

1 CONTAMINATES THAT WE'RE TALKING ABOUT IN THIS CASE. AND YOU
2 CAN TAKE THAT INTO ACCOUNT IN ASSESSING THAT.

3 OKAY. THEY DID DO SOME MORE SOIL GOODS
4 TESTING, ALL OF WHICH ARE ON MS. MAXFIELD'S MAP. YOU SEE A
5 LOT OF DOTS HERE.

6 THIS SHOWS THE EXACT AREAS THE SHELL AND ARCO
7 PIPELINES GOING RIGHT UP HERE THROUGH THE UTILITY WAY
8 CORRIDOR. SO YOU CAN SEE WHERE THEY TOOK THEIR SOIL BORINGS.

9 AND WE ACTUALLY SAW SOME PHOTOGRAPHS, REMEMBER,
10 OF THIS AREA LOOKING BACK HERE FROM MONITORING WELL 3 UP
11 TOWARDS MONITORING WELL 1.

12 AND AGAIN, NOTHING. JUST AS DR. DAGDIGIAN
13 SAID, NO SIGNIFICANT HITS.

14 THAT WAS EXHIBIT 2155.

15 SO DR. DAGDIGIAN ADMITS THAT THERE'S NO
16 SIGNIFICANT SOIL HITS. WE SEE THAT IN THE REPORTS.

17 AND WHAT DID THEY DO WHEN THEY STARTED TO DO
18 THEIR OWN INVESTIGATION?

19 I ASKED MS. BERESKI ABOUT THAT, ABOUT HER CPT
20 PUNCHES.

21 SHE SAID (READING):

22
23 "THAT'S RIGHT. YOU DON'T GET
24 ANY LITHOLOGY INFORMATION FROM THAT.

25 "Q. AND YOU DIDN'T GET ANY
26 LITHOLOGY INFORMATION FROM ANY OF WHAT YOU
27 CALL YOUR CPT BORINGS?

28 "A. THAT IS CORRECT.

1 "Q. HOWEVER, IF YOU, IN FACT, DID
2 A CONE PENETROMETER TEST, INSTEAD OF JUST
3 SHOIVING THE ROD DOWN, YOU COULD HAVE GOTTEN
4 LITHOLOGIC INFORMATION IN EVERY SINGLE ONE OF
5 THOSE HOLES, COULDN'T YOU?

6 "A. ON THE CALIBRATED LITHOLOGIC
7 INFORMATION, THAT'S ABSOLUTELY TRUE.

8 "Q. AND PEOPLE, IN FACT, IN YOUR
9 FIELD, HYDROGEOLOGISTS, USE CONE PENETROMETER
10 TESTS ALL THE TIME AS A WAY TO GET SOME
11 LITHOLOGIC INFORMATION WHEN YOU ARE GOING
12 DOWN FOR YOUR ONETIME GRAB SAMPLE, RIGHT?

13 "A. IF YOU CALIBRATE IT, THAT'S
14 TRUE.

15 "Q. AND PRESUMABLY, TO GET
16 MEANINGFUL RESULTS, YOU WOULD WANT TO
17 CALIBRATE IT, CORRECT?

18 "A. THAT'S CORRECT.

19 "Q. AND YOU DIDN'T DO THAT, DID
20 YOU?

21 "WE DID NOT."

22
23 AND THEN SHE SAID, OH, I DIDN'T DO IT BECAUSE
24 IT WOULD BE REALLY EXPENSIVE TO CALIBRATE IT.

25 REMEMBER, THAT WOULD BE -- REQUIRE A CONTINUOUS
26 CORE. I ASKED HER (READING):

27

28

"HOW MUCH WOULD IT COST TO

1 TAKE A BORING WITH A HOLLOW STEP AUGER RIG,
2 ONE BORING IN THE A PLUME AREA?

3 "YOU WANT ME TO CALCULATE IT?"

4 AND SHE SAID: "IF YOU ARE

5 JUST DOING ONE WITH THE PERSONNEL ON-SITE AND
6 EVERYTHING, PROBABLY 2500 TO \$3,000," THEY
7 COULD HAVE CALIBRATED THAT.

8
9 BUT THEN SHE SAID, OH, WELL, MAYBE DOWN IN THE
10 B2 PLUME, I MIGHT HAVE WANTED TO TAKE SOME MORE.

11 SO I ASKED HER, I SAID (READING):

12
13 "SO FOR 2500 BUCKS, YOU COULD
14 HAVE GOTTEN CONTINUOUS BORING LITHOLOGICAL
15 INFORMATION AND THEN FOR A SMALL EXTRA
16 INCREMENTAL COST, YOU COULD HAVE THEN GOTTEN
17 CONE PENETROMETER INFORMATION" -- IN THE
18 INTEREST OF TIME?

19 AND I ASKED HER: "SO YOU DID
20 30 CPT OR HYDROPUNCHES IN ORDER TO BETTER
21 DEFINE THE PLUMES AND YOUR JUDGMENT AS A
22 HYDROGEOLOGIST WAS NOT TO SPEND 2500 BUCKS UP
23 HERE TO GET A CONTINUOUS LITHOLOGIC CORE AND
24 NOT TO SPEND MAYBE 9,000 OR 10,000 BUCKS
25 DOWN" -- IN THE B2 AREA -- "TO GET CONTINUOUS
26 LITHOLOGIC CORES AND THEN TO USE THE ACTUAL
27 CONE PENETROMETER TESTS TO GET THE LITHOLOGIC
28 DATA IN EACH ONE OF THOSE, WHAT WE CALLED THE

1 CPT HOLES; CORRECT, THAT WAS YOUR JUDGMENT?

2 "IT'S NOT QUITE THAT SIMPLE,
3 BUT IT IS ESSENTIALLY CORRECT."
4

5 SO THERE WAS A CONSCIOUS DECISION NOT TO TAKE
6 ANY OF THAT INFORMATION.

7 AND WE SAW THAT, IN FACT, YOU CAN EASILY GET
8 THAT TYPE OF INFORMATION. WE SAW THAT FROM EXHIBIT 3275,
9 WHICH MS. MAXFIELD SHOWED US, AND THAT WAS SOME INFORMATION
10 ABOUT THE TYPE OF INFORMATION YOU COULD GET FROM THESE CONE
11 PENETROMETER TESTS. AND WHAT YOU CAN DO, ESPECIALLY WHEN YOU
12 GET THE CALIBRATED SCORE, YOU CAN GET CLAY LAYERS, YOU CAN
13 GET SILT, YOU CAN FIND OUT IF IT'S SAND.

14 WHY IS THAT IMPORTANT IN THIS CASE?

15 BECAUSE ONE OF THE THINGS THAT MS. MAXFIELD
16 SAYS MIGHT HAVE BEEN A MIGRATION PATHWAY WAS THE CLAY AND
17 SILT LAYER THAT COULD HAVE PROVIDED A PERCHING PATHWAY.

18 AND THE PROBLEM IS, IS THAT WE DON'T HAVE TONS
19 OF DATA ON THAT. BUT WATSON DIDN'T COLLECT ANY DATA ON THAT
20 AT ALL.

21 WHAT ELSE COULD THEY HAVE DONE ON THIS CONE
22 PENETROMETER TEST?

23 IF YOU LOOK AT THIS SAME EXACT EXHIBIT, YOU
24 COULD DO SOIL SAMPLING ON IT. YOU COULD DO SOIL SAMPLING AT
25 ANY POINT IN THE SOIL COLUMN.

26 YOU CANNOT ONLY DO A LITHOLOGY, BUT YOU CAN
27 WITHDRAW SOIL SAMPLES AND YOU CAN TEST THEM IN THE LAB.

28 AND THEY DIDN'T DO ANY OF THAT. AND YOU HAVE

1 TO ASK YOURSELVES WHY, IF THEY WANTED TO TRY TO DISPROVE THAT
2 IT WAS COMING FROM ARCO, AND THEY WANTED TO TRY TO PROVE IT
3 WAS COMING FROM THE SHELL PIPELINES, DID THEY NOT TAKE ANY
4 SUCH DATA AT ALL IN THEIR INVESTIGATION.

5 I ASKED DR. DAGDIGIAN ABOUT THIS (READING):

6
7 "WELL -- BUT, SIR, YOU WERE
8 AWARE WHEN YOU GOT INVOLVED IN THE CASE THAT
9 THE DATA THAT WE JUST TALKED ABOUT WAS THAT
10 WATSON'S PREVIOUS CONSULTANTS HAD DONE SOME
11 SHALLOW SOIL TESTING AND DONE SOME SHALLOW
12 SOIL GAS TESTING IN AND AMONG -- OR AROUND
13 THE AREA OF THE UTILITY WAY CORRIDOR AND HAD
14 COME UP WITH NOTHING, CORRECT?

15 "A. YES.

16 "IN ALL OF YOUR INVESTIGATION
17 FOR WATERSTONE WHEN YOU WERE SINKING THOSE
18 STEEL BORINGS, YOU ELECTED NOT TO TAKE ANY
19 SOIL SAMPLES AT ALL, DIDN'T YOU, SIR?"

20 "A. EXACTLY."

21
22 EXACTLY. THAT WAS A CONSCIOUS CHOICE.

23 AND INTERESTINGLY, LET'S REMIND OURSELVES THAT
24 HE, IN FACT, SAID UNDER OATH THAT HE RECOMMENDED TO WATSON
25 THAT THEY TAKE SOIL SAMPLES WITH THE DEMAND FOR INSPECTION IN
26 AND AROUND THE PIPELINES, AND WATSON NEVER DID THAT.

27 AND WAS THE NATURE OF THAT NOT TO TAKE ANY SOIL
28 SAMPLING?

1 I ASKED HIM THAT. HERE WE GO (READING):

2

3

"Q. AND BASED UPON YOUR DECISION

4

NOT TO COLLECT SOIL DATA RIGHT IN THE UTILITY

5

WAY CORRIDOR AREA BOTH ABOVE THE A PLUME AND

6

THE B2 PLUME -- THAT WAS A CONSCIOUS

7

DECISION, WASN'T IT, THAT YOU MADE IN

8

CONJUNCTION WITH WATSON AND ITS COUNSEL?

9

"A. YES.

10

"OKAY. AND BASED ON YOUR

11

CONSCIOUS DECISION NOT TO GET THE SOIL DATA,

12

NOW YOU'RE PROPOSING, WITHOUT ANY SUCH DATA,

13

TO DO APPROXIMATELY 12- OR 13,000 CUBIC YARDS

14

OR 500,000 SQUARE FEET, CUBIC FEET OF SOIL

15

EXCAVATION, CORRECT?

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"A. THAT'S ABSOLUTELY CORRECT."

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WHY WOULD THEY MAKE THAT DECISION IF THEY WERE,

19

IN FACT, INTERESTED AS SCIENTISTS IN THE -- THEY SAY -- IN

20

TRYING TO FIGURE OUT WHAT THE ACTUAL SOURCE OF THE

21

CONTAMINATION WAS?

22

WHAT ABOUT SOIL GAS ISSUES?

23

I ASKED HIM ABOUT THAT, TOO.

24

(READING:)

25

26

"IF YOU HAD TAKEN SOME SOIL

27

GAS READINGS FROM IN AND AMONGST THE

28

PIPELINES IN THE GRAVEL BED AREA, YOU WOULD

1 HAVE BEEN LIKELY TO FIND SOMETHING HAD THERE
2 BEEN A LEAK, CORRECT?

3 "SURE," ANSWER.

4 "Q. AND YOU WOULD THEN USE THOSE
5 SOIL GAS SAMPLES IN ORDER TO FIGURE OUT MAYBE
6 WHERE TO DO SOME SOIL BORINGS SO THAT YOU
7 COULD FIGURE OUT WHERE TO PUT YOUR PROPOSED
8 EXCAVATIONS, CORRECT?

9 "A. IT MIGHT HAVE HELPED.

10 "OKAY. AND YOU DIDN'T DO ANY
11 OF THAT WORK, DID YOU, SIR?

12 "NO.

13 "AND UP IN THE AREA, UP IN THE
14 NORTHERN END OF THE PLUME, NORTH OF
15 223RD STREET, LEVINE-FRICKE, WATSON'S
16 PREVIOUS FOLKS, TOOK BOTH SOIL GAS SAMPLES
17 AND THEY ALSO TOOK SOIL BORINGS, DIDN'T THEY?

18 "YES, THEY DID.

19 "AND THE PURPOSE OF GRIDING IT
20 LIKE THIS WAS TO SEE IF THEY COULD FIND SOME
21 EVIDENCE OF ANY LEAKS UP AND DOWN THE
22 PIPELINES; ISN'T THAT RIGHT?

23 "A. YES, IT WAS.

24 "Q. AND THERE WERE A WHOLE BUNCH
25 OF OTHER SOIL GAS POINTS THAT WERE TAKEN ALL
26 UP AND DOWN ON THE BUILDING 165 SIDE, THE
27 EAST SIDE OF THE UTILITY WAY PIPELINE
28 CORRIDOR SOUTH OF 223RD STREET, TOO, CORRECT?

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"THAT'S CORRECT.

"AND ALL OF THOSE CAME UP
ESSENTIALLY NOTHING, DIDN'T THEY?

"A. YES."

SO THE WAY TO FIND OUT, ALL THE EXPERTS AGREE,
WHEN THERE'S A PIPELINE LEAK IS YOU TAKE SOIL SAMPLES.

WATSON TOOK SOIL SAMPLES, THEY FOUND NOTHING,
AND WHEN IT CAME TIME FOR DR. DAGDIGIAN TO TAKE SOME
ADDITIONAL DATA, HE TOOK NOTHING BASED ON THE CONSCIOUS
DECISION THAT WAS MADE WITH WATSON AND ITS COUNSEL.

BY THE WAY, ON THE BLUE DOT ISSUE, LOOK AT
EXHIBIT 1447. LOOK AT THIS SCALE. LOOK AT THE SIDE OF THEIR
BLUE DOTS. IT'S A MEANINGLESS POINT. I MEAN, THAT'S A TRUE
RED HERRING.

SO WHAT DID MS. MAXFIELD DO TO TRY TO SUMMARIZE
THE SOIL INFORMATION?

BECAUSE THAT'S SOMETHING THAT'S VERY IMPORTANT?

LOOK AT EXHIBIT 3201, WHICH IS THIS EXHIBIT
RIGHT HERE, AND I'LL PUT IT ON THE ELMO, TOO, SINCE IT'S HARD
TO SEE, SO YOU CAN LOOK AT THIS.

THIS SUMMARIZES ALL OF THE SOIL INVESTIGATION
THAT WAS DONE BOTH BY WATSON AND BY ARCO.

AND WHAT YOU CAN SEE IS ALL THOSE BLUE DOTS,
WHICH ALL ARE NOTHING. THAT'S HOW THEY PERFORATED THAT WHOLE
AREA TO TRY TO FIND IT. AND THEY FOUND NOTHING AT ALL.

THAT'S IN CONTRAST TO THE GATX PLUME, AS WE
SAW, WHERE THEY DID FIND IN SOME OF THEIR BORINGS, TRACES

1 DOWN TO GROUNDWATER.

2 AND WHAT THEY WERE DOING THERE WAS THEY WERE
3 NOT TRYING TO FIND THE SOURCE OF THE LEAK. THEY KNEW WHERE
4 IT WAS, BECAUSE IT HAD LEAKED AND KILLED ALL THE GRASS, AND

5 IT WAS A MASSIVE RUPTURE OF PIPELINE. THEY WERE TRYING TO
6 FIND WHERE THE LEAK WASN'T, AND THEY STILL FOUND IT ALL THE
7 WAY DOWN TO GROUNDWATER.

8 AND WHAT DID ARCO FIND ON THEIR SIDE WHEN THEY
9 TESTED UP AND DOWN?

10 THEY ALSO FOUND SOME GASOLINE IN THE SOIL RIGHT
11 UP IN THIS AREA AND RIGHT DOWN HERE, WHICH ARE RIGHT IN THE
12 AREAS WHERE WE FIND GASOLINE, ALSO, DOWN ON THE WATER TABLE,
13 AND I'LL TALK ABOUT THAT A LITTLE BIT.

14 SO ALL OF THE AREA IN AND AROUND THE SHELL
15 PIPELINES SHOWED NOTHING IN THE SOIL.

16 AND LOOK AT EXHIBIT 3260 AS WELL. THIS IS JUST
17 A CONVENIENT SUMMARY OF THE DATA SO YOU DON'T HAVE TO GO BACK
18 TO THE REPORTS.

19 SAME BLUE DOTS.

20 THERE'S A CROSS-SECTION MS. MAXFIELD DREW
21 THROUGH THE BLUE DOTS. AND YOU'LL REMEMBER THAT, WHERE WE
22 WENT OVER THIS IN HER TESTIMONY, IT JUST SHOWED ALL OF THE
23 INDIVIDUAL SOIL POINTS. AND AS DR. DAGDIGIAN SUMMARIZED,
24 THEY ESSENTIALLY FOUND NOTHING WHATSOEVER.

25 WE ALSO HAVE THE GATX DRAWING ON THERE SO THAT
26 YOU CAN FIND THAT EASILY WITHOUT HAVING TO SCRAMBLE THROUGH
27 EXHIBITS.

28 SO TAKE A LOOK AT THAT SOIL DATA. AND THAT'S

1 SOMETHING IMPORTANT THAT NEEDS TO BE TAKEN INTO ACCOUNT.

2 NOW, WHAT SOIL DATA DO WE HAVE THAT THEY'RE
3 RELYING ON?

4 BECAUSE THEY'RE RELYING ON SOME. THE ONLY SOIL
5 DATA THAT THEY HAVE THAT THEY'RE TRYING TO CONVINCING YOU SHOWS
6 A RELEASE FROM THE PIPELINE IS MR. SCHMIDT'S DOWNHOLE FLUX.
7 OKAY.

8 NOW, YOU'VE HEARD A LOT ABOUT THAT, BUT -- AND
9 I'LL TRY NOT TO GO INTO GREAT DETAIL ON THAT -- BUT LET ME
10 JUST REMIND YOU OF A COUPLE OF THINGS.

11 NOT A SINGLE ONE OF THE EXPERTS IN THIS CASE
12 HAD EVER HEARD OF DOWNHOLE FLUX BEING USED TO FIND THE SOURCE
13 OF A LEAK IN HYDROCARBON CONTAMINATION BEFORE THIS CASE.

14 DR. DAGDIGIAN TESTIFIED THAT HE HAD NEVER USED
15 DOWNHOLE FLUX OR HEARD OF IT BEING USED IN A HYDROCARBON
16 CASE. HE HAD USED IT ONCE BEFORE IN A STRIP MALL, FINDING A
17 RELEASE OF DRY CLEANING FLUID.

18 AND MS. BERESKI TOLD US THAT PART OF THE
19 PURPOSE THERE WAS TO DETERMINE A HEALTH RISK ASSESSMENT FOR
20 WHEN THEY DUG INTO THIS, WAS IT GOING TO CAUSE A HEALTH
21 THREAT. OKAY.

22 BUT THEY SPECIFICALLY ADMITTED THAT THEY HAD NO
23 PREVIOUS EXPERIENCE USING DOWNHOLE FLUX.

24 DR. DAGDIGIAN SAID -- I ASKED HIM (READING):

25

26 "BY THE WAY, DID YOU WORK ON

27 THAT STRIP MALL DRY CLEANING THING WITH

28 MS. BERESKI THAT SHE TOLD US ABOUT, WORK ON

1 THAT PROJECT WITH HER WHERE DOWNHOLE FLUX WAS
2 USED?

3 "A. YES, I DID.

4 "Q. AT LEAST IN PART, FOR RISK
5 ASSESSMENT?

6 "A. DEFINITELY.

7 "Q. AND SIR, PRIOR TO THAT TIME,
8 DID YOU EVER EMPLOY A DOWNHOLE FLUX ON ANY
9 PROJECT YOU WERE INVOLVED IN INVOLVING
10 HYDROCARBON CONTAMINATION?

11 "A. NO."

12

13 HE DIDN'T. HE DIDN'T.

14 WHAT ABOUT NANCY BERESKI?

15 I ASKED HER (READING):

16

17 "SO NEVER, IN ALL OF YOUR
18 HUNDREDS OF INVESTIGATIONS OF HYDROCARBON
19 SITES, HAVE YOU EVER USED DOWNHOLE FLUX
20 TESTING FOR ANY REASON, CORRECT?

21 "A. THAT'S TRUE."

22

23 AND THEN SHE TRIED TO SAY, "IT'S VERY
24 EXPENSIVE," AS THOUGH THAT WERE THE REASON SHE DIDN'T DO IT.

25 THE REASON WHY SHE DIDN'T DO IT IS BECAUSE TO
26 USE DOWNHOLE FLUX TESTING AS SOMETHING MORE THAN JUST A
27 SIMPLE SOIL GAS TECHNIQUE TO TRY TO FIND OUT WHETHER A
28 PIPELINE IS THE SOURCE OF THE LEAK IS THE ULTIMATE IN JUNK

1 SCIENCE, AND PEOPLE JUST SIMPLY DO NOT DO THAT.

2 EVEN DR. SCHMIDT HAD TO AGREE WHEN I WAS ASKING
3 HIM ABOUT IT. I SAID (READING):

4

5 "WHEN YOU DID YOUR DOWNHOLE
6 FLUX HERE, WE ESTABLISHED ON THURSDAY THAT
7 YOU CAN'T TELL WHERE THE CONTAMINATION
8 MIGRATED FROM, WHEN YOU WERE TAKING A READING
9 IN A HOLE, CORRECT?

10 "CORRECT."

11

12 CORRECT.

13 AND WHAT DID MRS. BRIGHT SAY IN HER CLOSING
14 STATEMENT ABOUT THE DOWNHOLE FLUX?

15 DOWNHOLE FLUX IS A GREAT TECHNOLOGY. IT
16 ALLOWED DR. SCHMIDT TO WIRE AROUND THE PROBLEMS WITH THE CLAY
17 SOIL THAT WAS -- AND THE EXPLANATION WHY WE DIDN'T FIND
18 ANYTHING WHEN WE TESTED AROUND THE PIPELINES.

19 OKAY. WIRE AROUND THE PROBLEMS IN THE SOIL?
20 YOU REMEMBER WHAT DR. SCHMIDT TESTIFIED?
21 HE TESTIFIED THAT DOWNHOLE FLUX IS A SOIL GAS
22 TECHNIQUE.

23 WHAT HE DOES IS, HE DRILLS A LITTLE 4-INCH HOLE
24 AND HE LOWERS HIS LITTLE PLASTIC CHAMBER DOWN, AND ALL HE'S
25 SEEING IS HE'S SEEING WHAT COMPOUNDS EVAPORATE OUT OF THE
26 SOIL IN THAT LITTLE 4-INCH DITCH RIGHT IN THE AREA OF HIS
27 HOLE.

28 AND YOU'LL SEE THAT HE DIDN'T DO ANY DOWNHOLE

1 FLUX IN ANY HOLE CLOSER THAN WSB-4 AT ALL.

2 HE DID A DOWNHOLE FLUX INITIALLY IN MONITORING
3 WELL 4 AND 5 AND DIDN'T COME UP WITH MUCH. SO OTHER THAN
4 THOSE THREE POINTS, ALL OF HIS OTHER DOWNHOLE FLUXES WERE FAR
5 AWAY.

6 AND WHAT HE ADMITTED HERE IS THAT WHAT YOU
7 WOULD EXPECT AND WHAT THE OTHER EXPERTS TESTIFIED, YOU CAN'T
8 TELL WHERE A LEAK CAME FROM BY USING DOWNHOLE FLUX.

9 WHERE HAS IT BEEN USED BEFORE?

10 IT'S BEEN USED BEFORE IN RISK ASSESSMENT. AND
11 THAT'S WHERE HE HAD USED IT, ON SITES THAT SHELL WAS
12 INVOLVED, IF YOU'LL RECALL.

13 MRS. BRIGHT TRIED TO MAKE A BIG THING ABOUT
14 THAT. AT THE MCCOLL SITE, THEY HAD AN AREA OF KNOWN
15 CONTAMINATION IN SOME OIL SUMPS.

16 OKAY. AND THE ISSUE THERE, DR. SCHMIDT
17 TESTIFIED, WAS WHEN THEY DUG INTO IT, THERE WERE SOME GASES
18 IN THERE THAT WERE SMELLY AND POSSIBLY TOXIC, AND THEY WANTED
19 TO KNOW, WAS THAT SMART TO DIG INTO IT AND IS THAT GOING TO
20 POSE A HEALTH THREAT.

21 THAT'S HOW YOU USE IT. SAME THING ON THE DEL
22 AMO SITE. IT'S THE SAME EXACT THING.

23 BUT NOBODY IN THIS CASE HAS TOLD YOU THAT
24 DOWNHOLE FLUX HAS EVER BEEN USED TO FIND THE SOURCE OF A
25 PIPELINE LEAK VERSUS GROUNDWATER. DR. DAGDIGIAN SAID THAT,
26 MS. BERESKI SAID THAT, MR. LEITER SAID THAT, MS. MAXFIELD
27 SAID THAT.

28 AND YOU REMEMBER WHEN I ASKED A COUPLE OF THOSE

1 CUSTODIANS OF RECORD WHO WERE COMING IN HERE, MR. KAPLAND AND
2 MR. JONES ABOUT OVA METERS, WOULD YOU EVER USE THOSE TO TRY
3 TO TYPE THINGS AND TAKE MEANINGFUL READINGS?

4 AND THEY SAID, NO, ABSOLUTELY NOT. THE OVA IS
5 JUST SIMPLY NOT SUFFICIENTLY -- SUFFICIENTLY ACCURATE.

6 SO WHAT, THEN, IS THE REAL JUNK SCIENCE PORTION
7 OF MR. SCHMIDT'S DOWNHOLE FLUX?

8 IT'S PRECISELY THIS BOGUS ANALYSIS THAT IF THE
9 INITIAL PEAK IS GREATER THAN 50 PERCENT OF THE TAIL, IT'S
10 SOURCE-LIKE.

11 REMEMBER THAT?

12 HE HAD THIS LITTLE THING -- SOME OF THEM HE
13 COLORED RED, WHICH HE SAID WERE SOURCE-LIKE -- SOME OF WHICH
14 HE COLORED ORANGE, SOME OF WHICH WERE YELLOW. HE WASN'T
15 REALLY SURE. THAT WAS ALL BASED ON HIS LITTLE CALCULATION OF
16 HOW FAR THE CONTAMINATION DIED OFF.

17 AND I ASKED HIM ABOUT THAT PARTICULAR ASPECT OF
18 HIS DOWNHOLE FLUX. I SAID (READING):

19
20 . . . "CAN YOU CITE TO ME, SIR,
21 ANY ARTICLES IN PEER-REVIEWED JOURNALS THAT
22 TALK ABOUT THE 50 PERCENT RATIO, SAY, THAT
23 IT'S MORE THAN 50 PERCENT, IT'S SOURCE-LIKE?

24 "NO.

25 "CAN YOU TELL ME, SIR, AS YOU
26 SIT HERE TODAY, ANY POLICY OR PROTOCOL FROM
27 THE REGIONAL WATER QUALITY CONTROL BOARD THAT
28 SAYS THAT WHERE YOU HAVE GOT A 50 PERCENT OR

1 GREATER STEADY STATE AFTER AN INITIAL PEAK
2 FLUX, THAT THAT INDICATES THAT YOU ARE NEAR
3 BY THE SOURCE THAT'S CLOSE TO THE SOURCE?

4 "NO, I CANNOT.

5 "AND YOU CAN'T CITE TO ME,
6 SIR, ANY ARTICLE OR PROTOCOL ISSUED OR
7 APPROVED BY THE EPA THAT THEY SPECIFICALLY
8 TALK ABOUT THAT IF YOU HAVE A STEADY STATE OF
9 50 PERCENT OR GREATER OF THE INITIAL PEAK
10 INFLUENCES THAT THAT MEANS YOU ARE CLOSE TO
11 THE SOURCE OR AT A SOURCE LINE?

12 "A. SAID IN THOSE WORDS, I
13 CANNOT."

14
15 AND THERE ISN'T ANY SUCH THING. BECAUSE PEOPLE
16 DON'T USE IT FOR THAT. BECAUSE ALL OF THE SAME PROBLEMS THAT
17 WATSON LAND COMPANY SAYS WERE WHY THEY DIDN'T FIND SOIL GAS
18 EVIDENCE OF A RELEASE, THESE CLAY SOILS, THAT IS JUST AS
19 OPERATIVE WITH A DOWNHOLE FLUX.

20 AND FOR MR. SCHMIDT -- DR. SCHMIDT TO SAY
21 OTHERWISE IS NOTHING MORE THAN JUNK SCIENCE.

22 EVEN LOOKING AT HIS OWN EPA PROTOCOL,
23 EXHIBIT 3213. REMEMBER, WE LOOKED AT THAT?

24 (READING:)

25
26 "NO PRECISION OR ACCURACY DATA
27 ARE AVAILABLE FOR THE DOWNHOLE FLUX CHAMBER
28 METHOD."

1 SO HE USED DATA FOR SURFACE FLUX CHAMBERS.

2 WHAT DID THEY FIND?

3 HE SAID (READING):

4

5 "THE DOWNHOLE FLUX HAMMER IS
6 SUBSTANTIALLY SMALLER THAN THE SURFACE FLUX
7 HAMMER, SO ITS PRECISION IS EXPECTED TO BE
8 WORSE."

9

10 WHAT ABOUT ACCURACY?

11 HE SAID (READING):

12

13 "THE FLUX CHAMBER ACCURACY,
14 BASED UPON BOTH THE RECOVERY TESTS AND
15 PREDICTIVE MODELING, RANGES FROM 50 PERCENT
16 TO 124 PERCENT. THE DOWNHOLE FLUX CHAMBER
17 HAS MUCH LONGER SAMPLING LINES AND IS MORE
18 DIFFICULT TO SEAL TO THE SAMPLING SURFACE, SO
19 ITS ACCURACY IS EXPECTED TO BE LOWER."

20

21 AND DR. SCHMIDT IS SAYING THAT WHERE YOU HAVE
22 ACCURACY, THAT'S EQUALLY ACCURATE IF YOU HAVE A READING OF 50
23 OR IF YOU HAVE A READING OF 124.

24

25 HOW CAN HE SAY THAT THIS INITIAL PEAK, IF IT'S
26 GREATER THAN 50 PERCENT, SOMEHOW MEANS ANYTHING THAT'S
27 MEANINGFUL AT ALL IN THIS CASE?

28

AND FOR WATSON TO STOOP TO THAT TYPE OF JUNK
SCIENCE WHEN THERE WAS A VERY SIMPLE WAY TO FIND OUT ONCE AND

1 FOR ALL WHETHER THIS WAS COMING FROM THE PIPELINE LEAKS, TO
2 TAKE SOIL GAS DATA AND SOIL SAMPLING DATA RIGHT FROM IN AND
3 AMONGST THE PIPELINES, FOR THEM TO DECIDE CONSCIOUSLY AS
4 DR. DAGDIGIAN SAID, NOT TO DO THAT, BUT INSTEAD RELY ON THIS
5 PREEXISTING GATHERED DOWNHOLE FLUX AND ALL OF A SUDDEN MAKE
6 THAT THE CENTERPIECE OF THEIR CASE, THAT TELLS YOU A LITTLE
7 SOMETHING ABOUT THEIR CONFIDENCE IN WHAT IT WOULD SHOW IF
8 THEY, IN FACT, WENT IN TO TEST AROUND THE PIPELINES.

9 FINALLY, WE KNOW SOMETHING ELSE ABOUT
10 DR. SCHMIDT. WE KNOW THAT DR. SCHMIDT STRETCHES THINGS A
11 LITTLE BIT, JUST LIKE HE STRETCHES HIS 50 PERCENT RULE AS
12 BEING SOMETHING THAT'S SCIENTIFIC, AS SOMETHING THAT MEANS
13 ANYTHING.

14 REMEMBER, HE MADE A BIG DEAL IN HIS CASE ABOUT
15 HOW HE, SUPPOSEDLY, HE ASKED FOR PERMISSION TO GO INTO AND
16 TEST AMONG THE SHELL PIPELINES, AND HE WAS DENIED.

17 WITH A BIG FANFARE, HE WHIPPED OUT THESE TWO
18 CARDS. THESE ARE THE GUYS THAT DENIED ME ACCESS IN THE
19 PIPELINES. I WANTED TO GO IN THERE, THEY DENIED ME ACCESS.
20 WATSON MADE A HUGE DEAL OF THAT.

21 AND I HAVE THAT TESTIMONY RIGHT HERE. THIS IS
22 MRS. BRIGHT LEADING HIM (READING):

23
24 "DR. SCHMIDT, DID YOU TRY TO
25 PUT ANY OF YOUR DOWNHOLE FLUX BORING IN
26 UTILITY WAY PIPELINE CORRIDOR?

27 "YES, WE DID.

28 "WERE YOU ABLE TO PUT ANY

1 BORINGS IN THE UTILITY WAY PIPELINE CORRIDOR?
2 "NO, WE WEREN'T.
3 "WHO PREVENTED YOU?
4 "THERE WAS A SHELL PIPELINE
5 REPRESENTATIVE THERE PREVENTING US FROM DOING
6 ANY TESTING IN THE CORRIDOR.
7 "CAN YOU TELL ME WHO IT WAS?
8 "I THINK I STILL HAVE THEIR
9 CARDS. ALLEN ROSENKRANTZ, FACILITY INSPECTOR
10 WITH THE CONSULTANTS MONTGOMERY WATSON.
11 "THESE ARE THE BUSINESS CARDS
12 YOU KEPT FROM THE DAY YOU DID THE SAMPLING.
13 "AND WHAT YEAR WAS IT IN?
14 "A. 1996."
15
16 THEN I ASKED HIM (READING):
17
18 "ARE YOU SAYING, DR. SCHMIDT,
19 THAT THESE PEOPLE REFUSED YOUR REQUEST TO
20 TEST IN AND AMONGST THE PIPELINES?"
21
22 ON CROSS-EXAMINATION, I ASKED HIM THAT
23 QUESTION. AND THEN HE SORT OF BACKS AWAY, AND, GOES
24 (READING):
25
26 "WELL, YOU KNOW, I WAS REALLY
27 PRETTY BUSY. I WAS THE GUY OUT THERE THAT
28 GENERATED ALL THAT DATA.

1 "THE PRINCIPAL RESPONSIBILITY
2 OF COMMUNICATING A DOT ON THE MAP FROM MY
3 HISTORICAL RECORD SEARCH TO A POINT IN THE
4 FIELD WAS THE RESPONSIBILITY OF THE SENIOR
5 HYDROLOGIST, JOE TURNER, OF HERITAGE. IN
6 FACT, JOE WENT A WEEK AHEAD FOR EACH OF THESE
7 PHASES AND CLEARED THE UTILITIES AND TALKED
8 WITH TENANTS AND TRIED TO PICK LOCATIONS FOR
9 TESTING PRIOR TO MY ARRIVAL.

10 "BUT I DON'T HAVE A THOROUGH
11 MEMORY OF EACH AND EVERY PLACE I TESTED
12 BECAUSE I HAD ALL THIS OTHER STUFF TO DO.
13 BUT JOE DID."

14
15 NOW, HE'S TRYING SAY, OH, WELL, EVEN THOUGH I
16 SAID ON DIRECT THAT I WAS TOLD THAT I COULDN'T TEST IN HERE,
17 THAT GENTLEMEN, IN FACT, WENT AHEAD THE WEEK BEFORE THE
18 SAMPLING PLAN WAS SET.

19 AND HE SAID -- HE SAYS, BUT JOE MAY HAVE HAD
20 SOME SUCH DISCUSSIONS.

21 DID WATSON EVER CALL JOE TURNER, EVER?

22 THEY CALL HIM IN THEIR CASE IN CHIEF?

23 DID THEY EVER CALL HIM AFTER WE CALLED

24 ALAN ROSENKRANTZ AND EVA WANG WHO DENIED EVER TALKING TO

25 CHUCK SCHMIDT, EVER DENYING HIM ACCESS WHATSOEVER?

26 NEVER CALLED HIM IN THEIR REBUTTAL CASE.

27 WHY DO YOU SUPPOSE THAT THAT IS THAT THEY NEVER
28 CALLED THIS GUY THAT CHUCK SCHMIDT SAID WAS ONE OF THE ONES

1 WHO MAY HAVE HAD SOME CONTACTS, BECAUSE HE COULDN'T REMEMBER
2 VERY WELL WHEN HE WAS ON CROSS-EXAMINATION?

3 WE ASKED MR. ROSENKRANTZ. WE BROUGHT HIM IN
4 BECAUSE WE THOUGHT YOU SHOULD HEAR THEIR TESTIMONY (READING):

5
6 "DO YOU RECALL EVER GETTING A
7 REQUEST TO DO SOIL SAMPLING OR ENVIRONMENTAL
8 TESTING IN AND AROUND THE SHELL PIPELINES
9 FROM SOMEONE NAMED CHARLES SCHMIDT OR
10 DR. SCHMIDT?

11 "A. NO. I NEVER GOT THE REQUEST.
12 I NEVER HEARD OF THAT GENTLEMAN YOU JUST
13 NAMED.

14 "Q. DID YOU EVER TELL DR. SCHMIDT
15 THAT HE COULDN'T TAKE SAMPLES FROM THE SHELL
16 PIPELINE AREA AT ANY TIME?

17 "A. NO. I NEVER MET THE MAN AND I
18 NEVER TOLD HIM THAT.

19 "Q. HAS ANYBODY AT SHELL EVER TOLD
20 YOU NOT TO LET WATSON LAND COMPANY SAMPLE IN
21 AND AROUND THE LINES IN THE WATSON PROPERTY?

22 "A. NO. NOBODY'S EVER TOLD ME
23 THAT."

24
25 REMEMBER WHO MR. ROSENKRANTZ WAS?

26 HE WAS THE PIPELINER WHO WENT UP AND DOWN ALL
27 THE TIME AND WAS CALLED OUT BY DIG ALERT WHEN PEOPLE WANTED
28 TO CLEAR DIGGING IN THIS AREA.

1 WHAT ABOUT THE JOE TURNER ISSUE?

2 (READING:)

3

4 "Q. DO YOU RECALL EVER GETTING A
5 REQUEST FROM A GUY NAMED JOE TURNER ON THE
6 WATSON LAND COMPANY TO TAKE SOIL SAMPLES OR
7 ENVIRONMENTAL SAMPLES OF SOME KIND IN THE
8 SHELL PIPELINES?

9 "A. NO. BUT YOU SEE, THAT WOULD
10 BE OUT OF PROCEDURES.

11 "HE WOULDN'T -- NOBODY WOULD
12 ASK ME TO DIG. THEY'D HAVE TO GO THROUGH DIG
13 ALERT. I HAVE NO AUTHORITY TO ALLOW ANYBODY
14 TO DIG. THEY HAVE TO GO THROUGH DIG ALERT,
15 SO THEY WOULDN'T HAVE ASKED ME.

16 "AND I CAN'T TELL THEM. SO I
17 JUST HAVE TO REFER THEM TO DIG ALERT.

18

19 NOBODY, NOT JOE TURNER, NOT CHUCK SCHMIDT EVER
20 ASKED HIM FOR ACCESS.

21 WHAT ABOUT EVA WANG WHO CAME DOWN HERE JUST TO
22 TELL YOU ABOUT THAT.

23 (READING:)

24

25 "Q. NOW, WHEN YOU WERE DOWN THERE
26 ON THAT PROJECT, DID YOU HAVE ANY ROLE IN
27 DECIDING WHERE THE SAMPLES WERE TO BE TAKEN?

28 "A. NO. THE SAMPLING PLAN FOR

1 WATSON WAS ALREADY IN EXISTENCE AT THE TIME
2 WHEN I GOT THERE.

3 "THAT'S THE WAY IT'S ALWAYS
4 DONE WITH ENVIRONMENTAL SAMPLING WHERE YOU
5 NOTIFY SOMEBODY TO TAKE SPLITS. YOU HAVE
6 THE SAMPLING PLAN IN ADVANCE."

7
8 SO BY THE TIME SHE GOT THERE, IT WAS ALREADY
9 THERE.

10 (READING:)

11
12 "Q. SO YOU HAD NO PART IN THOSE
13 DECISIONS?

14 "A. NO.

15 "Q. DO YOU RECALL IF YOU WOULD
16 HAVE GIVEN A BUSINESS CARD TO ANYONE ON THAT
17 PROJECT?

18 "A. I WOULD, AS A MATTER OF
19 COURSE, HAVE GIVEN IT TO SOMEONE FROM WATSON,
20 PERHAPS, THE PERSON IN CHARGE AT THE TIME.

21 "Q. DO YOU REMEMBER A MAN BY THE
22 NAME OF CHARLES SCHMIDT BEING INVOLVED IN THE
23 SAMPLING PROCESS?

24 "I DON'T RECALL THE NAME.

25 "DURING YOUR INVOLVEMENT IN
26 THIS PROJECT, DID YOU EVER TELL ANYONE THEY
27 COULD NOT TAKE SAMPLES AT A PARTICULAR
28 LOCATION?

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28

"A. NO.

"WOULD THAT HAVE BEEN PART OF
YOUR RESPONSIBILITY ON THAT JOB?

"NO. I WAS DIRECTED TO
STRICTLY OBSERVE AND TO COLLECT THE
DUPLICATES OF THE SPLITS AS NEEDED.

"SO DID YOU TELL ANYONE THEY
COULD NOT TAKE SAMPLES UNDER OR NEAR SHELL
PIPELINES?

"A. NO."

IT DIDN'T HAPPEN.

AND WHY WOULD DR. SCHMIDT SAY THAT TO YOU?

WHY WOULD HE SIT UP THERE ON THE STAND AND WITH
GREAT FANFARE WHIP OUT THESE CARDS AND SAY, I WAS DENIED
ACCESS?

THE REASON WHY HE DID THAT WAS BECAUSE I WAS
ASKING HIM, IN ESTABLISHING ON CROSS-EXAMINATION THAT HIS
DOWNHOLE FLUX METHOD WAS A PRETTY FLAKY WAY OF TRYING TO
IDENTIFY WHETHER THERE'S BEEN A PIPELINE LEAK AND THE WAY
THAT MOST PEOPLE DO IT IS WHAT DR. -- MR. DAGDIGIAN SAID AND
IT'S WHAT OUR EXPERTS SAID, IS YOU GO AND TEST AROUND THE
PIPELINE.

SO IN RESPONSE, HE MADE UP THIS STORY.

AND THE JUDGE WILL INSTRUCT YOU THAT (READING):

"A WITNESS FALSE IN ONE PART
OF HIS OR HER TESTIMONY IS TO BE DISTRUSTED

1 IN OTHERS."

2
3 THAT IS THE ONLY REASON. OKAY.

4 ONE OTHER THING WITH DR. SCHMIDT -- AND I THINK
5 IT'S NOT THAT BIG OF A DEAL, BUT I THINK IT JUST GOES TO SHOW
6 HOW HE IS HAPPY TO SIT UP THERE AND STRETCH THE TRUTH -- IS
7 THIS WHOLE THING ABOUT HIS DATA POINTS AND THE EXCEL.

8 OKAY. FIRST, HE FOUGHT ME ON IT.

9 WHEN I SHOWED HIM WHAT HE ULTIMATELY ADMITTED
10 WERE FALSE DATA POINTS THAT HE HAD PUT IN HIS GRAPHS -- AND
11 REMEMBER, THAT WAS IMPORTANT, BECAUSE HIS WHOLE THING IS HOW
12 HIGH IS THE PEAK. AND THEN HOW FLAT AND BROAD IS THE TAIL.

13 OKAY. WHEN I SHOWED HIM THAT HE HAD NO DATA
14 POINTS IN HIS WORK SHEETS BECAUSE HE WAS TAKING MR. HOYT'S
15 SAMPLES, AND WHEN I SHOWED HIM THAT HE HAD, IN FACT, PUT
16 LITTLE DOTS, I ASKED HIM (READING):

17
18 "NOW, SIR, THE PROBLEM WITH
19 THIS AND OF YOUR OTHER GRAPHS IS THAT THESE
20 POINTS ARE MADE UP RIGHT HERE; ISN'T THAT
21 RIGHT?

22 "YES, THEY ARE. "IN FACT" --

23
24 AND I -- (READING):

25
26 "Q. LET ME SHOW YOU HOW.

27 "A. I KNOW HOW.

28 "Q. YOU KNEW THAT THEY WERE MADE

1 UP. OKAY. THAT'S A STEP IN THE RIGHT
2 DIRECTION.

3 "A. ME AND EXCEL DON'T GET ALONG.

4

5 "ME AND EXCEL DON'T GET ALONG." THAT WAS HIS
6 EXCUSE. AND HE MADE A JOKE OF IT.

7 I ASKED HIM (READING):

8

9 "SIR, IF THIS WAS SUBMITTED TO
10 A PEER-REVIEWED ACADEMIC JOURNAL, THESE KIND
11 OF DATA MANIPULATION AND ERRORS AND
12 MISLEADING CHANGING SCALES ON YOUR CHARTS, IT
13 WOULDN'T MAKE IT IN THAT PUBLICATION, WOULD
14 IT, SIR?"

15

16 AGAIN, HE TRIED TO LAUGH IT OFF.

17 (READING:)

18

19 "I AM CONFIDENT WHEN I PUBLISH
20 THESE DATA, I WILL HAVE EXCEL MASTERED."

21

22 THEN I SAID: "SIR, YOU
23 COLLECTED THESE DATA BACK IN 1997, DIDN'T
24 YOU, SIR?"

24

"A. '93, '96, 97, YES.

25

26 "Q. AND YOU HAD ALL THAT TIME TO
27 TRY TO FIGURE OUT OR MAYBE ASK SOMEBODY THAT
28 KNEW HOW TO MAKE YOUR GRAPHS, RIGHT, DIDN'T
YOU?"

1 "A. I SUPPOSE YOU COULD SAY THAT,
2 YES."

3
4 NOW, WHEN I SHOWED HIM HOW SIMPLE IT WAS, YOU
5 ~~CLICK A LITTLE CHART WIZARD AND THREE CLICKS LATER YOU'VE GOT~~
6 YOUR DATA POINTS, AND IT WILL DRAW THE LINE WITHOUT MAKING
7 YOUR FALSE LITTLE SHELF, THAT THE ONLY WAY TO GET THE FALSE
8 LITTLE SHELF WAS TO MANUALLY INSERT THOSE.

9 I STARTED TO CROSS-EXAMINE HIM ON THAT. I SAID
10 (READING):

11
12 "YOU SAID YOU TRIED AND TRIED,
13 YOU COULDN'T GET IT TO DO WHAT YOU WANTED."

14 AND HE SAYS: "WELL, PROBABLY
15 FOUR TRIES, YES."

16 AND I SAID: "AND DID YOU
17 NOTICE, SIR, THAT ON EXCEL IT AUTOMATICALLY
18 PLACES A NICE EVEN SCALE?"

19 AND HE SAID: "I WILL HAVE THE
20 NEW VERSION OF EXCEL THAT YOU HAVE SHOWN ME.
21 I AM GOING TO GO OUT AND BUY THIS. IT WAS
22 NOT AVAILABLE WHEN I DID THESE PLOTS FOR
23 THESE REPORTS IN 1997."

24
25 BUT YOU REMEMBER WHAT MR. LEITER SAID?
26 SAME FUNCTIONS IN EXCEL IN '97. THIS IS
27 SOMETHING THAT'S BEEN AROUND FOR A LONG TIME THAT ANY
28 SCIENTIST THAT MAKES GRAPHS KNOWS HOW TO USE, AND THAT IT

1 DOESN'T PUT IN FALSE DATA POINTS. IT DIDN'T DO THAT IN 2001,
2 IT DOESN'T DO THAT IN 1997.

3 AND THEN I ASKED HIM A LITTLE BIT MORE. I SAID
4 (READING):

5
6 "YOU DENY, THEN, SIR, UNDER
7 OATH, THAT WHEN YOU MADE THESE GRAPHS, THAT
8 YOU MADE A CONSCIOUS DECISION TO INSERT IT,
9 SOME DATA POINTS FOR WHICH YOU HAD NO DATA
10 JUST TO CONTINUE OUT THE SAME VALUE?

11 "YOU DENY THAT, SIR?

12
13 WHAT DID HE SAY?

14 (READING:)

15
16 "ACTUALLY, I HIRED SOMEONE TO
17 DO THIS WITH EXCEL AND GAVE THEM THE PLOTTED
18 DATA AND TABLE, WHICH I BASED MY CONCLUSIONS
19 ON."

20
21 SO NOW HE'S SAYING, WHOOPS, YOU KNOW, I JUST
22 HIRED SOMEBODY, AFTER SAYING THAT HE PERSONALLY TRIED AND
23 TRIED AND COULD NEVER GET IT MASTERED AND NEVER FIXED THAT
24 OVER YEARS AND YEARS.

25 AND THAT'S THE SORT OF EVIDENCE THAT
26 MR. SCHMIDT PUT ON, AND THAT'S THE SORT OF EVIDENCE THAT
27 WATSON LAND COMPANY PUT ON IN LIEU -- EXCUSE ME -- TO TRY TO
28 FILL THE GAPS IN THEIR SOIL DATA WHICH SHOWED NO

1 CONTAMINATION FROM THE PIPELINE.

2 AND YOU SHOULD TAKE THAT INTO ACCOUNT WHEN
3 YOU'RE ASSESSING THE EVIDENCE IN THIS CASE AND THE EXPERTS.

4 OKAY. WHAT ABOUT THE HYDROLOGY?

5 LET ME GO OVER SOME OF THAT HYDROLOGY WITH YOU.
6 YOU CAN SEE UP ON THE BOARD UP HERE -- AND I'LL PUT ON THE
7 ELMO EXHIBIT 3257.

8 THESE PLUMES ARE TAKEN FROM TWO REPORTS FROM
9 ARCO THAT ARE IN EVIDENCE, AND I'LL SHOW YOU THE PLUME MAPS.

10 WHAT THESE SHOW IS WHAT WATSON WOULD HAVE YOU
11 IGNORE AS A RED HERRING.

12 YOU NOTICE THAT NONE OF DR. DAGDIGIAN'S MAPS
13 EVER HAVE ANY INFORMATION FROM ARCO ON THEM AT ALL, HOW
14 THEY'RE ALL ZOOMED IN FOR THE WATSON CENTER AS THOUGH THEY
15 WISH THAT THIS ARCO PROBLEM JUST DIDN'T EXIST, JUST DIDN'T
16 EXIST. HOW NOT A SINGLE GRAPH, HOW NOT A SINGLE CHART THAT
17 THEY SHOWED YOU IN THIS ENTIRE CASE EVER HAD THAT ARCO STUFF
18 ON IT.

19 OKAY. INSTEAD, WHAT DO THEY HAVE?

20 JUST ZOOMED IN ON THESE AREAS HERE.

21 IT'S OBVIOUS THAT YOU SHOULD TAKE INTO ACCOUNT
22 WHAT'S OVER AT ARCO. YOU KNOW, YOU MAY DISAGREE WITH THE
23 CONCLUSIONS OF THE EXPERTS AT THE END OF THE DAY, BUT YOU
24 HAVE TO TAKE THAT INTO ACCOUNT.

25 AND THE REASON YOU HAVE TO TAKE THAT INTO
26 ACCOUNT IS BECAUSE IT IS A MASSIVE, MASSIVE PROBLEM THAT
27 DWARFS ANY PROBLEM OVER ON THE WATSON LAND COMPANY.

28 AND THAT'S RELEVANT AS TO CAUSATION. IT'S

1 RELEVANT AS TO REMEDIATION. AND IT'S RELEVANT AS TO WHAT
2 WATSON CHOSE TO LOOK AT AND WHETHER THEIR ANALYSIS IS
3 SCIENTIFIC OR WHETHER IT'S JUST SIMPLY LITIGATION ORIENTED.

4 WE KNOW A COUPLE THINGS ABOUT THIS.

5 WE KNOW, FIRST OF ALL, THAT THE PROBLEM IS
6 MASSIVE OVER AT ARCO. AND THERE ARE HUNDREDS OF ACRES OF
7 FREE PRODUCT, UP TO 25 FEET THICK, THROUGH THE YEARS.

8 WE KNOW THAT DESPITE WATSON LAND COMPANY TRYING
9 TO MAKE A BIG DEAL ABOUT CERTAIN TEST RESULTS FOR LEAD THAT
10 ONLY SHOWED TEL OR THAT DIDN'T SHOW SOMETHING IN A FEW WELLS
11 RIGHT IN HERE -- YOU NOTICE MRS. BRIGHT COUNTED THEM ALL UP
12 BECAUSE SOME OF THOSE WELLS WERE TESTED MORE THAN ONCE, CAME
13 UP TO AROUND 20 OR 25. THAT'S REALLY ONLY ABOUT 10 WELLS IN
14 THIS AREA.

15 GIVEN THE SCOPE OF THIS PROBLEM, WHAT
16 MS. MAXFIELD TESTIFIED IS THAT YOU CAN'T PROVE THAT THERE'S
17 NO MIXED LEAD ALKYLs IN THIS FREE PRODUCT POOL IN THESE
18 GASOLINE STORAGE TANKS OVER IN HERE THAT EVEN CALLAHAN AND
19 SIMONS ADMIT CAME OVER AT LEAST THIS FAR AND THAT THERE'S AT
20 LEAST 10 OTHER ONES, REGARDLESS OF THEM WITHHOLDING THE DATA.

21 IN LIGHT OF THE FACT THAT WE KNOW THAT THEY
22 PURCHASED THE MIXED LEAD ALKYLs, WE KNOW THAT THEY WERE FOUND
23 AT LEAST UP IN HERE WHERE THEY TESTED FOR THEM.

24 WHAT WATSON HAS TO DO TO SHOW UNDER THEIR
25 BURDEN OF PROOF HERE THAT FOR SHELL -- EXCUSE ME -- THAT THE
26 SHELL PIPELINES WERE THE SOURCE OF THE B2 BASED UPON THESE
27 MIXED LEAD ALKYLs, IS THEY HAVE TO PROVE BY A PREPONDERANCE
28 OF THE EVIDENCE THAT THERE ARE NO MIXED LEAD ALKYLs ON THE

1 ARCO REFINERY THAT COULD POSSIBLY HAVE MIGRATED OVER IN THE
2 DECADES SINCE THEY SAY THIS LEAK OCCURRED.

3 REMEMBER, KEEP IN MIND, THEY SAY THE PRODUCT IN
4 B2 IS FROM THE 1960'S TO THE 1980'S.

5 THEY SAY THAT THE LEAK CAME FROM THE 1965
6 PIPELINES THAT WERE TAKEN OUT OF SERVICE IN 1973.

7 SO THAT PUTS THE POSTULATED DATE OF THEIR LEAK,
8 ACCORDING TO WHAT THEY'RE TRYING TO CONVINCING YOU, FROM ABOUT
9 1965 TO 1973.

10 DECADES AGO. DECADES AGO.

11 AND YOU HAVE TO KEEP THAT IN MIND WHEN YOU
12 ASSESS THE MIGRATION.

13 WE KNOW THAT ALTHOUGH WATSON DOESN'T LIKE TO
14 PUT IT ON ANY OF THEIR MAPS, THERE'S ALSO AREAS ALL UP AND
15 DOWN WILMINGTON OF FREE PRODUCT, SOME OF WHICH DOWN IN HERE
16 WAS 12 OR 16 FEET DEEP, SOME OF WHICH UP IN HERE,
17 LEVINE-FRICKE 1, WAS SIGNIFICANT AMOUNTS OF GASOLINE.

18 OKAY. WE KNOW THAT.

19 WE KNOW THAT IN WELL 543, WATSON'S OWN
20 CONSULTANTS SAID THAT THEY HAD A MIXTURE OF OLD WEATHERED
21 LEADED GASOLINE DIESEL AND REFINERY SLOPS. THE SAME THING
22 THAT THEY'RE TALKING ABOUT BEING OVER IN THIS PORTION OF THE
23 REFINERY.

24 WE KNOW, ALSO, THAT THERE'S 2 MILLION GALLONS
25 OF JET FUEL RIGHT OVER HERE IN THE GATX SITE AND THAT'S
26 RELEVANT LATER ON, NOT ONLY AS TO THE REMEDIATION ISSUES, BUT
27 IT'S ALSO RELEVANT TO WHAT WE TALKED ABOUT EARLIER, TALKING
28 ABOUT WHAT YOU TEND TO FIND WHEN YOU FIND A LEAK FROM A

1 PIPELINE THAT YOU KNOW IS THERE.

2 SO LET'S LOOK, FIRST OF ALL, AT THE FLOW
3 INFORMATION.

4 AND THERE'S A SIGNIFICANT AMOUNT OF THIS, AND
5 IT VARIES OVER TIME. BUT IT'S WORTH REITERATING.

6 THIS IS EXHIBIT 130-8 FROM 1986.

7 WE HAVE A SUBSEQUENTLY WESTERLY FLOW. EVEN
8 DR. DAGDIGIAN ADMITTED THAT THAT'S BEEN THE FLOW ON THE
9 ARCO REFINERY OVER TIME.

10 WE'VE GOT DATA FROM 1991 FROM EXHIBIT 2918 THAT
11 SHOWS THE SAME THING. AND THIS DATA IS ALSO IMPORTANT
12 BECAUSE BEFORE WATSON WAS TRYING TO DISMISS THE OFF-SITE FLOW
13 OF POTENTIAL BY SAYING, WELL, THEY DIDN'T HAVE ON-SITE WELLS,
14 WELL, THEY KNEW THEY DID HAVE ON-SITE WELLS. THEY HAD WELL
15 543, THEY HAD WELL 536, THEY HAD OTHER WELLS.

16 AND THIS IS -- THIS IS DATED JANUARY 1991.

17 AND YOU'LL REMEMBER THAT WATSON TRIED TO MAKE
18 AN ISSUE OUT OF THE FACT, WHEN I POINTED OUT THAT WELL 543
19 WAS RIGHT ABOUT HERE, TRIED TO MAKE AN ISSUE THAT ONE OF THE
20 CHARTS THAT THEY SHOWED YOU DIDN'T SHOW THAT AS BEING SAMPLED
21 IN NOVEMBER OF 1990.

22 BUT MS. MAXFIELD TESTIFIED THAT SHE LOOKED AT
23 THE WELL LOG FOR INSTALLATION OF THAT WELL 543, WHICH WAS PUT
24 IN IN DECEMBER OF '90, BEFORE THIS MAP WAS MADE, AND SHE SAID
25 WHAT THEY FOUND GROUNDWATER AT WAS ABOUT 39 FEET BELOW SEA
26 LEVEL. AND HERE'S THE HEINOUS 40 LINE.

27 OKAY. AND YOU HAVE TO ASK YOURSELF, GIVEN
28 EVERYTHING THAT WE'VE SEEN ABOUT ARCO BEING CONCERNED ABOUT

1 OFF-SITE CONTAMINATION, WHAT THEY HAVE DRAWN, THIS CONTOUR
2 OUT HERE, SHOWING A FLOW RIGHT OFF THE WATSON REFINERY FROM
3 THE AREA OF THE GASOLINE TANKS UP IN HERE, FROM THE AREA OF
4 THE POOL II RIGHT IN HERE, IF THEY DID NOT HAVE SOME DATA
5 POINT, WHY WOULD THEY JUST INSERT THAT IN THERE?

6 WE ALSO HAVE DATA FROM 1994 -- AND THIS IS FROM
7 EXHIBIT 286 -- THAT SHOWS, AGAIN, WHEN THEY HAVE DATA POINTS
8 OUT HERE -- AND THEY TOOK THIS IN 1994. THEY DREW A CONTOUR
9 LINE WAY OUT HERE SHOWING AN EAST/WEST FLOW. SHOWING AN
10 EAST/WEST FLOW.

11 WE ALSO HAVE -- YOU REMEMBER I WENT OVER WITH
12 MR. KIRK FROM EXHIBIT 291, PLATE 1. THIS IS FROM 1995 BEFORE
13 THE BARRIER WELL WAS INVOLVED -- OR WAS PUT IN.

14 REMEMBER, WE WENT THROUGH DRAWING THE 31-FOOT
15 CONTOUR RIGHT HERE.

16 AND HE SAID (READING):

17
18 "YES, YOU DREW IT RIGHT,
19 MR. LESLIE. THAT'S 31.2, THAT'S 31.8, AND
20 THAT'S 31.

21 "WHAT DOES THAT SHOW?

22 "IT SHOWS THAT THAT'S THE WAY
23 THE GROUNDWATER FLOW WAS GOING AT THAT TIME
24 THAT THEY TOOK THESE GAUGES."

25
26 OKAY.

27 LAST OF ALL, YOU HAVE WHAT I SHOWED YOU BEFORE
28 FROM EXHIBIT 3232, AND THAT WAS WHEN, IN 1995,

1 APRIL 4TH, 1995, WHEN DAMES & MOORE PUT IN MONITORING WELL 1,
2 2 AND 3. THEY TRIANGULATED THOSE READINGS AND THEY GOT AN
3 ACTUAL GROUNDWATER FLOW RIGHT IN THAT DIRECTION. OKAY.

4 SO WHAT THAT SHOWS IS THAT OVER THE PERIOD OF
5 TIME FOR WHICH WE HAVE DATA -- WE DON'T HAVE DATA FOR ALL OF
6 THE PERIOD OF TIME -- BUT FOR THE PERIOD THAT WE DO HAVE
7 DATA, THERE'S CERTAINLY PLENTY OF OFF-SITE FLOW THERE.

8 AND THAT MAKES SENSE, BECAUSE WHY ELSE WOULD
9 ARCO PUT IN ITS BARRIER WELL SYSTEM ALL UP AND DOWN
10 WILMINGTON?

11 IN TERMS OF PLUME MAPS, WE HAVE EXHIBIT 3208,
12 WHICH WAS USED AND IS A BASE FOR YOUR PINK BLOB MAP UP THERE.
13 THAT'S NOVEMBER '90.

14 WE HAVE JANUARY 1991 SHOWING FREE PRODUCT GOING
15 OFF-SITE. THAT'S FROM EXHIBIT 2918.

16 EXHIBIT 286, IN 1994 -- IT STILL HAS MY LITTLE
17 FOOTBALL FIELD ON IT -- AND IT SHOWS THAT -- THAT SHOWS THE
18 SCOPE OF THE PROBLEM.

19 AND THEN REMEMBER IN OPENING STATEMENT, I
20 SHOWED YOU EXHIBIT 3207?

21 AND I'VE GOT SOME BETTER VERSIONS OF PLUME
22 MAPS.

23 WE SHOWED THE REFINERY.

24 REMEMBER THESE ARE THE GASOLINE STORAGE TANKS
25 THAT WE KNOW OF AND THERE IS AT LEAST 10 OTHERS IN THIS AREA.

26 WHAT WATSON ALWAYS WANTS YOU TO SEE IS THIS.
27 THAT'S WHAT THEY WANT YOU TO SEE.

28 BUT ISN'T IT REASONABLE TO ALSO TAKE INTO

1 ACCOUNT THE ARCO PROBLEM?

2 AND MS. MAXFIELD TESTIFIED THAT HER ANALYSIS
3 SHOWS THAT THE DISSOLVED BENZENE HITS, SOME OF WHICH ARE
4 QUITE HIGH IN ALL OF THIS AREA, ARE SIMPLY A CONTINUATION OF
5 WHAT'S FLOWING OVER FROM ARCO.

6 AND I'M GOING TO SHOW SOME OF THOSE MAPS.

7 SO WE KNOW ARCO IS A MASSIVE PROBLEM. NOBODY
8 DENIES THAT.

9 WHAT WATSON TRIES TO DO IS THEY TRY TO
10 POOH-POOH THAT BY SAYING, OH, WE KNOW THAT THERE WAS SOME
11 MORE NORTHERLY COMPONENT ON THE OTHER SIDE. WE DON'T THINK
12 THAT THE FREE PRODUCT WENT THAT FAR. WE DON'T THINK THAT THE
13 BENZENE WENT THAT FAR. WE JUST CHOOSE TO IGNORE. WE DON'T
14 PUT IT ON OUR MAPS. WE DON'T REALLY CARE ABOUT IT.

15 OKAY. REMEMBER MR. SCHMIDT -- DR. SCHMIDT,
16 WHEN HE DID HIS SAMPLING PLAN FOR WATSON LAND COMPANY IN '97,
17 AGAIN, BEFORE THE ARCO SETTLEMENT?

18 I READ HIM SOMETHING FROM THAT.

19 I SAID (READING):

20

21 "AND YOU SAID EARLIER, DATA
22 FROM PRIOR STUDIES INDICATE THAT THE
23 PETROLEUM COMPOUNDS FOUND ON THESE UNITS
24 PROBABLY RELATED TO OFF-SITE GROUNDWATER
25 MIGRATING ON SITE, FREE-FLOATING PETROLEUM ON
26 GROUNDWATER AND DISSOLVED COMPOUNDS TO
27 GROUNDWATER.

28 "YOU WROTE THAT, DIDN'T YOU

1 SIR?

2 HE SAID: "YES, SIR.

3 "NOW, THE QUALITY ASSURANCE
4 PROJECT PLANS THAT YOU WROTE FOR THE
5 WATSON CENTER, DID YOU WRITE THOSE BEFORE YOU
6 DO FIELD WORK OR AFTER YOU DO FIELD WORK?

7 "BEFORE."

8
9 SO THAT'S WHAT HE WAS EXPECTING TO SEE.

10 WHAT ABOUT THE ARCO CONSULTANTS THAT THEY'RE
11 TALKING ABOUT WITH THE BARRIER WELL INSTALLATION?

12 I SHOWED HIM A PLUME MAP IN NOVEMBER OF 1990.
13 THAT'S ONE OF THE ONES I JUST SHOWED YOU.

14 AND I ASKED HIM AND MR. KIRK (READING):

15
16 "AND THAT'S BASED ON THE BEST
17 HYDROLOGICAL INFORMATION YOU HAD AT THE TIME,
18 ISN'T IT?

19 "A.. YES.

20 "AND IT SHOWS THAT YOUR BEST
21 HYDROLOGICAL INFORMATION AT THE TIME WAS THAT
22 FREE PRODUCT WAS ON THE OTHER SIDE OF
23 WILMINGTON, CORRECT?

24 "YES. THAT'S WHAT THIS
25 DEPICTS.

26 "OKAY. AND YOUR EXPERIENCE AS
27 A HYDROLOGIST, YOU WOULD EXPECT THAT
28 DISSOLVED COMPONENTS SUCH AS BENZENE AND

1 THINGS OF THAT NATURE WOULD MIGRATE FARTHER
2 DOWNGRADIENT THAN THE ACTUAL BOUNDARY OF THE
3 FREE PRODUCT PLUME, CORRECT?

4 "A. YES."

5
6 AND THAT'S BEEN CONSISTENT WITH MR. SIMON, IT'S
7 BEEN CONSISTENT WITH ALL OF THE PEOPLE THAT HAVE TESTIFIED IN
8 THIS CASE; IS THAT YOU WOULD EXPECT THERE TO BE SUBSTANTIALLY
9 OR SUBSTANTIAL AMOUNTS OF BENZENE MIGRATING OFF-SITE.

10 BUT WHAT DOES DR. DAGDIGIAN DO WITH HIS PLUME
11 MAP?

12 REMEMBER, WE HAD SOME BACK AND FORTH ON THAT,
13 AND WE SHOWED YOU HIS PLUME MAP.

14 AND I TOLD HIM, ESPECIALLY ON THAT SOUTH SIDE
15 (READING):

16
17 "THERE'S NO DATA POINTS IN
18 BETWEEN THESE THREE DATA POINTS RIGHT HERE
19 THAT, IF YOU'RE JUST LOOKING AT THE BENZENE
20 CONCENTRATION, COULD ALLOW YOU TO DRAW EITHER
21 OF THESE TWO LINES" --

22
23 AND THAT'S THE NONDETECT LINE, AND THAT'S THE
24 THAT 55 CONTOUR LINE.

25 AND HE SAYS (READING):

26
27 "YOU ARE JUST LOOKING AT THE
28 BENZENE, ABSOLUTELY CORRECT.

1 "NOW, SIR, THIS IS AN EMPTY
2 LOT RIGHT HERE, ISN'T THIS JUST LAND?

3 "A. THAT IS AN EMPTY LOT.

4 "SO IT'S NOT LIKE YOU HAVE TO
5 WORRY ABOUT PUTTING A DATA POINT THROUGH A
6 BUILDING OR DISRUPTING A TENANT OR SOMETHING,
7 CORRECT?

8 "CORRECT.

9 "SO HAD YOU WANTED TO GO OUT
10 AND GET SOME DATA IN THIS AREA TO FILL IN
11 THIS DATA GAP THAT YOU HAVE HERE MARKED AS A
12 QUESTION, YOU COULD HAVE TAKEN SOME SAMPLES,
13 CORRECT?

14 "SURE."

15
16 HE COULD HAVE, BUT HE DIDN'T.

17 WHY NOT?

18 BECAUSE HE WANTED TO SHOW, BY DRAWING HIS
19 PLUMES, THAT THEY SOMEHOW WERE ELONGATED ALONG THE PIPELINE,
20 AS IF TO CONVINCING YOU JUST BY THE WAY HE DREW HIS PLUMES,
21 THAT, OH, THAT MAKES IT SEEM LIKE THERE'S SHELL PIPELINE
22 RELEASE.

23 BUT GO BACK AND LOOK AT DR. DAGDIGIAN'S MAPS
24 AND LOOK AT THE UNDERLYING DATA THAT HE DREW THOSE MAPS ON.

25 AND HE EVEN ADMITTED THAT HE DREW THE PLUME
26 THAT WAY, IGNORING THE ARCO DATA, BECAUSE HE WANTED TO SHOW
27 YOU THAT IT WAS SEPARATE FROM THE ARCO PLUME.

28 OKAY. THAT IS A RESULT-ORIENTED ANALYSIS.

1 I SAID (READING):

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. . . "YOU SAID WE KNOW THAT
THIS PLUME IS SEPARATE FROM THE ARCO PLUME,
SO THEREFORE, I DREW THE NONDETECT IN THIS
AREA, SOMETHING TO THAT EFFECT.

"DO YOU REMEMBER THAT, SIR?"

"A. YES."

AND HE SAID: "IN REALITY, YOU
COULD GO OUT THERE AND YOU DRILL ON THAT LOT,
YOU MAY, FIND SOME ADDITIONAL CONCENTRATIONS
OF BENZENE RIGHT WHERE THAT QUESTION MARK IS.
AND I STILL WOULD DRAW A MAP, THE PLUME, THE
WAY YOU DREW IT, BECAUSE WHAT I WAS TRYING TO
SHOW WAS THE PORTION OF THE PLUME THAT WAS
COMING FROM THE LEAK IN THE UTILITY WAY."

HE DREW THE PLUME BECAUSE IT MADE THE POINT FOR
WHICH HE WAS HIRED AT THE INCEPTION, AND HE KNEW THAT. THE
POINT THAT HE WAS HIRED FOR WAS TO SHOW AND TRY TO CONVINC
YOU THAT THE LEAK CAME FROM THE SHELL PIPELINE.

OKAY. AND THAT IS WHAT MS. MAXFIELD WAS
REFERRING TO WHEN SHE SAID THAT DR. DAGDIGIAN IS LOOKING AT
THE TRUNK OF THE ELEPHANT AND WANTS TO IGNORE EVERYTHING
ELSE.

LET ME SHOW YOU SOMETHING ELSE ABOUT THE PLUME
MAPS, SINCE WE'RE ON THOSE.

FIRST OF ALL, REMEMBER BOTH MS. BERESKI AND

1 DR. DAGDIGIAN TESTIFIED THAT THEY DREW THIS BENZENE
2 MAP -- AND THIS IS THE AREA I WAS TALKING ABOUT AND THE
3 TESTIMONY YOU JUST HAD -- IN ORDER TO TRY TO SHOW THAT IT
4 CAME FROM THE PIPELINE LEAK.

5 AND YOU CAN SEE THE DATA POINTS, 1300, 8900,
6 250, 6400. RIGHT DOWN HERE.

7 BUT HE DREW THE LINE THAT WAY BECAUSE HE KNEW
8 THAT IT CAME FROM THE SHELL PIPELINE, AS OPPOSED TO BEING A
9 SCIENTIST SEEING WHICH WAY THE DATA LEAD AND LOOKING AT ALL
10 THIS STUFF THAT'S OVER HERE THAT'S NEVER ON THEIR MAPS.

11 HE DREW IT LIKE THIS, AND IT LOOKS PRETTY
12 PERSUASIVE.

13 AND YOU KNOW SOMETHING ELSE ABOUT IT?

14 IT MAKES YOU THINK BY THE WAY HE DREW THIS,
15 THIS IS A DISSOLVED PLUME. YOU NOTICE THEY NEVER DREW ANY
16 PLUMES IN. THEY SHOWED YOU JUST THE FREE PRODUCT, WHICH WAS
17 ONLY ONE HIT TO A WELL HERE AND ONE HIT IN A WELL HERE.
18 INSTEAD, THEY TRIED TO MAKE THIS LOOK AS BIG AS THEY COULD,
19 AND THEY TRIED TO THEN COMPARE THAT WITH THE GATX PLUME OR
20 WITH THE ARCO PLUME.

21 BUT WHAT BOTH DR. DAGDIGIAN AND NANCY BERESKI
22 SAID WAS, WE KNOW THIS IS SEPARATE BECAUSE WE BASED IT ON THE
23 DIPE DATA.

24 REMEMBER THAT TESTIMONY?

25 AND WE LOOKED AT THE DIPE PLUME. OH, GEE. IT
26 LOOKS A LOT ALIKE. EXCEPT FOR THE FACT THAT DOWN IN HERE,
27 THEY DIDN'T TEST FOR DIPE HERE. THEY DIDN'T TEST FOR DIPE
28 HERE. THEY DIDN'T TEST FOR DIPE HERE.

1 AND IN FACT, WE KNOW FROM THE TESTIMONY THAT
2 THERE'S DIPE ON THE ARCO REFINERY DOWN HERE AND ALL OVER IN
3 THIS AREA. SO THERE'S DIPE OVER HERE. THEY DIDN'T TEST IT.
4 AND AGAIN, THEY WANTED TO MAKE A POINT, SO THEY DREW IT LIKE
5 THAT.

6 SO JUST BECAUSE THEY DRAW THEIR PLUME MAPS IN A
7 SHAPE DOESN'T MEAN THAT THAT SATISFIES WATSON'S BURDEN OF
8 PROOF ON A SCIENTIFIC BASIS.

9 ONE OTHER POINT.

10 I LOOKED AT THEIR BIG PLUME. THEY HAVE SORT OF
11 A -- ONE WHERE THEY CAME BACK A LITTLE BIT HERE.

12 AGAIN, NOTHING OVER AT ARCO. NOTHING OVER AT
13 ARCO.

14 TAKING MRS. BRIGHT'S EXAMPLE, TRACED A LITTLE
15 THING OF THE B2 PLUME RIGHT HERE TO MAKE A POINT. THE POINT
16 IS JUST WHAT DR. MAXFIELD TESTIFIED; THAT YOU'VE GOT VERY FEW
17 DATA POINTS IN AND AMONGST WILMINGTON. YOU'VE GOT ONE RIGHT
18 HERE, YOU'VE GOT TWO DOWN HERE.

19 OKAY. YOU WOULD NEVER SEE THE B2 PLUME OR
20 SOMETHING LIKE THE B2 PLUME OF BENZENE, FREE PRODUCT
21 MIGRATING OVER THERE, BECAUSE YOU DON'T HAVE ENOUGH DATA
22 POINTS.

23 IN FACT, THOUGH -- AND THIS IS -- I CAN'T
24 REALLY READ VERY WELL. IF YOU GO AHEAD AND LOOK IN THE JURY
25 ROOM, LOOK AT THE DATA POINTS THAT THEY HAVE FOR BENZENE UP
26 IN HERE BECAUSE THEY WERE BIG HITS OF BENZENE.

27 LOOK AT THE FREE PRODUCT THAT THEY FOUND DOWN
28 HERE IN LEVINE-FRICKE MONITORING WELL 1 AND IN THE WSB-25.

1 THEY FOUND FREE PRODUCT THERE, GASOLINE.

2 SO NOT ONLY -- NOT ONLY COULD YOU NOT FIND THE
3 B2 PLUME IF YOU PUT IT IN THAT WAY, BUT, IN FACT, THEY DID
4 FIND SIGNIFICANT HITS OF BENZENE.

5 WHO TOOK THAT INTO ACCOUNT?

6 NOT DR. DAGDIGIAN, BUT MS. MAXFIELD.

7 LOOK AT OVER IN THIS AREA. THERE'S NO DATA
8 POINTS IN THAT AREA. THERE'S NO DATA POINTS RIGHT IN HERE.

9 AND WE SAW THAT THERE'S DATA POINTS DOWN IN
10 HERE, BUT DR. DAGDIGIAN IGNORED THEM.

11 YOU KNOW, YOU DON'T HAVE TO JUST ACCEPT
12 DR. DAGDIGIAN AND MS. BERESKI'S WORD, JUST AS YOU DON'T HAVE
13 TO ACCEPT MS. MAXFIELD'S WORD ON THIS STUFF BECAUSE YOU CAN
14 GO BACK AND LOOK AT THE EVIDENCE.

15 BUT I THINK WHAT YOU'LL SEE WHEN YOU LOOK AT
16 THE EVIDENCE IS YOU'LL SEE SOMETHING THAT LOOKS MUCH MORE
17 LIKE THIS.

18 THIS IS MS. MAXFIELD'S EXHIBIT 3266.

19 AND WHAT SHE DID WAS, SHE TOOK INTO ACCOUNT ALL
20 THE BENZENE THAT'S FOUND OVER HERE. AND SOME OF THESE ARE IN
21 VERY, VERY HIGH AMOUNTS.

22 AND I'LL HAVE TO GET THE BIGGER ONE TO READ
23 THEM TO YOU, TO POINT THEM OUT.

24 RIGHT HERE, BENZENE OF 19,000.

25 RIGHT HERE, BENZENE OF 28,000.

26 RIGHT HERE, BENZENE OF 12,000.

27 RIGHT HERE, WSB-25, BENZENE OF AROUND 12,000.

28 LEVINE-FRICKE MONITORING WELL 1, JUST ACROSS

1 WILMINGTON, 13,000.

2 11,000 UP HERE.

3 17,000 HERE.

4 41,000 HERE.

5 THIS IS THE B2 PLUME AREA. 8900 HERE.

6 6400 HERE, 1300 HERE, 7800 HERE, 11,180 HERE,
7 15,000 HERE, 10,600 HERE, 14,565 HERE, 11,000 OVER HERE.

8 SO WHAT DO YOU HAVE?

9 YOU HAVE BENZENE, SIGNIFICANT AMOUNTS OVER IN
10 HERE.

11 BY THE WAY, IN THE AREA OF THESE TANKS THAT WE
12 DON'T KNOW EXACTLY WHAT WAS IN THEM BECAUSE WE GOT THE
13 REDACTED INFORMATION, BUT WE HAVE VERY HIGH BENZENE.

14 WE HAVE BENZENE RIGHT ACROSS THE WAY IN
15 LEVINE-FRICKE MONITORING WELL 1 AND WSB-25.

16 BUT WE DO HAVE A COUPLE OF POINTS THAT HAVE
17 LOWER BENZENE. RIGHT HERE, MONITORING WELL 161, WHICH IS
18 RIGHT NEXT TO ONE OF ARCO'S BARRIER WELL EXTRACTION POINTS.

19 REMEMBER, MS. MAXFIELD SAID THAT YOU WOULD
20 EXPECT THE LEVELS WOULD BE -- TO BE SMALLER RIGHT THERE
21 BECAUSE OF THE EXTRACTION WELLS.

22 RIGHT OVER HERE, WE'VE GOT THIS AREA OF LOW
23 BENZENE GOING DOWN 223RD STREET. AND WE KNOW THAT BECAUSE
24 MONITORING WELL 536 AND WSB-26, WHICH ARE RIGHT HERE, DIDN'T
25 HAVE HIGH LEVELS.

26 BUT LOOK WHERE THESE TWO EXTRACTION WELLS ARE.
27 RIGHT IN THIS AREA.

28 REMEMBER WHEN MS. MAXFIELD SAID THAT -- THAT

1 RIGHT IN THIS AREA THERE'S A CLAY AREA RIGHT ON THE BOUNDARY,
2 DOWN AT THE WATER TABLE AND SHE WOULD EXPECT THAT TO HAVE A
3 SHADOW EFFECT ON THE DISSOLVED CONSTITUENTS AS THEY WERE
4 MIGRATING OUT, NOT TO MENTION THAT ALL ALONG UP IN HERE, WERE
5 ACTUALLY PULLING BACK ACCORDING TO ARCO'S CONSULTANTS.

6 SO IF YOU LOOK AT MORE THAN JUST THE MISLEADING
7 WATSON PLUMES, AND YOU LOOK AT ALL OF THE DATA OVER AT THE
8 ARCO REFINERY, WHAT YOU'LL SEE IS YOU'LL SEE SOMETHING MUCH
9 MORE SIMILAR TO THIS WHERE THIS -- PERFECTLY REASONABLE TO
10 SUGGEST THAT THE OFF-SITE MIGRATION OF BOTH FREE PRODUCT AND
11 DISSOLVED CONSTITUENTS ARE A SOURCE OF THE CONTAMINATION OVER
12 AT THE B2 PLUME.

13 SOMETHING ELSE, TOO, TO KEEP IN MIND.

14 REMEMBER ARCO DESIGNED THAT BARRIER WELL
15 SYSTEM?

16 REMEMBER ARCO HAS BEEN DRAWING MAPS OVER TIME?

17 REMEMBER EXHIBIT 3194, WHICH IS ALSO UP HERE
18 MARKED AS A SEPARATE EXHIBIT THAT WITNESSES FROM BOTH SIDES
19 HAVE DRAWN ON THAT YOU CAN LOOK IN THE JURY ROOM?

20 THIS IS EXHIBIT -- EXCUSE ME. WE GIVE IT
21 ANOTHER NAME -- 3276.

22 OKAY. WHAT ARE THEY DOING?

23 THE MOST RECENT INFORMATION WE HAVE FROM ARCO
24 IS THAT THEY'RE DRAWING THEIR CAPTURE ZONE AREA OUT HERE,
25 PUTTING ON THE ELMO, DRAW A ROUGH GATX AND ROUGH B2 PLUME.
26 THEY'RE DRAWING IT OUT HERE.

27 REMEMBER, WHY DO YOU SUPPOSE ARCO PUT THEIR
28 BARRIER WELL SYSTEM ALONG WILMINGTON IF THEY WEREN'T

1 CONVINCED THAT THERE IS OFF-SITE MIGRATION OF FREE PRODUCT
2 AND DISSOLVED PLUME CONSTITUENTS?

3 WHY DID YOU SUPPOSE THAT THEY'RE IN THEIR
4 RECENT -- CURRENT SUBMISSIONS TO THE REGIONAL WATER QUALITY
5 CONTROL BOARD THAT THEY'RE NOT DRAWING THEIR BARRIER WELL
6 CAPTURE ZONE LIKE THIS?

7 WHY WOULD THEY BE DRAWING THEIR LINE OUT IN
8 THAT AREA AS A RESULT OF THEIR BARRIER WELL SYSTEM IF ARCO
9 DIDN'T TRULY BELIEVE THAT THEY WERE A SOURCE OF OFF-SITE
10 CONTAMINATION IN THAT AREA?

11 OKAY. YOU CAN TAKE THAT INTO ACCOUNT AS WELL
12 WHEN YOU LOOK AT THE DATA.

13 SO WHAT DO WE HAVE?

14 WE HAVE NOT MUCH DATA THROUGH WHICH, IF YOU
15 WEREN'T RESULT-ORIENTED AND HIRED TO PROVE A POINT LIKE
16 DR. DAGDIGIAN, YOU COULD FIT THE B2 PLUME IN HERE, OVER HERE,
17 DOWN HERE. AND THAT'S ALL IN BETWEEN DATA POINTS.

18 SO THE DATA DOESN'T RULE IT OUT.

19 NOTICE THAT WATSON, WHEN THEY WERE DOING THEIR
20 2001 REPORT, OR THE 2001 TESTING WITH DR. DAGDIGIAN, THEY
21 DIDN'T TAKE ANY DATA POINTS IN THAT AREA.

22 THEY DIDN'T TAKE ANY DATA POINTS TO TRY TO SHOW
23 THAT THERE WAS NO PERCHING LAYER.

24 THEY DIDN'T TAKE ANY DATA POINTS TO SHOW THAT
25 THERE WAS ANY BENZENE.

26 THEY DID NOT TAKE ANY DATA POINTS TO SHOW
27 THAT -- WHAT WAS IN THE SOIL THERE, WHETHER THERE WAS
28 EVIDENCE OF GASOLINE MIGRATION OR OTHER CONSTITUENTS DOWN

1 THROUGH THE SOIL.

2 THEY DIDN'T TAKE ANY DATA POINTS TO TRY TO FIND
3 OUT IF THERE WERE FREE PRODUCT IN THAT AREA.

4 INSTEAD, WHAT THEY DID WAS, THEY JUST TOOK
5 ~~ONETIME HYDROPUNCH SAMPLES OF GROUNDWATER AROUND HERE AND~~
6 AROUND THE A PLUME.

7 AND THAT'S ALL THAT THEY DID.

8 AND I SUBMIT TO YOU THAT THE REASON THEY DID
9 THAT WAS PRECISELY WHAT DR. DAGDIGIAN HAD ADMITTED, BECAUSE
10 HE WAS HIRED TO PROVE A POINT. AND THE POINT WAS THAT THE
11 SHELL PIPELINE CAUSED THE CONTAMINATION, NOT THE
12 ARCO REFINERY. AND THAT'S WHAT HE WAS HIRED TO DO AND HE DID
13 A GOOD JOB OF IT.

14 BUT WE JUST DON'T HAVE TO LOOK AT WHAT HE SAYS.
15 WE CAN LOOK AT WHAT THE DATA SAYS AND WEIGH THAT AGAINST ALL
16 THE OTHER EXPERTS.

17 THE COURT: WOULD THIS BE A GOOD TIME FOR A LUNCH
18 BREAK?

19 MR. LESLIE: YES.

20 THE COURT: LADIES AND GENTLEMEN, SEE YOU AT 1:30.

21

22 (AT 11:58 A.M., A LUNCH RECESS WAS TAKEN
23 UNTIL 1:30 P.M. OF THE SAME DAY.)

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1 CASE NUMBER: BC 150161
2 CASE NAME: WATSON V. SHELL
3 LOS ANGELES, CALIFORNIA MONDAY, JULY 16, 2001
4 DEPARTMENT 307 HON. WENDELL MORTIMER, JR., JUDGE
5 APPEARANCES: (AS NOTED ON TITLE PAGE.)
6 REPORTER: LINDA STALEY, CSR NO. 3359, RMR, CRR
7 TIME: 1:30 P.M.

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THE COURT: BACK ON THE RECORD.

12

CONTINUE, MR. LESLIE.

13

MR. LESLIE: THANK YOU. THANK YOU.

14

15

ARGUMENT (RESUMED)

16

BY MR. LESLIE:

17

MIGRATION PATHWAYS IS BASICALLY WHERE WE ARE

18

NOW.

19

WE TALKED A LITTLE BIT ABOUT THE FLOW

20

DIRECTIONS HISTORICALLY, AND OBVIOUSLY, THEY VARY SOMEWHAT,

21

BUT GENERALLY, THEY DO FLOW IN AN EAST-TO-WEST DIRECTION ON

22

THE REFINERY.

23

WE'VE SEEN THAT THEY ALSO GO IN AN EAST-TO-WEST

24

DIRECTION OFF ONTO THE WICS PROPERTY AS WELL. ALTHOUGH THAT

25

CHANGED AFTER ARCO STARTED PUMPING ITS BARRIER WELL SYSTEM.

26

WHAT ABOUT THE OTHER POSSIBLE MIGRATION

27

PATHWAYS?

28

AND THIS IS SOMETHING YOU SHOULD KEEP IN MIND

1 AS YOU EVALUATE ALL THE EVIDENCE IN THIS CASE.

2 ONE OF THE THINGS THAT PEOPLE CAN DO TO TRY TO
3 SHOOT AN ARGUMENT DOWN IS THEY -- TO CREATE WHAT'S KNOWN AS A
4 STRAW MAN.

5 ~~IN OTHER WORDS, YOU CHARACTERIZE SOMETHING AWAY~~
6 THAT DOES NOT MAKE ANY SENSE AND THEN YOU EASILY SHOOT IT
7 DOWN HOPING THAT THE PERSON'S NOT GOING TO FOCUS ON WHERE
8 YOU'VE MADE THE SWITCHES.

9 ONE OF THE PLACES THAT WATSON HAS DONE THAT IS
10 HERE ON THIS PERCHING LAYER.

11 REMEMBER DR. DAGDIGIAN SAID IT'S A TABLE TOP.
12 SHOULD BE IMPERVIOUS. IF IT LEAKS, THAT MEANS WE KNOW IT'S
13 NOT ANYWHERE. WE KNOW IT'S NOT OPERATING. WE KNOW THAT
14 THERE HAS TO BE A CONTINUOUS SHEET OF STUFF MOVING DOWN OVER
15 THE TABLE TOP AND DUMP PRECISELY IN THE RIGHT DIRECTION IN
16 ORDER FOR THIS PERCHING LAYER THEORY TO WORK AT ALL.

17 BUT WE'VE ALSO HEARD THAT THAT'S SIMPLY NOT THE
18 REALITY. THAT'S -- IT'S NOT THE WAY THINGS HAPPEN
19 UNDERGROUND.

20 IT'S NOT WHAT THE PERCHING LAYERS ARE. IT'S
21 NOT WHAT MS. MAXFIELD HAS EVER SUGGESTED WHAT THE PERCHING
22 LAYER LOOKS LIKE.

23 WHAT WE DO KNOW ABOUT THE PERCHING LAYER IS
24 ARCO HAS DISCOVERED IT EXTENSIVELY ON THEIR REFINERY IN AREAS
25 MUCH MORE EXTENSIVE AND -- THAN WOULD BE REQUIRED EVEN TO
26 JUST GET IT OVER CLOSE TO THE B2 REGION.

27 NOW, WE KNOW THAT BECAUSE, FIRST OF ALL, IN A
28 VERY EARLY REPORT, MR. TESTA AT 95, WHICH WAS JUST HIS

1 SCHEMATIC AS TO HOW THE PERCHING LAYER COULD OCCUR AND HOW IT
2 COULD GO FROM ONE CLAY LAYER TO ANOTHER CAN ACTUALLY GO, AND
3 IF SOME FREE PRODUCT IN AN AREA THAT WOULD APPEAR TO BE
4 AGAINST THE GROUNDWATER FLOW DIRECTION. WE'VE SEEN HERE WHAT
5 THE GROUNDWATER FLOW DIRECTION GENERALLY IS, BUT THE POINT
6 IS, IS THAT THE PERCHING LAYER COMES ACROSS IN THE MIDDLE OF
7 THE SOIL.

8 NOW, WE ALSO HEARD FROM MS. MAXFIELD THAT, IN
9 FACT, EVEN IF THIS IS A LITTLE BIT SIMPLIFIED, AND WHAT YOU
10 WOULD REALLY HAVE IN MOST PERCHING LAYERS, YOU WOULD HAVE
11 SOME SLOW PERCOLATION DOWN AT VARIOUS AREAS IN HERE OVER
12 TIME. AND THAT YOU WOULD EXPECT THAT THERE MAY BE -- NOT HAS
13 TO BE -- BUT THERE MAY BE SOME SORT OF MIGRATION THROUGH THE
14 PERCHING LAYER AS WELL.

15 SO IT'S NOT A TABLE TOP. IT'S NOT IMPERVIOUS.
16 IT'S JUST A LAYER OF CLAY AND SILT. THAT'S ALL IT IS.

17 AND YOU'LL RECALL WHAT MS. MAXFIELD SAID WAS
18 THE WAY THAT THIS WAS DEPOSITED. AND IT WAS DEPOSITED JUST
19 LIKE THIS STREAM BED.

20 OKAY. SEE HOW THE WATER WAS ALSO FLOWING SORT
21 OF IN LITTLE FINGERS?

22 IT'S THAT FLOWING IN A GIANT CONTINUOUS SHEET
23 HUNDREDS OF YARDS WIDE. EVERYBODY'S SEEN THESE DRY
24 STREAMBEDS IN CALIFORNIA -- THE VENTURA RIVER, BASICALLY, ANY
25 OF THE UNLINED RIVERS ARE -- ARE MUCH LIKE THIS. ANY OF THE
26 WASH THAT'S COME DOWN FROM THE MOUNTAINS ARE LIKE THIS.

27 OKAY. SO THE HYDRATION ON THE PERCHING LAYER,
28 ACCORDING TO MS. MAXFIELD, CAN BE SEASONAL. IT CAN DEPEND ON

1 WHAT THE RAIN IS, IT CAN DEPEND ON SOURCES OF WATER THAT THEN
2 COME DOWN ON TOP OF THIS CLAY. AND WHEN IT DOES COME DOWN,
3 IT CAN MIGRATE OVER THAT.

4 NOW, WE ALSO SAW HER OTHER PHOTOGRAPHS WHERE
5 ~~THE PERCHING LAYER IS NOT NECESSARILY A CONTINUOUS TABLE TOP.~~
6 AND SHE USED THIS PHOTOGRAPH AS AN EXAMPLE OF HOW FAR YOU CAN
7 HAVE CLAY. AND THEN VERY CLOSE TO THAT, IT CAN COURSE EVEN
8 OUT BECAUSE OF THE WAY IT'S LAID DOWN. IT'S LAID DOWN IN A
9 STREAM, MIGRATING OVER TIME.

10 SOME PLACES, IT'S MORE CONTINUOUS THAN OTHERS.
11 SOME PLACES, THE GRAVEL SORT OF PINCHES OUT IN HERE.

12 SO IT DEPENDS A LOT ON WHERE YOU SINK YOUR
13 WELL, AND MORE IMPORTANT, THE POINT SHE MADE WAS, IT DEPENDS
14 ON WHERE YOU TAKE YOUR SAMPLES.

15 AND YOU'LL REMEMBER THAT WE STRETCHED OUT THE
16 TAPE MEASURE AND SHE SHOWED YOU THE SPLIT SPOON SAMPLER,
17 WHICH IS ABOUT THIS LONG.

18 AND ARCO WHO, OBVIOUSLY, HAS AN INTEREST NOT IN
19 TRACING THE PERCHING LAYER OUT ACROSS THE WICS FOR OBVIOUS
20 REASONS, TOOK ONLY SOIL SAMPLES ONCE EVERY 10 FEET. SO THAT
21 LEAVES US WITH A PIECE OF THE SOIL COLUMN IN WHICH WE DON'T
22 HAVE GOOD DATA OTHER THAN THE CUTTINGS THAT COME UP FROM THE
23 HOLE.

24 AND THINK OF IT. IF ANYBODY'S EVER DRILLED
25 DOWN INTO A PIECE OF WOOD WITH AN AUGER, THE THINGS COME UP
26 IN NICE, EVEN LAYERS. NOT -- IT ALL JUST COMES UP LIKE THIS.
27 AND MS. MAXFIELD TESTIFIED WHAT A FIELD GEOLOGIST IS OUT
28 THERE DOING.

1 HE'S GOT TO LOG THE SPLIT SAMPLE AND -- EXCUSE
2 ME -- THE SPLIT SPOON SAMPLE THAT -- THAT YOU OBTAIN, HE'S
3 GOT TO LABEL IT, HE'S GOT TO SEND A SOIL SAMPLE TO THE
4 LABORATORY ALL THE WHILE THE DRILLER IS GOING DOWN, DOWN,
5 DOWN, DRILLING, DRILLING, DRILLING, CUT, COMING UP.

6 SO MRS. BRIGHT TRIED TO MAKE A BIG DEAL OVER
7 THE FACT OF WHETHER CERTAIN WELL LOGS HAD CLAY, SEPARATELY
8 CULLED OUT IN THE CUTTINGS. WHAT MS. MAXFIELD TOLD YOU,
9 BASED ON HER EXPERIENCE OF ACTUALLY BEING OUT IN THE FIELD
10 AND SUPERVISING INVESTIGATIONS LIKE THIS, IS THAT THAT'S NOT
11 AN ACCURATE INDICATION OF WHAT'S REALLY THERE.

12 WHAT YOU REALLY NEED TO FULLY DETERMINE WHAT'S
13 UNDER THE GROUND IS, YOU NEED EITHER THE BEST -- WOULD BE A
14 CONTINUOUS CORE. OKAY. WHICH MS. BERESKI TESTIFIED WOULD
15 COST ABOUT \$2500 A POP. OR YOU NEED SAMPLES TAKEN EVERY FIVE
16 FEET, WHICH WAS DONE BY WATSON WHEN THEY TOOK THE WSB SOIL
17 BORINGS. SO WE'VE GOT SOME INDICATION FROM THAT.

18 NOW, WHAT ABOUT -- WHAT DOES ARCO SAY ABOUT
19 THIS?

20 EXHIBIT 3277, WHICH YOU'VE SEEN, AND I SHOWED
21 IT TO YOU IN MY OPENING. THIS ISN'T FREE PRODUCT. BUT THIS
22 IS THE HISTORIC AND THE KNOWN EXTENT OF THE PERCHED ZONE AT
23 THE TIME OF DECEMBER 16TH, 1993.

24 AND WHAT MR. TESTA TESTIFIED WAS HE TESTIFIED
25 THAT AT SOME POINT ON THE ARCO REFINERY, SOMETIMES, THERE'S
26 WATER ON TOP OF THE PERCHED ZONE, SOMETIMES THERE'S NOT. BUT
27 WHAT THIS INDICATES IS THIS INDICATES THE LITHOLOGIC LAYER OF
28 SILT AND CLAY THAT ARCO HAS FOUND ON ITS REFINERY IN ITS WELL

1 LOGS.

2 AND HE ALSO TESTIFIED TO SOMETHING VERY
3 IMPORTANT. AND THAT IS, WHAT'S OBVIOUS, IS THAT IT DOESN'T
4 STOP RIGHT HERE. MR. KIRK SAID IT DOESN'T STOP RIGHT HERE.
5 ~~WHAT MR. KIRK SAID, WHO WAS THE GUY IN CHARGE AT THIS TIME~~
6 THAT THIS WAS DONE IS, HE SAID, THEY STOPPED IT THERE BECAUSE
7 THEY DIDN'T MAP IT OUT BEYOND THAT BOUNDARY.

8 THAT'S WHAT HE SAID. THEY DIDN'T MAP IT OUT
9 BEYOND THAT BOUNDARY.

10 NOW, WHY WOULD ARCO NOT HAVE AN INTEREST WHEN
11 THEY'RE SINKING THESE OFF-SITE WELLS IN TRACING THE PERCHING
12 LAYER THAT THEY KNOW HAD CONTAMINATION RESTING ON IT IN THE
13 AREA RIGHT IN HERE?

14 WHY WOULD THEY DO THAT?

15 WELL, BECAUSE THEY HAD NO INTEREST IN
16 DEPOSITING.

17 MR. KIRK SAID HE WAS CONCERNED ABOUT LIABILITY.
18 MR. SIMONS SAID HE WAS CONCERNED ABOUT LIABILITY. YOU SAW
19 WHAT MR. BAKER SAID IN HIS NOTES.

20 SO WE KNOW THAT ARCO FOUND THAT THIS PERCHING
21 LAYER CAN BE VERY EXTENSIVE. IT MAY NOT ALL HAVE WATER ON
22 IT. IT MAY NOT ALL HAVE PRODUCT ON IT. BUT IT'S THE
23 PERCHING LAYER OF CLAY AND SILT THAT'S AT ISSUE HERE AS
24 ANOTHER POTENTIAL MIGRATION PATHWAY.

25 AND WHAT MS. MAXFIELD SAID WAS, IT DOESN'T GO
26 DOWN IN A SHEET LIKE A TABLE TOP. IT GOES DOWN IN LITTLE
27 FINGERS LIKE A HOSE ON A DRY ROAD. IT DOESN'T GO IN ONE
28 SHEET. IT FINDS ITS PATH AND GOES IN LITTLE FINGERS, AND IT

1 CAN GO PLACES.

2 WELL, WHAT DID WE FIND OUT ABOUT THIS?

3 WELL, HERE'S WHAT MS. MAXFIELD DETERMINED AS
4 PART OF HER CONCEPTUAL SITE MODEL, EXHIBIT 3197. AND ALL SHE
5 DID WAS SHE EXTENDED THIS BOUNDARY FROM ARCO. ARCO HAD
6 STOPPED RIGHT HERE.

7 AND SHE DETERMINES THAT, IN HER BEST ESTIMATE,
8 AS A HYDROGEOLOGIST AND A FATE-AND-TRANSPORT PERSON, IT DOES
9 EXTEND OFF THE SITE.

10 AT THE TIME SHE DID THIS, SHE DIDN'T HAVE MUCH
11 DATA TO FULLY MAP THIS. SO SHE PUT A LOT OF QUESTION MARKS.

12 BUT LOOK AT THE GAPS IN BETWEEN THE DATA POINTS
13 AT WSB-25 OUT THAT -- THE C SERIES?

14 WELL, WHICH I THINK WAS REFUSED, SO THEY DIDN'T
15 GET ANY INFORMATION ON THAT WSB-4, WSB-26. SO THERE'S VERY,
16 VERY FEW DATA POINTS IN HERE. THERE'S VERY, VERY FEW DATA
17 POINTS UP AND DOWN WILMINGTON.

18 WHAT YOU'LL ALSO SEE ON THIS IS
19 THIS -- REMEMBER, WE SAW THOSE GROUNDWATER FLOW DIRECTIONS
20 FROM THE ARCO POTENTIOMETRIC SURFACE MAPS?

21 SHE JUST PUT THOSE ON TO SHOW THAT NOT ONLY IS
22 POTENTIAL PATHWAY IN THE GROUNDWATER IN THE DIRECTION THAT IT
23 WOULD GO, BUT ALSO A POTENTIAL PRESENCE OF A PERCHING LAYER.

24 NOW, WATSON LAND COMPANY MADE A BIG ISSUE OF
25 CROSS-EXAMINING MS. MAXFIELD ON WHERE EXACTLY WAS THIS CLAY
26 AND THE DIFFERENT BORINGS, AND COULDN'T YOU HAVE SAID
27 THAT -- YOU SAID IT WAS HERE, BUT COULDN'T YOU HAVE ALSO SAID
28 THAT MAYBE IT WASN'T THERE AT THE SAME TIME?

1 WELL, LET'S LOOK AT WHAT MS. MAXFIELD'S
2 CROSS-SECTION IS.

3 FIRST OF ALL, WE KNOW THAT THE PERCHING
4 SEDIMENTS ARE VERY EXTENSIVE THROUGHOUT THE ARCO REFINERY
5 BECAUSE THAT'S WHAT ARCO FOUND. THAT'S WHAT ARCO'S OWN MAP
6 SAYS.

7 RIGHT HERE, WSB-26, HE'S SHOWING A PERCHING
8 LAYER AT AROUND MINUS 5 OR SO, MINUS 10.

9 SO I GOT CURIOUS.

10 SO I DECIDED TO LOOK AND SEE WHAT WATSON'S
11 PEOPLE SAW. BECAUSE YOU'LL RECALL THAT ONE OF THE BIG POINTS
12 OF CONTENTION RAISED BY WATSON'S COUNSEL WHEN THEY WERE
13 CROSS-EXAMINING WAS THIS AREA.

14 THERE'S A SPIDER -- EXCUSE ME.

15 WATSON'S COUNSEL CROSS-EXAMINED MS. MAXFIELD
16 ABOUT THIS AREA RIGHT IN HERE.

17 WATSON CONCEDES THAT THE WELLBORE FOR WSB-26
18 SHOWS FIVE FEET OF CLAY SILT THAT COULD FORM A PERCHING
19 LAYER.

20 WHAT MS. MAXFIELD STATED HERE WAS THAT SHE SAW
21 EVIDENCE OF WHAT SHE FELT WAS A REASONABLE INFERENCE OF A
22 PERCHING LAYER IN WELL 536. SHE POINTED OUT, BUT WITH THIS,
23 THAT THE SAMPLING -- THE UNSAMPLED INTERVAL WAS 8.5 FEET.

24 SO INSTEAD OF TRYING TO PULL ONE OVER ON US, AS
25 MS. BRIGHT TRIED TO INDICATE, SHE, IN FACT, NOTED THAT RIGHT
26 ON HER CHART OF THE VAGARIES OF THE DATA BECAUSE THAT'S WHAT
27 SCIENTISTS DO. WHERE IT NEEDS A FOOTNOTE, THEY DROP A
28 FOOTNOTE. WHERE IT NEEDS TO HAVE QUALIFICATION, THEY DROP A

1 QUALIFICATION.

2 BUT LOOK AT THIS. THIS IS EXHIBIT 1503, WHICH
3 IS DR. DAGDIGIAN'S AND MS. BERESKI'S CROSS-SECTION OF THE
4 SAME AREA. WHAT TWO DATA POINTS DO THEY RELY ON?

5 ~~WSB-26 AND MW-536.~~

6 WHAT DO THEY FIND IN THE SAME EXACT LOCATION?

7 CLAY SILT. SAME SORT OF PERCHING LAYER.

8 WHAT DEPTH IS THAT?

9 AROUND MINUS 5 OR SO IN ONE WELL; AROUND MINUS
10 7 OR 8 OR SO IN WELL 536.

11 SAME THING THAT MS. MAXFIELD HAD ON HERS.

12 WE HAVE MINUS 5 OR SO RIGHT IN HERE, PLUS OR
13 MINUS, GOES DOWN TO MINUS 7 OR SO, PLUS OR MINUS OVER IN
14 HERE, AND THIS IS BASED ON WSB-26.

15 SO APPARENTLY, CROSS-EXAMINATION FROM COUNSEL
16 ASIDE, WATSON'S OWN HYDROGEOLOGIST FELT CONFIDENT IN PUTTING
17 IN HERE IN WELL 536 THAT THE PERCHING LAYER EXISTED HERE, AND
18 WE KNOW IT EXISTED IN WSB-26.

19 OKAY. THAT'S THE SAME EXACT THING THAT
20 MS. MAXFIELD POSTULATED. THAT'S WHY SHE DIDN'T DRAW A ZERO
21 LINE HERE BECAUSE SHE FELT HER BEST HYDROLOGIC JUDGMENT WAS,
22 GIVEN THE FACT THAT WSB-26 IS RIGHT ACROSS THE ROAD, AND
23 GIVEN THE FACT THAT THE SAMPLING INTERVAL WAS EVERY 10 FEET
24 WITH ARCO, THAT IT WAS REASONABLE TO INFER THAT THE PERCHING
25 LAYER EXISTED IN THIS AREA AS WELL.

26 WHAT'S THE DIFFERENCE WITH WATSON'S
27 CROSS-SECTION?

28 THE DIFFERENCE IS THAT YOU'LL NOTE THAT THERE

1 IS NO DATA IN BETWEEN THESE POINTS AT ALL. BUT THEY
2 MIRACULOUSLY STOP THE PERCHING LAYER RIGHT IN HERE, WHICH WE
3 KNOW WAS A -- REALLY VERY EXTENSIVE THROUGHOUT THE
4 ARCO REFINERY.

5 IT'S JUST AS PLAUSIBLE AND, IN FACT, MORE
6 PLAUSIBLE WHEN YOU LISTEN TO MS. MAXFIELD'S TESTIMONY AND YOU
7 SEE THAT SHE DID SIX OR EIGHT DIFFERENT CROSS-SECTIONS. AND
8 YOU CAN LOOK AT THOSE, WHICH IS WHAT GEOLOGISTS DO WHEN
9 THEY'RE NOT TRYING TO PROVE A POINT. JUST AS REASONABLE THAT
10 THIS CAN COME RIGHT OVER IN HERE. IT MIGHT THICKEN, IT MIGHT
11 THIN. BUT GENERALLY, THERE'S NO REASON TO THINK IT DOESN'T
12 COME HERE.

13 AND LOOK WHAT'S OVER HERE.

14 IT'S IN MW-2. IT'S IN MW-4 OR MW-1. AND IT'S
15 IN MW-4. RIGHT OVER HERE.

16 THE ONLY QUESTION WOULD BE THIS ONE RIGHT HERE,
17 WSB-4. WSB-4.

18 OKAY. WATSON SAYS IT'S IN MW-2. WATSON SAYS
19 THEY DON'T HAVE IT IN WSB-4, AND THEY HAVE IT IN BOTH 536 AND
20 26.

21 SO WHAT DID MS. MAXFIELD DO ON HER GRAPH?

22 WELL, WHAT SHE SAID, IT'S IN MW-536, PROBABLY
23 INFERRED.

24 IT'S DEFINITELY IN WSB-26.

25 IT'S IN MW-2 AT 15 FEET. VERY MUCH THERE.

26 SHE'S NOT SURE IT'S IN WSB-4 FOR SURE.

27 REMEMBER, SHE SAID IT WAS LESS THAN 3.5 FEET?

28 WELL, IF YOU LOOK AT THE BORING LOG FOR WSB-4,

1 WHAT YOU'LL SEE IS RIGHT ABOUT AT THE SAME LEVEL, THEY HAVE
2 AN INCREASE IN SILT, SOME CLAY.

3 THEY DON'T HAVE A SAMPLE RIGHT IN THAT AREA,
4 BUT IT'S RIGHT ABOVE WHERE THEY HAD A SAMPLE.

5 ~~SO IT'S REASONABLE TO INFER THAT THE PERCHING~~
6 LAYER MIGHT BE THERE, TOO.

7 IT DOESN'T HAVE TO BE THERE. MS. MAXFIELD SAID
8 SHE'S NOT TRYING TO OVERSIMPLIFY THINGS BECAUSE THINGS ARE
9 COMPLICATED. IT COULD BE IN CERTAIN WELLS AND IT COULD BE IN
10 OTHER WELLS.

11 BUT REMEMBER, MRS. BRIGHT MADE A BIG DEAL HERE
12 ABOUT ZERO LESS THAN 3.5, ZERO LESS THAN 3.5, ZERO LESS THAN
13 3.5.

14 WELL, THAT'S THE ZERO LINE THAT SHE HAD.

15 WHAT ABOUT RIGHT HERE?

16 WHAT IF WE WANTED TO SAY ZERO LESS THAN 3.5?

17 THAT'S WSB-4, EVEN THOUGH IT'S NEXT TO MW-2,
18 WHICH HAD 15 FEET OF CLAY SILT.

19 SO WHAT'S THE DIFFERENCE IN THE THEORY IF WE
20 DRAW THE LINE LIKE THIS?

21 IT'S NOT THAT MUCH DIFFERENCE IN THE THEORY.
22 WHAT IT SHOWS IS, IT SHOWS THAT THERE IS THE PRESENCE OF A
23 CLAY LAYER AS RECOGNIZED EVEN BY WATSON'S CONSULTANTS THAT
24 COULD FORM A POTENTIAL MIGRATION PATHWAY. AND IT TENDS TO
25 PINCH OUT IN THIS GENERAL AREA.

26 THE ONLY THING THAT WATSON'S PEOPLE DID,
27 DR. DAGDIGIAN'S TEAM, IS THEY CHOSE TO ABRUPTLY TERMINATE
28 THIS HERE WITHOUT ANY OF THE DATA POINTS IN BETWEEN, AND STOP

1 IT AND THEN PICK IT UP RIGHT HERE.

2 SO THEY SAY, GEE, LOOK AT THE CROSS-SECTION.
3 THIS INDICATES IT'S NOT HERE.

4 BUT IN FACT, JUST AS REASONABLE AN INFERENCE IS
5 ~~THAT, IN FACT, IT'S THERE. AND IN FACT, THAT IS REASONABLE,~~
6 BECAUSE YOU LOOK AT -- HERE IT IS ON THE ARCO REFINERY. AND
7 IT'S RIGHT IN THAT SAME GENERAL AREA.

8 SO DOES THAT RULE OUT A MIGRATION PATHWAY ON
9 THE PERCHING LAYER?

10 OF COURSE, IT DOESN'T RULE OUT A PERCHING LAYER
11 THAT COULD FORM A MIGRATION PATHWAY.

12 WHAT OTHER EVIDENCE DO WE HAVE THAT IT'S AN
13 UNREASONABLE ASSUMPTION THAT THE CONTAMINATION FROM ARCO MAY
14 HAVE GOTTEN OVER AS FAR AS THE B2 PLUME?

15 WELL, WE HAVE WATSON'S OWN DISCOVERY, WHICH YOU
16 SAW.

17 WE ASKED MR. WEEKS ABOUT IT. WHAT DID THEY SAY
18 IN FALL OF 2000?

19 FALL OF 2000, WHO WAS THE CAUSE OF B2 PLUME IN
20 THE AREA OF 165 AND 166?

21 SHELL AND ARCO.

22 WHAT ABOUT THE OTHER BUILDINGS, 151 AND 152?

23 SHELL AND ARCO.

24 WHAT ABOUT 146?

25 SHELL AND ARCO.

26 NOW, WE ASKED MR. WEEKS ABOUT THIS. YOU'LL
27 RECALL THAT MR. WEEKS VERIFIED THESE RESPONSES.

28 I ASKED HIM (READING):

1 . . . "YOU VERIFY ON BEHALF OF
2 WATSON LAND COMPANY THAT THE CONTAMINATION
3 UNDER BUILDING 165 WAS ATTRIBUTABLE TO SHELL
4 AND ARCO.

5 "DO YOU SEE THAT?"

6 "A. YES.

7 "Q. AND YOU VERIFIED THAT UNDER
8 PENALTY OF PERJURY, CORRECT?

9 "A. YES.

10 "Q. AND THAT WAS TRUE AND CORRECT
11 AS OF THE TIME YOU VERIFIED THESE RESPONSES,
12 WAS IT NOT, SIR?

13 "A. TO THE BEST OF MY KNOWLEDGE,
14 YES.

15 "Q. BUILDING 165, WHICH IS RIGHT
16 NEXT-DOOR TO THE B2 PLUME -- ACTUALLY, I
17 THINK IT'S PART OF IT.

18 "LET'S SHOW THAT. IT'S THIS
19 BUILDING RIGHT IN HERE.

20 "DO YOU SEE THAT?"

21 "YES.

22 "SO AT THE TIME YOU VERIFIED
23 THESE RESPONSES, TO THE BEST OF
24 WATSON LAND COMPANY'S KNOWLEDGE, THE
25 CONTAMINATION IDENTIFIED AS THE B2 PLUME
26 UNDER BUILDINGS 165, 166 AND 152 WAS
27 ATTRIBUTED JOINTLY TO SHELL AND ARCO; IS THAT
28 RIGHT?

1 "A. YES.

2 "Q. AND THAT WAS BEFORE THE
3 SETTLEMENT BETWEEN WATSON LAND COMPANY AND
4 ARCO, CORRECT?

5 "A. YES."

6
7 THAT'S WHAT WATSON HAS SAID THROUGHOUT UP UNTIL
8 2001 WHEN THEY SETTLED WITH ARCO, WHEN THEY HIRED
9 DR. DAGDIGIAN.

10 OKAY. NOW, MRS. BRIGHT INDICATED, OH, WELL, WE
11 GOT A LOT MORE DATA AFTER THAT POINT THAT ENABLED US TO SAY,
12 YES, IT'S CONCLUSIVELY SHELL'S.

13 WELL, WHAT EXTRA DATA DID THEY GET?

14 THEY GOT DR. DAGDIGIAN'S HYDROPUNCHES, NO SOIL
15 INFORMATION WITH NO SOIL SAMPLING, WHERE HE WAS JUST SIMPLY
16 DEFINING SOME OF THE B2 PLUME.

17 WE GOT DR. DAGDIGIAN'S BENZENE PLUME, WHICH
18 WE'VE SEEN DOES NOT CONFORM TO THE DATA AND COULD BE DRAWN
19 IN -- MERGE INTO THE ARCO REFINERY, IF YOU CHOOSE ALL DATA.

20 THAT'S WHAT WE HAVE.

21 WHAT WE REALLY HAVE IS, WE'VE GOT WHAT
22 DR. DAGDIGIAN ADMITTED, AND THAT WAS THAT HE KNEW AT THE TIME
23 WHEN HE WAS HIRED THAT HIS JOB HERE WAS TO TRY TO PROVE
24 CONTAMINATION BY SHELL. THAT WAS HIS JOB, AND HE WAS HIRED
25 PARTIALLY FOR LITIGATION EXPERTISE.

26 SO I FOLLOWED UP WITH MR. WEEKS (READING):

27

28

"SO WATSON LAND COMPANY, AS OF

1 NOVEMBER OF LAST YEAR, WAS SAYING THAT THERE
2 WAS MIGRATION OF MATERIAL FROM UNDER THE
3 ARCO REFINERY OVER TO THE AREA OF
4 BUILDING 155 ON THE OTHER SIDE" -- "ON THE
5 OTHER SIDE OF THE B2 PLUME."

6 "DO YOU SEE THAT?

7 "A. YES.

8 "Q. AND AT THE TIME THAT YOU
9 LEARNED THAT THERE WAS CONTAMINATION UNDER
10 BUILDING 165, YOU WERE TOLD THAT THE CAUSE OF
11 THE CONTAMINATION WAS ARCO CONTAMINATION OF
12 THE GROUNDWATER; ISN'T THAT RIGHT?"

13 AND HE SAID: "I DON'T RECALL
14 THAT SPECIFICALLY, NO."

15
16 AND THEN I READ FROM HIS DEPOSITION (READING):

17
18 "AND AT THE TIME YOU HEARD
19 ABOUT SAMPLING, WHAT WERE YOU TOLD AS TO WHAT
20 THE CAUSE OF THE CONTAMINATION WAS?

21 "A. AS I RECALL, IT WAS THE ARCO
22 GROUNDWATER."

23
24 THAT'S WHAT HE TESTIFIED AT DEPOSITION, EVEN
25 THOUGH HE WAS RELUCTANT TO TESTIFY ABOUT IT HERE AT TRIAL.

26 NOW, YOU REMEMBER THAT ONE OF THE THINGS THAT
27 WATSON LAWYERS DID IS THEY TRIED TO AVOID THAT FACT, AND THEY
28 READ YOU A WHOLE PAGE OF MUMBO JUMBO SAYING ABOUT HOW, OH,