 Q. Can we get the spellings, please?

8 MR. GARDNER: Can you give us just a moment, Matt, I'll
9 look it up. I'm not sure.

10 MR. NICHOLSON: Oh, okay. I'm sorry, I thought you had
11 it.

12 MR. HYCHE: Are you ready for the spelling of Adolphus
13 Griggs?

14 BY MR. NICHOLSON:

15 Q. Yes, please.

16 A. First name Adolphus, A-d-o-l-p-h-u-s, last name Griggs,
17 G-r-i-g-g-s.

18 Q. Okay. And then the last person that was with you, I
19 didn't get his name and spelling.

20 A. Jason Lawrence, and we're looking the spelling up.

21 Q. Okay. What is Adolphus Griggs' position? Is he also
22 assistant specialist?

23 A. No, sir. He is a crewman.

24 Q. Okay. And what about Jason?

25 A. He has since moved departments to meter reading.

1 Q. What was he on the date of the accident when he was with
2 you?

3 A. A crewman.

4 Q. Crewman, okay. Okay, Cameron, I think we'll just go
5 ahead --

6 A. You ready?

7 Q. -- and move on. Is it -- I think we've got the
8 spelling, Jason Lawrence, L-a-w-r-e-n-c-e?

9 A. Yes, sir.

10 Q. Okay. Let's go ahead to the day of the accident and if
11 you would just kind of walk us through the events as you remember
12 them, starting with how you were notified and what time you got on
13 scene and then take it from there, if you would.

14 A. I was in bed asleep that morning. I don't remember the
15 exact time. I believe it was between 2:45 and 3:00 in the morning
16 I got a phone call from our radio room or our dispatcher and they
17 notified me that I needed to come in, that we've had an explosion.

18 So I get up, get dressed, told my parents I was leaving.
19 Got on my way to work, I contacted the radio room to find out who
20 my journeyman was to know which office I needed to report to,
21 whether it be the Bessemer office, the Pelham office or the
22 Birmingham office, and they told me my journeyman was Dan Ingram.
23 So I got to the office -- I'm not sure what time I got there that
24 morning -- got the truck ready that Dan is responsible for. He
25 pulled in about 10 minutes after I did. Jason and Adolphus got on

1 the truck and we headed towards Marks Village.

2 We got out to Marks Village -- we were the second truck
3 on scene that morning -- and then we started to try to get the
4 riser that was blowing. We tried to get it capped off or the flow
5 of gas shut off. The service man ended up walking up and valving
6 it off once the fire department had put the flame out, and then we
7 started bar testing over the main next to the building, finding
8 out where our gas readings were.

9 We centered it over the gas main and we started to dig
10 there. While they were digging, they had already dug up the
11 service to the building and we cut it and capped it about 5 foot
12 from the street to take gas off the service to get it away from
13 the building site. And when I got out of the hole abandoning the
14 service, they asked me to go ahead since I had my PPE on to catch
15 gas, to go ahead and put the repair clamp on the main where it was
16 broke or where the leak was.

17 Q. Okay. Can you talk about that, how the line was
18 excavated and then what you did when you got down in the trench?

19 A. Dan Ingram was the operator digging that down the
20 backhoe, and he started to dig a trench and every couple of foot
21 we would use a sharpshooter shovel to probe for the main so we
22 were careful not to hit it. Once we located it with a
23 sharpshooter we knew where to dig. So we got beside it, dug down,
24 and I uncovered it with the shovel and saw where the gas was
25 blowing from.

1 Once we located where it was blowing, we cleaned off
2 around it and noticed that there was a root wrapped around it with
3 a rock penned in between there. I tried with a shovel to get the
4 root off and I couldn't. So I had Dan bring the backhoe bucket
5 into the excavation and barely catch part of the root enough to
6 break the root out of my way. Then I grabbed the rock, moved it
7 off the main and, again, to clean out from around the main where
8 the dirt was, I took a scraper, scraped off the main, used some
9 soap to clean all the dirt off, and put the repair clamp on and
10 tightened it down.

11 Q. Okay. So just -- let's back up a little bit. The
12 sharpshooter, what was that?

13 A. A shovel.

14 Q. Okay.

15 A. I used it to probe -- stick in the ground to see where
16 the main was, how deep it was, to keep from hitting it with the
17 backhoe.

18 Q. Okay. And was there water in the trench at this time?

19 A. Yes, sir.

20 Q. Okay. Where was the water coming from?

21 A. There was groundwater seeping in and it was runoff from
22 the fire trucks that morning.

23 Q. Okay.

24 A. So the hole was filling up.

25 Q. So did you have to use a sump pump? How did you manage

1 the water?

2 A. We didn't have a pump that morning. We took a couple of
3 scoops with the backhoe bucket and dug a hole for it to run off
4 in --

5 Q. Okay.

6 A. -- to keep from backing up on where I was working.

7 Q. Can you describe a little bit, you said you tried to cut
8 the root first with your shovel but you couldn't and then you had
9 Dan come in with the backhoe. Whereabouts on the main were you?
10 I'm looking at your sketch, ALGC002684. Where were you cutting
11 the root? Where were you trying to extract it, over the rock or
12 towards the tree?

13 UNIDENTIFIED SPEAKER: -- the photograph helps better.

14 MR. HYCHE: Do you have the photograph?

15 UNIDENTIFIED SPEAKER: 2680.

16 MR. HYCHE: 2680?

17 BY MR. NICHOLSON:

18 Q. Yes. Yeah, we got it.

19 A. Where the red arrow with the root around rock and main,
20 that was facing the tree. Dan was digging with the tree to his
21 back and I had him come about, I want to say, about a foot away
22 from where the gas was escaping, and he managed to get a tooth in
23 the root enough to break it out of my way.

24 Q. Okay. So just to get my bearings -- I'm not quite clear
25 -- the tree is towards the top of the photo?

1 A. Yes, sir.

2 Q. Okay. And, I'm sorry, you said he hit it where? Just
3 south of the -- or just below the red arrow that says "root around
4 rock and main"?

5 A. Yes, sir. About a foot from that arrow is where he
6 managed to get it with the backhoe and was able to break the root
7 out of my way.

8 Q. Okay. And so the -- once he had cut that part of the
9 root, was the rock free?

10 A. It was still kind of saddled on the main. It was still
11 sitting there and I grabbed it off of the main --

12 Q. Yeah, it's hard to see --

13 A. -- and sat it on the bank.

14 Q. The pictures look as if the rock has a bit of a contour
15 to it, is that what you were saying, it's sitting on the main?
16 Did it have a contour? If I look at 2682, is that the rock?

17 A. Yes, sir, that is the rock and that was the contour that
18 was sitting on the main.

19 Q. Okay. And it's not -- that's not a clump of soil;
20 that's actually a rock, correct?

21 A. That is a rock.

22 Q. Okay. Where did the rock end up?

23 MR. NICHOLSON: Do we have that still or did we take it;
24 do you remember, Bob?

25 MR. GALLAGHER: This is David. Matt, the rock is in the

1 NTSB pod that we have in a blue bag marked Alagasco, and the root
2 as well is in that bag.

3 MR. NICHOLSON: Terrific.

4 MR. GARDNER: Well, we're not -- for clarification, the
5 root -- obviously we haven't looked at this -- we haven't been
6 back in the pod since you guys were here and were with us in it,
7 so we know we have the rock and --

8 MR. GALLAGHER: A piece of the root.

9 MR. GARDNER: -- a piece of the root. We're not sure
10 exactly from which -- what -- if it's exactly over the pipe,
11 exactly over the area of the leak, excuse me.

12 MR. NICHOLSON: Right. Okay. But it's a portion of the
13 root that was extracted by Cameron on the day of the accident?

14 MR. GARDNER: Hang on just a second. Hey, Matt?

15 MR. NICHOLSON: Yeah.

16 MR. GARDNER: David's going to explain that. He had
17 more familiarity than the rest of us.

18 MR. NICHOLSON: Okay.

19 MR. GALLAGHER: Matt, they did break a piece of the root
20 off to make that repair and it got thrown up on the bank. And
21 then there was a piece of the root -- the root went back towards
22 the tree on top of the main, and as we stripped it to put the
23 plastic in, they cut a piece of the root out that was on top of
24 the main. They didn't break it out. I don't know which pieces, I
25 don't remember what piece we have in that bag, but it was put on

1 one of the pictures. There's a sewer lid that we took some
2 pictures of the root, and that's what we have in the bag with the
3 rock.

4 MR. NICHOLSON: Okay.

5 MR. GALLAGHER: I believe it's a blue bag.

6 MR. GARDNER: And keep in mind, Matt, this is the second
7 day when the plastic is being put in, in place of the cast iron.

8 MR. NICHOLSON: Right.

9 MR. GARDNER: The picture labeled for 2682 is from 12/17
10 and then 2683, where you see pictures of the root, that is from
11 12/18. And so it would be after the pipe had been repaired.
12 These pictures reflect the condition as it was in the ground, but
13 the repair had been made to the section of pipe that Cameron
14 worked on.

15 MR. NICHOLSON: Okay.

16 MR. GARDNER: But these pictures are representative of
17 the root.

18 MR. NICHOLSON: I see. Okay. So this is --

19 MR. GARDNER: Does that help?

20 MR. NICHOLSON: Yeah, I think so. So these are portions
21 of the root that were identified as you excavated a little farther
22 back?

23 MR. GALLAGHER: Yes. The piece that is on 2683, you see
24 a piece that looks like it was sawed?

25 MR. NICHOLSON: Yes.

1 MR. GALLAGHER: And that is, we sawed that to get it off
2 the main, but I don't know which piece of the root we have in the
3 bag.

4 MR. NICHOLSON: Okay. Yeah, I noticed that one of them
5 looks cut and the other one looks like, I don't know, it was maybe
6 hit with a shovel. It looks a little rougher, the one above that
7 picture on the middle left, photograph on 2683.

8 MR. GALLAGHER: Yes.

9 MR. GARDNER: Are you talking about the one that's got
10 the 410 label in the lower left corner in small print?

11 MR. NICHOLSON: Actually, it's a 408. I'm looking at --

12 MR. GARDNER: 408, Okay.

13 MR. NICHOLSON: Yeah, just to the left of that.

14 MR. GARDNER: Okay. Yes, I see that.

15 MR. NICHOLSON: Okay. Ravi, you want to --

16 MR. CHHATRE: Yeah.

17 BY MR. CHHATRE:

18 Q. I'm sorry, I want to go back to you 2680, and I'm not
19 sure I understand the picture very well because I guess a copy
20 it's not that good. But if you look at the big frame there which
21 says root around the rock and the main in the area of leak, can
22 you show me in there where the pipe is, which is root and where is
23 the water? I think there's some water there too?

24 A. The main is around or up under exposed -- where the
25 arrow, the red arrow is pointing, that is the root on top of the

1 main. You cannot see the main in this picture. The main is up
2 under the root right there at the edge of the water.

3 Q. Okay. So that small light colored section is the root?

4 MR. GARDNER: Could you repeat the question, Ravi?

5 BY MR. CHHATRE:

6 Q. Yeah. The picture is not very clear and I'm just trying
7 to find out -- I see a dark, white patch going from bottom to top.
8 On the right is some light-colored area, which I am presuming, is
9 water. And then there are two arrows. And one says, root around
10 the rock and main, and I'm just trying to find out which is root
11 and which is the dark soil or trench?

12 MR. NICHOLSON: It's a hard photograph to decipher, but
13 what Ravi is asking is that -- sort of that light patch just to
14 the right of your red arrow, is that the root in that photograph?

15 MR. HYCHE: Yes, sir, at the top of the picture.

16 MR. NICHOLSON: Okay.

17 BY MR. CHHATRE:

18 Q. And the size of the rock, can you tell us was it like --
19 looks like 3 inches wide, 4 inches or something like that. Is
20 that the correct size? If you look at your picture 2682.

21 A. I have pictures on 2682 with the rock next to a tape
22 measure.

23 Q. Correct. In all honesty, I've never seen a rock with a
24 contour of a pipe. And I'm -- pardon me for double checking this,
25 but are you guys sure it's not a hardened soil and a rock? That

1 looks like something was kind of dried on the pipe. The contour
2 is so smooth and it seems to match the pipe. I want to make sure
3 that we are looking at the rock itself and not the very hardened
4 soil.

5 A. The best I can recall, I believe it's a rock.

6 Q. Okay. We still have rock, we can always double check.

7 MR. NICHOLSON: You want him to ship it to us?

8 MR. CHHATRE: Yeah, maybe we should, yeah.

9 MR. NICHOLSON: Yeah. Do you want to just grab that
10 package, that rock, very carefully and send it to us, Bob?

11 MR. CHHATRE: Rock and root.

12 MR. NICHOLSON: Yeah --

13 MR. GARDNER: Yes.

14 MR. NICHOLSON: -- the rock and the root.

15 MR. GARDNER: Yes, I can do that.

16 MR. NICHOLSON: Okay.

17 BY MR. CHHATRE:

18 Q. Great. Now going back, on the day of the accident you
19 said you had woken up around 2:45, 3-ish, you got dressed up and
20 you left and you went to office. How far is the office from your
21 home?

22 MR. BELL: Hey, Ravi?

23 MR. CHHATRE: Yes.

24 MR. BELL: Matt, this is Mike. Just so we're clear, the
25 bag that's in the NTSB pod has the rock and some portions of root.

1 Do you want just to have Bob send you whatever is in that blue
2 bag; is that the direction you're giving us?

3 MR. CHHATRE: Yes.

4 MR. NICHOLSON: Yes, that --

5 MR. GARDNER: In other words, if I'm not -- I don't
6 necessarily need or should open it. I can just send you what's in
7 that bag that's labeled rock and root?

8 MR. NICHOLSON: Yes.

9 MR. GARDNER: It's got Alagasco on it. We've not been
10 in the pod nor opened any of the contents without you guys being
11 present, so --

12 MR. CHHATRE: We understand.

13 MR. NICHOLSON: I understand, but we don't want to have
14 to make a trip down there.

15 MR. CHHATRE: I guess, pretty much --

16 MR. GARDNER: I'm sorry, I couldn't --

17 MR. NICHOLSON: Yeah, we're asking you, Bob, to enter
18 the pod on our behalf, take the blue bag with the root and the
19 rock, package it carefully, and send it to the same address you
20 would have sent the accident pipe.

21 MR. GARDNER: Okay. I'll be glad to do that.

22 MR. NICHOLSON: And I'll back that up in writing if
23 you'd like me to send you an e-mail to that effect.

24 MR. GARDNER: No, this is fine.

25 MR. NICHOLSON: Okay.

1 MR. CHHATRE: The transcript will show it anyway.

2 MR. GARDNER: I should be able to get that to you this
3 week.

4 MR. EMEABA: With respect to that -- this is Kelly
5 Emeaba. Mr. Wallace Jones from the PSC people who actually work
6 along with you people while you do this.

7 MR. NICHOLSON: So I think Kelly is requesting that
8 maybe Wallace be present when you package it and send it. Is that
9 something you could -- but Wallace is out of Montgomery.

10 MR. CHHATRE: Yeah.

11 MR. NICHOLSON: You're asking Wallace to make a trip.

12 MR. EMEABA: Oh, whoever is closer. Keith?

13 MR. NICHOLSON: Keith or Wallace, are you close enough
14 to the Alagasco offices to oversee that?

15 MR. JONES: I'm sorry, were you all talking to Wallace?

16 MR. NICHOLSON: Yeah.

17 MR. JONES: I was on -- had another call come in.

18 MR. NICHOLSON: Yeah, either of you, Wallace or Keith.

19 MR. JONES: Okay. Yeah, one of us could go to
20 Birmingham. When are we talking about doing that?

21 MR. NICHOLSON: Yeah, how long of a drive is that for
22 you? I don't know if that's necessary. How far is that?

23 MR. BLACKWOOD: It's an hour for me.

24 MR. JONES: Yeah, about an hour and a half for me too.

25 MR. CHHATRE: If you guys don't mind doing it, that's

1 fine, just to keep the legality side off a little bit. We really
2 have no issue Alagasco is sending it to us, but if you guys are
3 (indiscernible) might as well do it.

4 MR. JONES: Can you run down there?

5 MR. NICHOLSON: Okay. Well, we can work the
6 coordination out, I think, after this interview, so --

7 MR. GARDNER: May I ask a question?

8 MR. NICHOLSON: Sure.

9 MR. GARDNER: Just to be clear, someone from the PSC
10 will witness me extracting it from the pod, and then what is the
11 protocol from your perspective of what to do next?

12 MR. NICHOLSON: Pack it up and send it to us.

13 MR. GARDNER: I mean, I know I'm asking an obvious
14 question, but I want to make sure that I do as you would want us
15 to do. So you want Keith or Wallace to witness me putting it in a
16 box and taping the box up as well?

17 MR. NICHOLSON: Yes. As long as they're there, they
18 might as well --

19 MR. GARDNER: Okay.

20 MR. NICHOLSON: -- do everything, yep. They're
21 essentially acting on our behalf.

22 MR. GARDNER: Okay. I just wanted to make sure I
23 understood.

24 MR. NICHOLSON: Yes. Yeah, that's it.

25 MR. GARDNER: Okay.

1 BY MR. CHHATRE:

2 Q. Now going back again to the morning of the accident, can
3 you tell us how far the office is from your residence?

4 A. I'm sorry, I didn't understand what you were asking.

5 Q. Okay, I guess, you were called in while you're asleep
6 and asked to report because of the explosion. And my question is,
7 you said you went to the office, and how far is the office from
8 home?

9 A. Approximately 40 miles one way.

10 Q. Okay. So you're looking at about an hour's drive?

11 A. Depending on traffic anywhere from 45 minutes to an
12 hour.

13 Q. Okay. And how long it took you from the office to go
14 back to the accident scene?

15 A. I want to -- around 20 minutes, give or take a little
16 bit.

17 Q. Okay. So roughly, do you recall what time you were at
18 the accident scene? If you don't, you --

19 A. Sorry, I couldn't understand you.

20 Q. Do you know what time you arrived at the explosion site
21 or accident scene?

22 A. Between 4:45 and 5:00.

23 Q. Okay. And was there enough light for you to do what you
24 were doing?

25 A. It was dark when we got there. We all had flashlights

1 that were on our hard hats.

2 Q. Okay.

3 A. And we had handheld flashlights and lights from the
4 trucks.

5 Q. Okay. Now, when you finished your initial assignment
6 and went on to put the clamp on, do you know approximate time?

7 A. No, sir, I don't recall the time.

8 Q. Okay. Was the daylight breaking out or you still were
9 wearing your hard hat lights?

10 A. It was daylight.

11 Q. Okay.

12 A. It was early daylight, but I don't recall the time.

13 Q. Okay, that is fine. And do you recall seeing the
14 digging of the trench or you -- when you went there the trench
15 already was there and the pipe was exposed?

16 A. I'm sorry, can you repeat the question?

17 Q. Sure. When you went to put the clamp on, did you
18 witness the trench being dug or the trench was already there and
19 the pipe was exposed when you went?

20 A. I had abandoned the service running to the building to
21 take the gas off of that service.

22 Q. Right.

23 A. And as I got up from that, they had just put the backhoe
24 in the ground to start digging --

25 Q. Okay.

1 A. -- and since I had my PPE on, we started digging from
2 there and I was spotting and probing with the sharpshooter shovel
3 to get the depth of the main to keep from hitting it.

4 Q. Okay. So you were actually there from the get-go. Can
5 you tell us, roughly, was the root the same size as the pipe or
6 was it smaller or larger, in your opinion?

7 A. I don't recall the exact size, but it was very similar
8 to the size of the main in the ground.

9 Q. Okay. And did you try to pull the root physically
10 yourself before the bucket?

11 A. Can you repeat the question, please?

12 Q. Sure. Did you try to pull the root away from the pipe
13 yourself before the backhoe bucket, I guess, helped you get it
14 out?

15 A. Yes, sir, I tried by hand and then I tried with a
16 shovel. I could not get the root to budge, and at that point I
17 had Dan to use the backhoe to assist.

18 Q. Okay. Now, can you tell how tight the root was around
19 the pipe at that location with the rock?

20 A. I couldn't get my shovel in between the rock and main or
21 the root and main.

22 Q. Oh, okay. Do you think the pipe -- could you see the
23 pipe at that time? Was there enough light for you to see the pipe
24 and the root?

25 A. Yes, sir, there was enough light at that point.

1 Q. Okay. And could you smell the gas at that time?

2 A. I had my breathing mask on so I couldn't smell anything.

3 Q. Do you recall --

4 A. I had --

5 MR. NICHOLSON: Go ahead and finish. What was that
6 Cameron?

7 MR. HYCHE: Sir?

8 MR. NICHOLSON: It sounded like Ravi cut you off.

9 MR. CHHATRE: Yeah, go ahead.

10 MR. NICHOLSON: Go ahead and finish.

11 MR. BELL: He was worried that he cut you off. But go
12 ahead and finish the question about did you have enough light, I
13 think is the last question.

14 MR. CHHATRE: No, the question --

15 MR. HYCHE: I had enough light to see that morning, and
16 then the next question was whether I could smell the gas or not.
17 I had my supplied air breathing mask on; I couldn't smell gas or
18 anything.

19 MR. CHHATRE:

20 Q. How difficult was it to work with your gear on?

21 A. Sir, I couldn't understand you.

22 Q. How difficult was it for you to work with all your gear
23 on and the breathing apparatus on? Could you move freely?

24 A. Yes, sir, I could move freely. It wasn't difficult. I
25 had plenty of room in that excavation.

1 Q. Okay.

2 MR. GARDNER: Point out that you're in one of the -- in
3 fact, Ravi, he's in one of these photographs. You can see him on
4 the 2681.

5 MR. CHHATRE: I can (indiscernible).

6 MR. HYCHE: Do you have picture 2681?

7 MR. CHHATRE: Yeah.

8 MR. HYCHE: You can -- the top left picture, you can see
9 me within the trench.

10 MR. CHHATRE: Oh, okay.

11 MR. HYCHE: Holding a shovel with my breathing
12 equipment. And the bottom picture, I'm kneeled over cleaning the
13 main --

14 MR. CHHATRE: Okay.

15 MR. HYCHE: -- with my equipment on.

16 MR. CHHATRE: That's all I have. Thank you so much.

17 MR. NICHOLSON: Kelly?

18 BY MR. EMEABA:

19 Q. This is Kelly Emeaba. My question to Mr. Cameron is, I
20 looked at the picture that is schematically drawn, which is
21 002684. Do you think this is an accurate representation of the
22 movement of the root over the pipeline?

23 A. Yes, sir.

24 Q. Okay. If this were to be the close or exact
25 representation of this root, how do you think you were going to

1 remove this root from the pipe with your hand, pulling it?

2 A. Sorry, I didn't understand the question. Will you
3 repeat, please?

4 Q. Yes. You answered that this is an exact schematic
5 representation of the root movement over the pipe, and my question
6 to you is, if this root went through this pipe as drawn here, how
7 will you ever -- how do you think you'll be able to remove this
8 root from this pipe if not cut?

9 A. Well, I was -- I tried by hand hoping that the root was
10 rotten or wasn't a strong root, and then I tried to pry it with a
11 shovel hoping that maybe some leverage would help me. At that
12 point I couldn't -- I realized I couldn't get it and I needed the
13 assistance of the backhoe.

14 Q. Okay. Within this I can see, based on the drawing that
15 we have here, at least we can see about two -- I mean, three
16 positions on top, that it actually made over three turns on this
17 pipe. Where within these three turns on top were you holding or
18 you grabbed to actually pull it out?

19 A. Again, this is not to scale, so the root was a little
20 longer before it made the wrap. About a foot away from the rock
21 is where we grabbed it with the backhoe and broke it.

22 Q. Okay. So how many sections did you have to break it in
23 order to remove the root --

24 A. Just broke the one.

25 Q. Just in one position?

1 A. Just broke one section to get it out.

2 Q. So you broke it in one section and what then did you do?
3 Because it would not have fallen down by itself after you break it
4 by one section. The fact that --

5 A. The backhoe grabbed it and separated it. He picked it
6 up, which made it pivot at the back, and I twisted it to break it
7 off and I tossed it on the bank to get it out of my way.

8 Q. Okay. So if you were able to cut it in one section and
9 was able to remove it, why was the root now in pieces as we can
10 actually examine them in these pictures? Because if it's one cut
11 and you were able to untangle it out of the root, was it
12 deliberately cut into pieces and what reason?

13 MR. NICHOLSON: What picture are you looking at?

14 MR. EMEABA: If you're looking at 83, 022683.

15 BY MR. EMEABA:

16 Q. So my question is, if you were able to cut it in one
17 section and untangle it from the pipe, the picture taken on
18 12/18/2013, why was it now in pieces as you observe here?

19 A. Those pictures were taken on the second day. I was not
20 there the second day.

21 Q. Okay. Do you know the person who could have cut it in
22 pieces?

23 A. I was not out there. I do not know who partook in what
24 activities out there.

25 MR. NICHOLSON: So I think what they said earlier, and

1 you guys can chime in, Alagasco, was that those pictures don't
2 depict the root directly over the leak. I think those are
3 pictures of root elsewhere on the pipeline that were cut after the
4 accident.

5 MR. EMEABA: So more or less --

6 MR. GALLAGHER: Yes, this is David. That's correct.
7 When we were going to put in the plastic to cut that piece of cast
8 iron out to replace it with plastic, they cut the root off the top
9 of the main because it was going in both directions and they cut
10 it off so they could cut the cast iron pipe out and we could put
11 the plastic in. And that was day 2.

12 MR. EMEABA: Okay.

13 BY MR. EMEABA:

14 Q. Mr. Cameron, are you qualified to work on pipeline
15 unsupervised?

16 A. Can you repeat the question, please?

17 Q. Are you qualified to work on pipeline unsupervised?

18 A. The morning of the accident I had to be under the
19 supervision of my journeyman, which was Dan Ingram that morning,
20 and he was the one operating, instructing me on what to do.

21 Q. Okay. If the foreman, journeyman was not there, could
22 you have worked on the pipeline unsupervised?

23 A. That morning I could not have. I would have to have had
24 a journeyman present, and because my journeyman was present I was
25 able to do so.

1 Q. Who is your journeyman, please?

2 A. That morning it was Dan Ingram.

3 Q. Okay. Where was he when you were removing this root?

4 A. He was on the backhoe. I was instructing him how far to
5 bring the backhoe bucket down to keep from hitting the main but
6 would be able to remove the root.

7 Q. So as a backhoe operator, do you think he actually
8 observed what you were doing and he wasn't busy operating the
9 backhoe?

10 A. Can you repeat the question, please?

11 Q. As a backhoe operator that your foreman is, are you sure
12 he was observing you directly and he was not busy operating the
13 backhoe itself?

14 A. The only time the backhoe bucket was being operated, Dan
15 was operating it under my guidelines to keep it off the main and
16 then the bucket was set to the side and he was watching me from
17 the backhoe seat while I done my work.

18 Q. Okay. Currently or at the time of the accident, what
19 activities on the gas pipeline may you not perform?

20 A. Will you repeat the question, please?

21 Q. At the time of the accident, what activities, task,
22 covered task on the pipeline may you not perform?

23 A. Under the supervision of my journeyman I could have done
24 whatever he requested me to do.

25 Q. Okay. So were you qualified for any covered task on the

1 pipeline at all at the time of the accident?

2 A. Will you repeat that question, please?

3 Q. Were you qualified for any covered task at all at the
4 time of the accident?

5 A. I was OQ qualified, or operator qualified, through our
6 gas company.

7 Q. Okay. What activities were you OQ qualified?

8 A. I don't have a list on everything I'm OQ qualified to
9 do.

10 Q. Do you --

11 A. Or I don't have it with me.

12 Q. Okay. Based on the activities you were performing, can
13 you tell us some of the OQ qualifications you already received
14 prior to the accident or on the day of the accident?

15 MR. GARDNER: This is Bob. If you're taking a list of
16 what covered tasks Cameron had received at the time of the
17 accident, if I understand the question correctly, we can provide
18 that to you. We just don't have it in front of us.

19 MR. NICHOLSON: Yeah, why don't we just do that.

20 MR. GARDNER: He doesn't have it from memory.

21 MR. NICHOLSON: Yeah, I think that's fine.

22 MR. EMEABA: Okay.

23 MR. NICHOLSON: Why don't you make that a request, Bob,
24 or Kelly.

25 MR. EMEABA: Some of his OQ tasks on that day.

1 MR. NICHOLSON: That's for December 2013.

2 MR. EMEABA: Okay. Thank you --

3 MR. GARDNER: I'm sorry, could you repeat that? I
4 apologize.

5 MR. NICHOLSON: Why don't you state your request, Kelly.

6 MR. EMEABA: No. My request is to send us the OQ or
7 covered task that Mr. Cameron was qualified on the day of the
8 accident.

9 MR. GARDNER: We can do that and we will.

10 MR. EMEABA: Thank you. Back to Matt Nicholson.

11 MR. NICHOLSON: Okay, PSC, Wallace, Keith, you got any
12 questions?

13 MR. JONES: No, I don't have any now.

14 MR. BLACKWOOD: No, I don't have any.

15 MR. NICHOLSON: Okay. Bob, did you have any questions?
16 Alagasco?

17 MR. GARDNER: Yes.

18 BY MR. GARDNER:

19 Q. Yes, Cameron, could you describe the location of the
20 leak and what you observed about the location of the leak prior to
21 putting the repair clamp on it?

22 A. Between the diagram and between page --

23 MR. NICHOLSON: What are we looking at, 2684?

24 MR. GARDNER: Yes, sir.

25 MR. HYCHE: The rock was on the top of the main,

1 sandwiched between the root and the main. And the break was
2 directly up under it at an angle. So if it was a clock, it would
3 have been at 5:00 and the rock would have been around the 11:00.
4 The break where the gas was escaping was maybe a quarter to half
5 inch, half inch long. It was not broke all the way around. There
6 was not gas escaping anywhere but that one concentrated area.

7 BY MR. NICHOLSON:

8 Q. Okay. So we're saying --

9 A. And if you go to page --

10 Q. I'm sorry, I want to back up. You're saying it was a
11 quarter to a half-inch circumferential break at the 5:00 position?

12 A. Yes, sir.

13 Q. And in this cross-section view on your schematic 2684,
14 which -- what are we looking at? Are we going -- are we looking
15 east or west?

16 MR. GARDNER: Is the question, which direction are we
17 looking at with this?

18 MR. NICHOLSON: Yeah, I just want to be clear.

19 MR. HYCHE: The cross-section view is east to west.

20 BY MR. NICHOLSON:

21 Q. But I'm looking west in this view or am I looking --
22 which side is the apartment on? Is it to the right or the left of
23 the trench?

24 A. To the right. The apartment is to the right.

25 Q. Okay.

1 MR. CHHATRE: This is east.

2 MR. NICHOLSON: Looking east, yeah. No, no it's looking
3 west.

4 MR. HYCHE: If you go to page 2680 --

5 MR. NICHOLSON: Oh, no, you're right, east.

6 Yep.

7 MR. HYCHE: -- where the box with area of leak and the
8 red arrow pointing to the water, you see where the water is
9 agitated?

10 MR. NICHOLSON: Yeah.

11 MR. HYCHE: That is where the leak was blowing towards.

12 MR. NICHOLSON: Okay. Okay.

13 MR. HYCHE: That's not soap, that's just froth from the
14 water being stirred up.

15 MR. CHHATRE: Right, right.

16 BY MR. NICHOLSON: Go ahead, Bob; did you have anything
17 else?

18 MR. GARDNER: I do not. Thank you.

19 MR. NICHOLSON: Okay. I've got a few follow-up
20 questions for you, Cameron.

21 BY MR. NICHOLSON:

22 Q. You said you did a little work to install the clamp.
23 Can you tell us what kind of work had to be done to the pipe
24 before you put the clamp on?

25 A. Yes, sir. That morning when we got -- the root was

1 removed, the rock was removed, I was able to take a scraper and --
2 just a paint scraper, and run it up and down the pipe to remove
3 the majority of the dirt and smooth it out. And then I took soap
4 with a paint brush and scrubbed the main to remove all the loose
5 dirt that the scraper wouldn't get and I put the clamp around it,
6 which was -- I centered the leak with the repair clamp. I used an
7 impact to run the nuts up on the bolt to tighten it down and I
8 finished with a box ratchet to get it tight enough for the leak to
9 quit.

10 Q. So I thought -- when we were out there we had heard that
11 a mill file was used and a hammer. Is that -- neither of those
12 were stated just now. Were you using a mill file?

13 A. There was a file in the hole. I had the file and the
14 hammer because I was not sure of the condition of the hole -- or
15 the main was going to be, but I just used the scraper.

16 Q. Does that mean that the dirt was coming off fairly
17 easily?

18 A. Yes, sir, that main cleaned up real easy.

19 Q. Okay. And so, was there a dirt ball or anything stuck
20 to this leak and built up around it?

21 A. No, sir, no dust ball, no evidence of any frost. The
22 only thing that stood out was the root and the rock.

23 Q. Okay. And on that note, had you ever seen anything like
24 this before on a cast iron main in your experience; have you seen
25 a root wrapped around a main?

1 A. Yes, sir, I've seen it one or two other times.

2 Q. And was that main cracked or leaking?

3 A. It had -- the one leak I can recall where the root was
4 around it, the shifting of the tree, because it was right up under
5 the tree, had managed to loosen a coupling --

6 Q. Okay.

7 A. -- and it was leaking. We cut the root out of the way
8 and retightened the coupling to repair the leak.

9 Q. Now, was it similar, was it coiled around the pipe in
10 that other instance; do you recall?

11 A. Yes, sir.

12 Q. Okay. And then just to be clear on your -- on the
13 sketch that was submitted to us, 2684, that sketch or that
14 schematic was created based on testimony or discussions you had
15 with Alagasco; is that true?

16 A. Yes, sir. I testified and wrote on a dry erase board
17 what I saw in the excavation and they had this schematic drawn up,
18 which is representative of what I saw.

19 Q. Okay. So in this photograph we were talking about, or
20 this schematic, I'm sorry, where you have the side view in the
21 bottom right corner, it does show -- it shows the root in sort of
22 a helical fashion going over and under, and I just want to be
23 clear that, in fact, you observed the root coming not only over
24 the pipe but back beneath the pipe and over again. Is that --

25 A. Yes, sir.

1 Q. Okay. Was there any clearance around that root? Was it
2 -- had it pushed dirt away or was the pipe supported?

3 A. There was no dirt between the rock and the root. I
4 tried to get a shovel between the main and the rock -- I mean, the
5 main and the root and I couldn't get anything in between them to
6 try and get them apart.

7 Q. Okay. I want to go back a little bit. You mentioned
8 plugging the service line off the main. Tell me again, why was
9 that done and how did you accomplish it?

10 A. It was done in the interest of safety, to take the gas
11 away from the building off of the riser. And we -- I suited up
12 with my PPE to catch gas. I took a pair of four-wheel cutters and
13 cut a foot-long section out of an inch and a quarter steel
14 service. I put an expansion plug in it, threaded it and capped
15 it.

16 Q. So was there not a curb valve located there where you
17 were digging?

18 A. Not where we were digging, not the section we dug up.

19 Q. Was there a curb valve anywhere on that service line off
20 the main?

21 A. Our prints on MAGI mobile where we were looking that
22 morning did not show any curb valve.

23 Q. Okay. What about the service line print?

24 A. I couldn't find any records that morning on that
25 particular address.

1 MR. NICHOLSON: Well, okay, so I've got a service line
2 print, Bob, that you gave us, and I believe it shows a curb valve.
3 I'm trying to figure out was that ever identified or not?

4 MR. GARDNER: We'll let David explain that because he
5 was more familiar with it, if that's okay?

6 MR. GALLAGHER: Matt, we never uncovered it. And once
7 we abandoned the service, the hole that they dug, we just dug a
8 hole and cut the pipe and we never exposed the service cock that
9 was on that line. I believe it was -- said it was about 19 feet
10 off the main possibly We never uncovered that and we just cut the
11 pipe. And then from that point, I think when Kelly got there we
12 tested the service and we did remove the service cock from the
13 Building 80 and also 79 because from the heat they were leaking
14 around the core. We screwed them off and put caps on there to
15 complete the service test.

16 MR. NICHOLSON: Okay. Thanks for that.

17 BY MR. NICHOLSON:

18 Q. And then just to go back one more time, Cameron, when
19 you were -- when the root finally got cut on the top of the pipe,
20 did you -- were you able to hear more gas escape? Was there any
21 sense that maybe this crack opened up more or there was a greater
22 leak?

23 A. No, sir. I laid my eyes on it before I ever had Dan
24 bring the backhoe bucket into the excavation to remove the root.
25 And I had earplugs in so I couldn't hear --

1 Q. Okay.

2 A. -- a difference. But looking at it prior to him
3 removing the root and after the root there was no change; it
4 didn't open up the break or anything.

5 Q. Okay. That's all --

6 A. Going back, going back to your --

7 Q. Yes?

8 A. Going back to your previous question about the service
9 and about the service print that was there?

10 Q. Yes.

11 A. We dug two lines up that morning and one of the service
12 men had pulled up a service print but it was in the old line.
13 When I cut it, it was already dead. The new -- the live line we
14 dug up, I never saw a service print for it.

15 Q. Okay. When you say it was already dead, are we talking
16 about you dug up an abandoned line or are you talking about the
17 line that was capped at the meter, at the riser?

18 A. It was already an abandoned line.

19 Q. Okay.

20 A. It was the old one, I guess one of the original ones
21 they ran.

22 Q. Okay. All right.

23 A. It was no longer in use.

24 Q. Okay. Thanks.

25 MR. NICHOLSON: Ravi?

1 BY MR. CHHATRE:

2 Q. Hi, this is Ravi. One quick question here on your
3 sketch 2684, 2-6-8-4 --

4 MR. GARDNER: Ravi, can you wait just a second. I'll --
5 ran to go to the restroom. Do you mind waiting just a second?

6 MR. CHHATRE: I can wait.

7 MR. NICHOLSON: Let's go off record then. Off the
8 record.

9 (Off the record.)

10 (On the record.)

11 MR. NICHOLSON: Back on the record.

12 BY MR. CHHATRE:

13 Q. Hi, this is Ravi, and I'm referencing to 2684. All I'm
14 asking is which way is the sewer main connection coming from the
15 building?

16 MR. NICHOLSON: Which one? For the bottom right?

17 MR. CHHATRE: Right.

18 MR. NICHOLSON: In the bottom right schematic.

19 MR. HYCHE: That I can't answer. I don't know the
20 answer to that.

21 BY MR. CHHATRE:

22 Q. Okay. At least on this one, on this side view, are we
23 looking towards the building?

24 A. That schematic is just to show how the root wrapped
25 around the main. It's not orientated in any direction.

1 Q. Okay. That's fine. And that's all I have. By the way,
2 all the sketches really helped. They're nicely done.

3 A. Thank you.

4 MR. NICHOLSON: Kelly, anything else?

5 MR. EMEABA: No, nothing.

6 MR. NICHOLSON: Nothing. Wallace, Keith, anything you
7 want to follow up on?

8 MR. JONES: No, not now. I think we got all our
9 questions answered too.

10 MR. NICHOLSON: Okay. Bob, Alagasco, any other
11 questions?

12 MR. GARDNER: No other questions.

13 MR. NICHOLSON: Okay. I don't think there's anything
14 else here. So at this time, Cameron, I think we'll conclude the
15 interview. We'll go off record. Off the record.

16 (Whereupon, the interview was concluded.)

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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: ALABAMA GAS CORPORATION (ALAGASCO)
 NATURAL GAS RELEASE WITH IGNITION
 BIRMINGHAM, ALABAMA
 DECEMBER 17, 2013
 Interview of Cameron Hyche

DOCKET NUMBER: DCA-14-MP-001

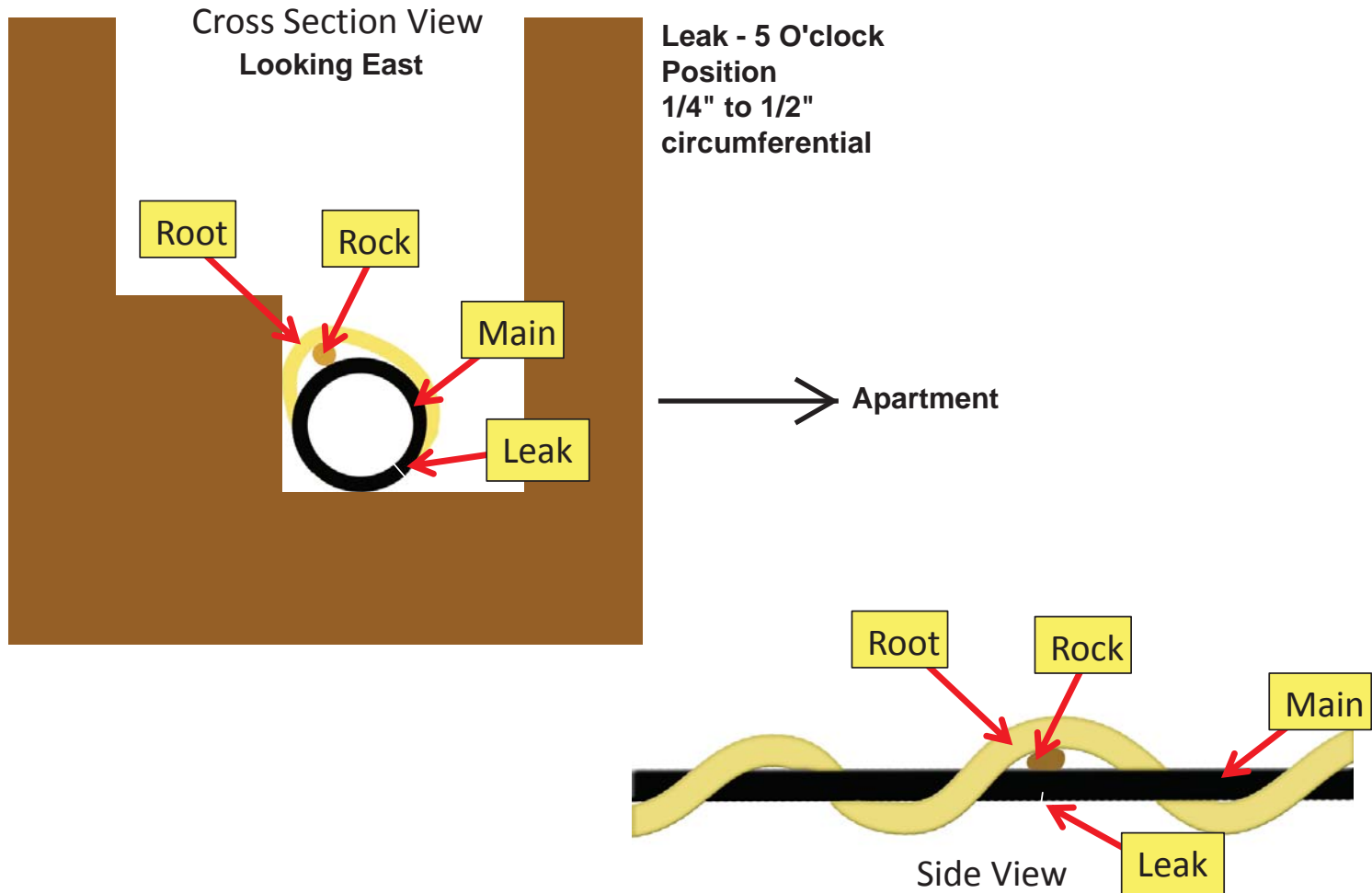
PLACE: Washington, D.C.

DATE: September 4, 2014

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.

Michelle Smioldo
Transcriber

Relationship of Root, Rock and Main



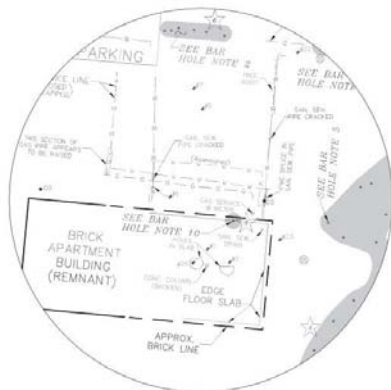
Not To Scale

BAR HOLE NOTES

1. ALL BAR HOLE READINGS & COMMENTS NOTATIONS WERE OBTAINED BY ALABAMA, KNOWN TO THESE PAGES 25, 2012. CITY LIST & DETAILS FROM THESE ARE: (1) DATA BAR HOLE TESTING FOR THE ALABAMA EMPLOYEE TESTAL STATEMENTS TO A.C.D. ALL DATA BAR HOLE READINGS & NOTATIONS ARE JOPPA, KNOWN TO THESE PAGES.
2. NO READINGS TAKEN DUE TO PRESENCE OF WATER FROM PROHIBITIVE OPERATIONS IN ALL HOLES. EVIDENCE OF HOLE FILLING IN SOME HOLES.
3. THE ONLY OF PREVIOUS TEST IN HOLE LOCATION OF LEAK OR HOLE (CONCRETE) DUE TO 10/15/2012.
4. JOPPA TO 20% DAY FROM SHOWER, SHOWERST OUTSTANDING.
5. 10% DAY FROM SHOWER.
6. 10% TO 40% DAY.
7. 20% DAY TO 10% FROM SHOWER.
8. 10% TO 10% DAY - MOST OCCURRED READINGS HERE (LOCATED USED AT WATER LINE).
9. "10%" OR LESS.
10. INITIAL READINGS WERE TAKEN AT 10% IN SHOT 1 - 3. SHOT.

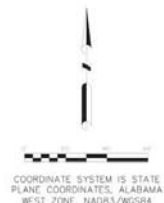
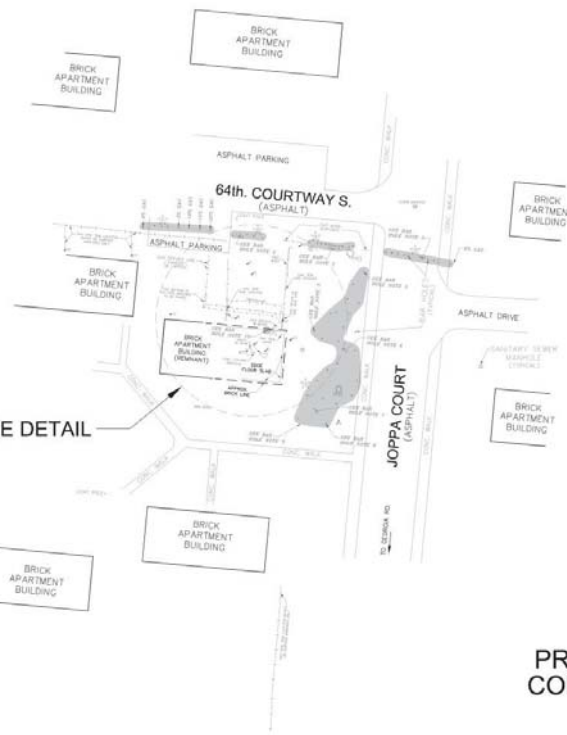
BAR HOLE LOCATION & ALABAMA EMPLOYEE LISTING

ALABAMA	OUTLINE	NAME
1	10	10% FROM SHOWER
2	20	20% FROM SHOWER
3	30	30% FROM SHOWER
4	40	40% FROM SHOWER
5	50	50% FROM SHOWER
6	60	60% FROM SHOWER
7	70	70% FROM SHOWER
8	80	80% FROM SHOWER
9	90	90% FROM SHOWER
10	100	100% FROM SHOWER



DETAIL
SCALE: 1"=10'

SEE DETAIL



**PRELIMINARY
CONFIDENTIAL**

EXHIBIT LISTING

EXHIBIT NUMBER	DESCRIPTION
#1	WATER HEATER COMPONENT
#2	BLACK BURN PIPE
#3	BRICK PIPE
#4	IRON PIPE (2 FT)
#5	PIPE (2 FT)
#6	POSSIBLE SANITARY SEWER PIPE
#7	PIPE
#8	PIPE

*NOTE: THE ABOVE LISTING WERE OBTAINED FROM THE SITE IN FEBRUARY 2012. THE LISTING OF THE ABOVE LISTING WERE OBTAINED FROM THE SITE IN FEBRUARY 2012. THE LISTING OF THE ABOVE LISTING WERE OBTAINED FROM THE SITE IN FEBRUARY 2012.

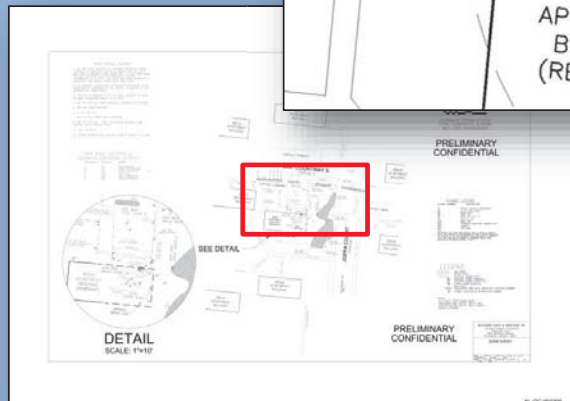
LEGEND

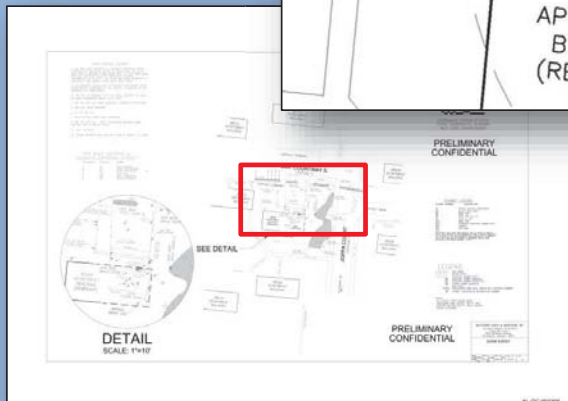
---	GAS PIPE
---	WATER PIPE
---	SANITARY SEWER PIPE
---	SANITARY SEWER MANHOLE
---	SANITARY SEWER CLEAN OUT
---	STORM SEWER MANHOLE
---	BAR HOLE
---	HIGHLIGHTED BAR HOLE GROUP #7 LOCATION NUMBER
---	EXHIBIT LOCATION & DESIGNATION NUMBER

*NOTE: ALL UTILITY LINES SHOWN WERE UNOBTAINED AND ACTUAL TOP OF PIPE LOCATED ON FEB. 20-21, 2012, UNLESS NOTED OTHERWISE.

**PRELIMINARY
CONFIDENTIAL**

MICHELLE-CAPPS & ASSOCIATES, INC.	
Surveying - Mapping - Construction	
2400 15th St. N.	
Birmingham, Alabama 35203	
SCENE SURVEY	
DATE: 2-21-12	SCALE: 1"=10'
BY: J. CAPPS	SURV: J. CAPPS
CHECKED: J. CAPPS	DATE: 2-21-12



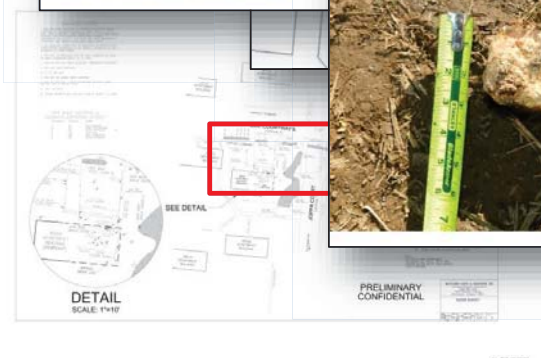
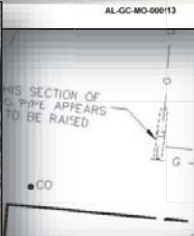




All photographs taken 12-17-2013
See File 19-D produced to NTSB



All photographs taken 12-17-2013
See File 19-D produced to NTSB



All photographs taken 12-17-2013
See File 19-A produced to NTSB



All photographs taken 12-18-2013
See File 19-J produced to NTSB