

1 further water could be injected, as I understand your state-
2 ment, is not factual. Definitely -- and this is normal for
3 any injection well -- the maximum rate of injection at a given
4 pressure is achieved when the well is first put on an injection
5 line and actually a back pressure and reservoir pressure builds
6 up; and as the reservoir pressure builds up and to maintain
7 the initial pressures, increasing pressure must be applied.
8 Consequently, you don't reach the highest pressures and over a
9 period of time you get lesser and lesser water injection into
10 the well during its remaining life.

11 There are some wells that are already past that
12 point where the rate of injection, the capacity to absorb
13 water into the reservoir has increased, but we are not aware of
14 any wells at the present moment -- correct me if I am wrong --
15 where we have reached the ultimate and no further water can be
16 injected -- which I understood to be the report you were making
17 your inquiry on.

18 Now, going back to the first question, the volumes
19 of water under high pressure, the gallons or barrels, are simply
20 the maximum by which we hope to achieve the pressure restoration
21 and you might be oversimplifying it again. You might consider
22 the barrels of water as the vehicle to carry the pressure down
23 there, as the vehicle to get it down there -- so both barrels
24 and pressure are involved at all times.

25 MR. CARR: Do I understand correctly, or is this
26 correct, that in some wells the pressure built up for a period

1 under a certain rate of injection and maybe blew a plug some-
2 place and the water continued to go in and the pressure went
3 down?

4 MR. HORTIG: I am not aware of any such specific
5 instance in any of our analyses. The City of Long Beach may
6 be. You might ask Mr. Roberts.

7 MR. ROBERTS: Your engineering job, as your gentlemen
8 will tell you, is never done in your water flooding. For
9 example, after you put these wells down, they gradually build
10 the pressures up to see how much they can take without breaking
11 down the formation. Then they make periodic spinner surveys
12 that determine pretty well where the water is going into the
13 subsands in the zone; and after this has been going on for a
14 while we have had cases where one subsand has turned out to be
15 a thief and taken a lot more water than it should. In those
16 cases, you have to take corrective measures. In some cases
17 it means shutting the well down, perforate to cut off that
18 thief sand. Even in some cases you might have to end up by
19 drilling another well to take care of certain sands. This is
20 a constant control problem that will go on all through the
21 years of this operation.

22 MR. CARR: That brings me up to this question --
23 the discussion we had at one time with regard to running this
24 data into an analog computer. I am not a doodlebug hound, but
25 I think that is one of the things we should decide, as to
26 whether or not that is an aid to the determination of how to

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1 conduct this program and I just wondered if that had been
2 completely passed off or what.

3 MAYOR KEALER: May I answer that? First, I'd like
4 to say we appreciate your tolerance in listening to us because
5 last May I asked you people to give us some time and suggested
6 that we work out this problem. The rest is history. We appre-
7 ciate your consideration and the time you have given us. The
8 Attorney General's office has been most considerate in sending
9 men down to talk to our people. I want you to know we sure
10 appreciate it and hope to reach a solution.

11 To answer your question, following Mr. Hortig's sug-
12 gestion, I wrote a letter to the Harbor Commission suggesting
13 this analog computer study, and suggested they study the
14 feasibility of that. Following that the Board did, and dele-
15 gated to DeGolyer and MacNaughton to explore this possibility
16 and report back to the Board.

17 MR. RIDINGS: I might add we have a preliminary
18 report from DeGolyer and MacNaughton, in which they state they
19 went study from the multiple sand situation -- they feel there
20 would be complications for even one of these high fallutin'
21 computers; but they are going ahead with the study.

22 MAYOR KEALER: I might go further, because in this
23 memo from Mr. Hortig he also asked about the feasibility of
24 another facet of this thing and that was reconciling the various
25 figures on elevations and bench marks, and so forth; and the
26 Board of Harbor Commissioners has engaged a consultant who is

1 doing that very thing.

2 I'd like to add another thing, one that might help
3 Mr. Zweiback in his question on quantity of wells. The
4 quantity is one thing, but the important thing about it -- in
5 which Mr. Hertig, I think, will concur -- is quantity of wells
6 has to do with the spacing. You have to put these in certain
7 places, so you are not only putting the volume, but placing
8 your volume so the pressure is not in one place. You have to
9 put these wells in the spots where they will do the most good
10 and not put water where you don't want it to go.

11 MR. CARR: With respect to that, I recall when
12 movement of earth sheared off some wells. How many wells
13 were sheared off?

14 MAYOR KEALER: There were several. Of course, the
15 biggest happened in 1949 -- 155 wells went out then -- not
16 all City.

17 MR. CARR: Mr. Roberts suggested a while ago further
18 work might be endangered by further movement. Has there been
19 any movement? What's his name, Branson -- do I understand he
20 ran several million punch cards in Texas to get some of the
21 data that might be produced by analog computers?

22 MR. ROBERTS: We have a lot of cards; we use punch
23 cards on this data. We can give you no date of subsurface
24 movement. All I was giving you was warning. We have had those
25 occasionally in the past and they have been serious; and if
26 something like that occurred, it could give us trouble. We

1 are not expecting that.

2 MAYOR KEALER: The problem has been you have certain
3 fault planes which will run 1600, 1700, 1800, 2000 -- and it
4 has been the theory among some of the engineers in the profes-
5 sion that where the drawdown and pressure has been so great in
6 one area -- I will use one with which I am familiar. In
7 Fault Block IV in the Terminal Zone, the original fault pressure
8 was 1600 or 1700. Then the withdrawal of fluids, oil and gas
9 and so on, brought the pressures down up at the crest, the top
10 of the structures, way down. That created stresses within the
11 area that finally it gave away along these fault planes.
12 That's what I meant by this spacing. You want the wells in
13 but you want them built up on a pressure basis so they won't
14 cause further tectonic movement.

15 MR. HORTIG: Mr. Chairman, may I reply to one premise
16 of Mr. Carr on having Mr. Branson's report based on electric
17 processing system. I hasten to distinguish and try to minimize
18 the confusion here -- that when you are talking about this type
19 of system you are making a mathematical analysis, which is a
20 different type of analysis than that performed by an analog
21 computer. The computers which handle numbers simply and which
22 punch cards are used for, to get the numbers into the machine,
23 are classified as digital computers. The analog computer is a
24 different animal of the same general breed, but there is a
25 distinction.

26 MR. CARR: Would the information now in the possession

1 of the Navy be susceptible of being processed through an
2 analog computer -- that is ^{without} gathering entirely new and fresh
3 data?

4 MR. HORTIG: The basic information in the possession
5 of the Navy, the Harbor Commission, DeGolyer and MacNaughton,
6 and everyone else who has made extensive studies of the
7 Wilmington Oil Field are what would be required to be injected
8 into an analog computer to acquire whatever solutions that
9 type of system would yield. The data is there; no data would
10 be needed. It would have to be processed on an analog basis
11 instead of a mathematical basis. At your convenience I'd like
12 to go into that further.

13 MR. CARR: Mr. Hortig, I appreciate your cooperation.
14 I don't want to take any more time parading my ignorance before
15 this meeting. I was wondering if we were taking that seriously
16 because it seemed to be important to me.

17 I have asked all my questions but one -- and I pre-
18 sume you expect to have our Executive Officer and our people
19 sum up this thing, and also Long Beach, so we can decide when
20 we are going to meet together here again and decide things.
21 One of these things, when I was wearing two hats -- we felt
22 it was very necessary that we establish a timetable to measure
23 the results of the efforts. Do we now have a timetable for
24 this?

25 MR. CRANSTON: John, before we get to this, I have
26 one or two more questions. These don't relate to subsidence.

1 MR. CARR: I have a last question -- do we take
2 Mr. Ball's remarks to indicate that perhaps it's better for
3 both the City of Long Beach and the State of California, after
4 the problem has been solved physically and we know what we can
5 do about subsidence, satisfy the Navy and all other things --
6 do we take his remarks to mean that after all we need a
7 friendly law suit to establish the situation in such a way
8 that not any of us are going to be in the position that we can
9 be accused by any of our enemies or friends of not going all
10 the way in the decision we are going to have to make? I
11 think we have to face up to that. Are we ultimately going to
12 have to have a friendly suit in order to reach a decision?

13 MR. LAMB: I am Mr. Lamb, Assistant District Attorney.
14 I don't think Mr. Ball meant anything of that kind. What we
15 have all hoped all along is that we could avoid litigation at
16 all on this subject and we all feel it would be advantageous
17 if such a thing could be worked out. On the other hand, if
18 there is litigation, it probably won't be of a friendly nature.
19 It certainly would be an adversary type of thing if we have to
20 go into it. Does that answer your question?

21 MR. CRANSTON: We have heard from the City Attorney's
22 representatives on this matter and I think we should hear from
23 the Mayor on this point, because he represents the City Council.
24 While he cannot speak for it, he is the head of it at the
25 present time. I realize he has other votes. We have received
26 an offer through your agents via the Attorney General's

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1 representatives and that offer was expressed to us by the
2 Attorney General's representatives as unsatisfactory; and it
3 was reported to us in view of its minimal terms as something
4 that was intended to break off the negotiations and suggest
5 that we proceed with a suit. Mr. Ball has assured us that is
6 not the case and assures us you wish to go ahead with further
7 meaningful negotiations.

8 MAYOR KEALER: This is not said in levity. Remember
9 there are eight other men around that council table and I
10 cannot vouch for all of them, what they would say. I do have
11 the feeling, Mr. Cranston, that this is the feeling of the
12 City Council -- that this problem is susceptible of solution
13 by a meeting of minds, sitting down and bearing in mind,
14 first of all, as Mr. Ball pointed out, that up until this
15 thing came up, this boundary question, we had felt assured
16 that our boundaries were settled because of a court decision
17 some twenty-odd years ago. -- I don't remember exactly when it
18 was. Anyway, all the boundaries had been set up. And I be-
19 lieve we can find a way to get around certain portions of this
20 boundary question. The other angle of it, the one in which
21 you are particularly interested, can probably be settled
22 amicably -- perhaps not to the satisfaction of everybody --
23 we will have to give up something, you will have to give up
24 something; but there will be a mutual ground where we will
25 meet.

26 As far as I know, the items outlined in the

1 attorneys' offer are not closing the door in the Commission's
2 face -- that is not the point. I believe the feeling was one
3 of horse-trading. The State had given to the City what it
4 thought it should have, so the City said "Well, that's too
5 much money for that horse. This is what we can do and that's
6 the bottom offer." Somewhere in between -- may I use an old
7 analogy my father used to say "When you are horse trading,
8 don't ask for \$10, ask for \$20 -- or you might get five or six."
9 That is our feeling. It hasn't been mentioned too much or
10 stressed too much here about the benefits that would inure to
11 both interests if we can get this show on the road. No one
12 has mentioned Fault Block IV here today. If we can get this
13 show on the road and program going, we not only will solve our
14 boundary problems but tremendous benefits will inure to both
15 sides. If this program breaks down and we don't get it and
16 they even enjoin us, shut us down, we will not only lose imme-
17 diate benefit but we will lose out forever.

18 MR. CRANSTON: We can then depend upon you to use
19 your influence, to exert your leadership to negotiate further?

20 MAYOR KEALER: Yes sir.

21 MR. CRANSTON: We have talked about friendly and
22 unfriendly law suits. We obviously have been under pressure
23 to bring this to a head. The Legislature has instructed us
24 to find out where this boundary exists. It is not easy to
25 put that off. It is obvious that if we put this off at this
26 time we might jeopardize the Navy yard. It seems to me if we

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1 find that we cannot negotiate this and we are finally driven
2 to the courts to settle it, that when we come to that point,
3 if we do, our action in filing suit should not be construed by
4 you or your colleagues as unfriendly. I think we should be
5 entitled to that view from you if we have to file suit.

6 MAYOR KEALER: As far as I am concerned, I am just a
7 layman. When I tell you I am willing to deal with you in good
8 faith I mean just that way. When lawyers get into these things
9 they bring in things that are antagonistic. I don't know any-
10 thing about law and glad of it. I do believe we can sit down
11 and work out something where the benefits would inure to all
12 of us. I can't see where filing a law suit and shutting every-
13 thing down would do anything. I believe Mr. Ball has pointed
14 out the statute of limitations is protected and is still running
15 and you are protected since last June.

16 MR. CRANSTON: I'd like to thank you for your atti-
17 tude. I'd like to ask the Attorney General ~~when~~ were we to delay
18 action in this boundary line dispute between ourselves and the
19 City of Long Beach, do we need any other action to prevent
20 prejudicial results to the State of California?

21 MR. KAUFMANN: No, as long as we continue negotia-
22 tions the agreement we have prepared will protect our rights
23 and the City's.

24 MR. CRANSTON: I am prepared to move

25 MAYOR KEALER: May I say this? I am only saying
26 this -- I couldn't be more sincere in saying it -- I shall do

and work out an agreement for all of us. I will do it

GOV. ANDERSON: Mr. Carr notes that Mr. Sutherland representing the Naval shipyard employees, is in the room and that he might like to say something on this at this time.

MR. SUTHERLAND: Down in Long Beach, I think you are aware that I represent 5500 of the 6500 people working at the shipyard and naturally we are vitally concerned and have been concerned for fifteen years with the whole subsider problem in the Terminal Island area. I feel this morning quite optimistic about the results of what is going on in regard to our waterfront program. I am sure you people are a little concerned about your unequivocal "no" which you received by mail. However, I think at that time there was not as much advancement in the program as we see it today.

I hope -- and I am sincere when I say this along with the Mayor, the City officials and the people of Long Beach who are trying to solve this problem -- I hope this boundary issue will be delayed until such time as we get this agreement signed and get the aspect and the final decision out of the Bureau of Ships in regard to the Navy, probably also so that we can get down to bare facts and get this whole problem solved. It's a big problem. I am sure all of you realize it and I am sure from the Association point of view we will still continue to pitch and help solve where we feel we can

1 participate; but I am real optimistic this morning that this
2 program is going along. I am optimistic that it will be in its
3 full force in the future providing we continue our efforts as
4 we are doing today.

5 MR. CARR: Thank you very much. Mr. Chairman, there
6 is one other individual I notice. Harry Fulton is going to
7 write this up. I am wondering if he would like to ask a few
8 questions before he writes the story.

9 MR. FULTON: In a word, I am a reporter, not an
10 orator. I have checked with Admiral James on his unequivocal
11 "no" and I think what Mr. Sutherland had to tell you about
12 that is factual. I think he is more pleased with progress
13 down there than he probably would care to admit now, for fear
14 of committing himself to a decision in December; and the ques-
15 tions Mr. Zweiback was bringing up about the volumes, I think
16 there was some confusion there the first part of this month
17 about schedules. I really think both the schedules they were
18 talking about will be met. I think the 175 to 200,000 Admiral
19 James was talking about in July pertained to the total Fault
20 Block II and III areas and this other 153,000 is the reduced
21 area that Consultant Branston recommended.

22 GOV. ANDERSON: Can we bring this Item 1 on the
23 calendar to a head, then?

24 MAYOR KEALER: May I make this one comment in closing
25 I think it would be perhaps appropriate to say at this time
26 that based upon our attendance at some of your previous meeting

1 the last one and this one, all of the answers brought into
2 focus the problem that I have recognized previously, that is,
3 we need a little bit closer liaison and a little closer rela-
4 tionship between us of the City and your people, so we can
5 be fully informed. Many of these questions need not have been
6 answered if they had been handled through the proper channels.
7 A couple weeks ago I asked our Sacramento representative, Mr.
8 MacWhinney, to exert his efforts to try to keep you people
9 fully informed on anything you wish to know, and I sincerely
10 hope you will have that information and perhaps we will obviate
11 any difficulty by being able to have it.

12 MR. CRANSTON: In view of the seriousness of the
13 impending decisions to be made by others regarding the Navy
14 shipyard and considering the assurances we have been given by
15 both the legal representatives and the Mayor of Long Beach that
16 they will enter into serious efforts to negotiate this with us,
17 I therefore move that the Lands Commission request and instruct
18 the representatives of the Attorney General's office to carry
19 on negotiations with the City of Long Beach in an effort to
20 resolve our dispute in regard to the tidelands boundary; and
21 that, while not setting a final date for these negotiations at
22 this time, that we set as a target date the next meeting of
23 the Lands Commission and that they have a report to us at this
24 time.

25 MR. CARR: Second the motion.

26 GOV. ANDERSON: Moved and seconded. So ordered.

1 MR. HORTIG: May I suggest a brief recess at
2 this moment.

3 (Recess 11-11:10 A.M.)

4 GOV. ANDERSON: The meeting of the State Lands Com-
5 mission will reconvene and we will proceed with Item 2 on the
6 calendar -- permits, easements, and rights-of-way to be granted
7 to public and other agencies at no fee; and the one applica-
8 tion in this case is the Palos Verdes Corporation and Capital
9 Company. Are there any comments, Mr. Hortig?

10 MR. HORTIG: Mr. Chairman, I feel I should explain
11 briefly the necessity of the rescission of the Commission's
12 action of July 15, 1957, under which a prior Commission author-
13 ized in effect the issuance of the same easement for the con-
14 struction of a protective sea wall, which easement was in fact
15 not accepted by the applicant because plans were reviewed
16 further; and decision has been made now on a crash basis in an
17 emergency matter, that easement is necessary in fact to con-
18 struct a rock sea wall in the hopes of arresting a landslide
19 which is progressively carrying Portuguese Bend area into the
20 sea; and, therefore, it is recommended that the prior authori-
21 zation of the Commission, which never actually became an
22 executed action, be rescinded and the Commission in lieu
23 thereof authorize the Executive Officer to issue permit for
24 the easement.

25 MR. CARR: I so move.

26 MR. GRANSTON: Second.

1 GOV. ANDERSON: No objection? If not, so ordered.
2 Item number 3 -- permits, easements, leases, and rights-of-
3 way issued pursuant to statutes and established rental policies
4 of the Commission. Applicant (a) - Seaward Oil Company.
5 Any comments, Mr. Hortig?

6 MR. HORTIG: The proposed extension is for an oil
7 and gas lease issued originally in 1929, subsequently renewed,
8 now up for renewal again for whatever remaining economic life
9 there may be in two existing wells. It is a marginal oil and
10 gas lease and it is recommended that the lease be extended as
11 provided by statute for so long as oil and gas may be produced
12 in paying quantities.

13 MR. CARR: So move.

14 MR. CRANSTON: Second.

15 GOV. ANDERSON: Any objection? (No response) So
16 ordered.

17 Item 4 - City of Long Beach projects -- approvals
18 required under Section 6879 of the Public Resources Code.
19 (a) is the water-flooding program. Mr. Hortig?

20 MR. HORTIG: If we may consider, Mr. Chairman, Items
21 (a), (b) and (c) together -- (b) and (c) being on the next
22 page -- they are all of the same general nature. These are
23 all release agreements, interim agreements, and cooperative
24 agreements all relating to the necessary agreements between the
25 City of Long Beach and property owners to implement the repres-
26 suring program being conducted on the tidelands between the