

39/85

IN THE PRIVY COUNCIL

NO. 28 of 1985

ON APPEAL
FROM THE COURT OF THE SUPREME COURT OF WESTERN AUSTRALIA

B E T W E E N :

HAMERSLEY IRON PTY LIMITED

Appellant
(Respondent)
(Plaintiff)

- and -

1. THE NATIONAL MUTUAL LIFE ASSOCIATION OF AUSTRALASIA LIMITED,

2. LANGLEY GEORGE HANCOCK,

3. ERNEST ARCHIBALD MAYNARD WRIGHT,

4. HANCOCK PROSPECTING PTY LTD,

5. WRIGHT PROSPECTING PTY LTD AND

6. L.S.P. PTY LTD

Respondents
(Appellants)
(Defendants)

RECORD OF PROCEEDINGS

PART I
VOLUME IV

Ince & Co.
Knollys House
11 Byward Street
LONDON, EC3R 5EN

WALTONS & MORSE
PLANTATION HOUSE
31-35 FENCHURCH STREET
LONDON, EC3M 3NN

SOLICITORS FOR THE APPELLANT
(RESPONDENT) (PLAINTIFF)

SOLICITORS FOR THE RESPONDENTS
(APPELLANTS) (DEFENDANTS)

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B E T W E E N :

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(Plaintiff)

- and -

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ARCHIBALD MAYNARD WRIGHT, HANCOCK

PROSPECTING PTY LTD, WRIGHT

PROSPECTING PTY LTD AND L.S.P. PTY LTD AND

THE NATIONAL MUTUAL LIFE

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GEOFFREY SAMUEL BAKER, sworn:

EXAMINED BY MR HEEREY:

MR HEEREY: Mr Baker, what is your full name?---Geoffrey
Samuel Baker.

Where do you live?---At 31 Mitchell Street, Ardross.

What is your occupation?---Business manager.

(Could the witness be shown his affidavit which was sworn on
17th October 1983?) Just looking at that affidavit,
Mr Baker, do you recognise that affidavit as one
which you have sworn and is that your signature appearing
on the third page?---Yes.

10

I will just take you to a few matters. In para.1 there is a
sentence in which you say - - -

101. 3.00

MR HEEREY (Continuing): - - - which you say, "I spent several years working for companies owner by Messrs Hancock and Wright". The word "owner" is a misprint which should be "owned". Is that so?---That's correct.

You say you spent several years working for companies. On giving further thought to the matter are you able to put a figure on the number of years you worked with them?---It was approximately six.

If you look at para.3 where it is said, "Wet screening was used at every mine I worked at or visited in my time in the north-west with the exception of the Nungari asbestos mine". Have you since recalled another mine which did not use wet screening and which you visited while you were in the north-west?---Yes; Wittenoom Gorge. 10

What sort of mine was that?---Asbestos.

So that paragraph is true is one adds as an exception not only the Nungari asbestos mine but the Wittenoom Gorge asbestos mine?---That's correct.

Apart from those matters to which we have referred, are the contents of your affidavit true and correct?---That's right, yes. 20

I tender that, your Honour.

EXHIBIT

EXHIBIT 35 Affidavit of G.S.Baker,
dated 17th October 1983.

MR HEEREY: I just take you back to para.1 of the affidavit, Mr Baker. The company Mineral By-Products Pty Ltd; who owns that?---Myself and my wife. 30

It would appear from para.2 that you ceased working for Hancock and Wright - certainly as an employee - in 1959. Is that right?---That's correct.

After 1959 from time to time have you done some work for Hancock and Wright on a contract basis?---Yes.

When is the last time you can recall that you did such work?--- Approximately 10 years ago; roughly 10 years.

What sort of work was that?---It was pegging mineral claims. 40

Paragraph 4 of your affidavit deals with the Ragged Hills mine. That was a lead mine, was it?---That's correct.

Was that an underground or surface mine?---Underground.

SM
2313/82

DOCUMENT 3* - Defendant's Evidence
Evidence of Geoffrey Samuel Baker
Examination in Chief

17.11.83

MR HEEREY: The mines at Cooklagong[?] and Shaw River; they were tin mines, were they not?---Yes.

Were they surface or underground?---Surface.

At Ragged Hills were there any dry screens?---No.

What about at Cooklagong and Shaw River?---No.

In the course of your work at Ragged Hills, Cooklagong and Shaw River, if you wanted to refer in the course of conversation to somebody about the wet screens that you have referred to at those mines, what would you refer to them as?---As screens.

10

What would you say was going on on the screens, if you had to say to somebody, "I have had a bit of trouble with thetoday at Ragged Hills"? What word would you use to describe the operation that was going on in these wet screens?---Screening.

CROSS-EXAMINED BY MR CALLAWAY:

MR CALLAWAY: Mr Baker, just taking up something that my learned friend Mr Heerey asked you a moment ago, you told us that there were no dry screens at Ragged Hills. Is that correct?---That's correct, yes.

There were no dry screens at Cooklagong or Shaw River?---No.

So naturally if you had referred to the screens which were wet you simply could have called them screens - - -



MR CALLAWAY (Continuing): - - - them screens?---That is right.

It would have been pretty silly to have said "wet screens" all the time?---That is correct.

Can we look at the part of your affidavit first which deals with lead mining? You refer to the ore being removed from the line and you told my learned friend that was an underground operation?---That is right.

And it was removed dry?---Yes.

And is it correct that at Ragged Hills the principal lead-bearing mineral was galena?---Primarily, yes. 10

With some sericite?---That is right.

Can you give his Honour some indication of the proportion of galena to sericite? Would it be three to one, or something of that order?---I am guessing a bit it would be 50 per cent.

About 50 per cent?---Yes.

But probably some more galena than sericite, because a moment ago you said that was the primary mineral?---They are both lead ores as I know them. 20

You crushed the ore which was taken out of the mine and that was a dry operation?---Yes, save for some moisture to keep the dust down because there was a problem of lead poisoning.

Yes, but that was just water for dust control?---Purely.

Then it was wet-screened to size before the concentrating tables? ---That is right. 30

Because sizing is very important for concentrating tables, is it not?---Yes.

Indeed, concentrating tables for lead deal in very small sizes, do they not?---Yes.

As small as one millimetre?---It would be larger than one millimetre; probably three or four or five - somewhere in that order.

The concentration was on tables and is it correct that what you were doing was concentrating the galena and the sericite from the material you had taken from the underground mine?---That is right. 40

Because eventually you get the lead in a smelter?---Yes.

The tables are flat surfaces, slightly sloping?---Yes.

MR CALLAWAY: With water moving across the surface of the table?
---Yes.

And the galena and sericite stay on the surface of the table but
move across it?---They stay on the high side of the
table.

But they do not float?---No.

They stay on the bottom, as it were?---Yes.

Because it is the tailings which go out on the top of the water.
Is that not so?---Basically, yes. It all depends if
you understand the operation of a table.

10

Would you like to tell us what the table looks like, give us a
word picture of the concentrating tables?---They
are about 12 feet in length and approximately 6 feet
wide and if you were to leave these tables run by
themselves and flat and put an object of any description
on them that object would have a tendency to move to
the end, or run parallel with this 12 foot length;
but kicking on the one side or having a slope to
one side, with the aid of some ripples the heavies
would stay behind the ripples and go along in the
same direction as that object I just mentioned and
the lights, the lighter material such as the quartz
and the gangue would tend to be washed over the
edge or the 6 foot side of the table. In effect,
because the lead is heavier, it is affected by
the forward motion of the table which is on the
12 foot plan.

20

The concentrate in fact is ultimately collected from one side
of the table - - -

MR CALLAWAY (Continuing): - - - the table and the gangue goes out over another side?---That is right.

That is a distinct method of concentration which has been known for many, many years?---That is right, yes.

Quite different from other methods of concentration?---I would say yes.

It is hard to think of another concentration method which is like it?---An air table has the same or similar.

But apart from an air table?---Yes. 10

Yes, it is a distinct machine?---Yes.

The water you use is plain water. You do not add ferro-silicone to it?---Nothing.

In fact you do not add anything to it. Returning to this matter of size, I think you told his Honour that the size of the material on the concentrating tables was very small. It could be up to, I think you said, 4 or 5mm?---That is right. 20

Is it correct to say that concentrating tables tolerate a very narrow size range?---Yes. The closer the range, the more efficient the table is. It is the general practice.

If you began putting feed on the concentrating tables which was, say, 12mm, the tables would not work properly, would they?---Not as well as they would otherwise.

They are sensitive to size?---That is right.

Surely, that is the reason why you say in your affidavit that the screens were purely to size the ore for separation? ---That is right. 30

Do you recall in para.5 of your affidavit you say

"It was possible to employ dry screening, with water being added after sizing."

I take it you did not, in fact, employ dry screening. That was just something you could have done. Is that correct?---Yes, that is right. 40

Then you continue:

"However, since the downstream processes" - meaning the concentrating tables - "were wet and water assisted screening....(reads)....pure to size the ore for separation."

WITNESS: Added to that was the fact that it was a little bit damp in the crushing plant. Had we needed to screen it dry, we would have had to dry it, so it was logical to do it wet.

MR CALLAWAY: But you adhere to your statement that the purpose of the screens was purely to size the ore for separation?---Yes.

Because cleaning is not important when you are using tables?
---That is right.

In fact, cleaning is irrelevant when you are using tables?---
Absolutely, yes.

I know it is a long time ago but do you happen to remember the brand name of the concentrating tables which you used at Ragged Hills?---Yes. We had two. We called them "fine" and "coarse". The coarse one was a Butchart and the fine one was a Wilfléy.

Just one other matter about the lead operation. In para.5, where you say "The water required for the separation, i.e. concentration process was introduced in the feed chutes to the screens and utilised during sizing" you do not, of course, mean all the water subsequently used on the tables. You would have added more water
- - -

10

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MR CALLAWAY (Continuing): - - - added more water at the tables?---Yes.

Turning to tin and dealing firstly with Cooglegong, I appreciate you went to Cooglegong after Shaw River?---That's right.

Let me start with Cooglegong and work back, if I may?---Cooglegong is at Shaw River, but up - -

But you worked at two different tin operations?---Yes.

They are in the same area; they are nearby?---I am sorry. I went to Shaw River first.

10

I think I did get it right the first time. You went to Shaw River and then you moved to Cooglegong?---That's right, yes.

I was trying to avoid confusing you by just pointing out I was starting with Cooglegong and proposing to work back later to Shaw River. Am I correct in thinking that at Cooglegong the tin bearing mineral was cassiterite?---That is right.

20

Which is tin oxide?---That's right.

For the sake of completion, is it correct to say that the galena in the lead mines that we were talking about earlier is a compound of lead and sulphur?---Well it is a sulphite lead; yes.

Going back to the tin, the tin bearing mineral was cassiterite and tin oxide, sometimes commonly called "black tin". Is that right?---Yes.

In Western Australia?---They didn't refer to it as such. It was just tin.

30

It is not important. You ultimately derive the tin from the cassiterite by smelting?---No; we just purely got the tin ore, the tin concentrate, from the creeks - river beds.

We may be at cross purposes. What you concentrated was not pure tin, it was tin oxide?---No; tin sulphide actually.

Tin sulphide?---Yes.

And stannite?---Now you're getting a bit technical for me. I'm afraid I wouldn't - -

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Never mind. What you concentrated was tin sulphide?---Yes.

That would have gone to a smelter and the smelter would have

got out the pure tin?---That's right, yes.

MR CALLAWAY: Still at Cooglegong; you told my learned friend Mr Heerey that that was surface mining?---Yes.

From a dry river bed?---Yes.

That is very common, is it not?---Yes.

So that it would come out dry and then you would add water for the purpose of converting it into a slurry?---Yes.

You would do that because your concentration method was jigging?---Yes, that's right.

10

Mr Baker, are you aware of the distinction between tin ore that comes from alluvial deposits and tin ore that comes from primary deposits?---Yes.

Have you ever worked at a tin mine that mined primary deposits?---No.

There are many kinds of jigs, are there not?---Yes.

They, like the concentrating tables, are a distinct concentrating method in their own right?---Yes.

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Which have also been known for many years?---Yes.

Do you recall what particular kind of jig was used at Cooglegong?---Wilfey.

Wilfey?---Yes; the same as the table..

Reduced to its most basic principles, is it correct to say that jigging operates by moving the ore up and down in water, the water pulsing the ore up and down?---Yes.

30

And the heavier concentrate settles at the bottom of what a layman might call the basket in the jig in which the feed is put?---That's right, yes.

A lighter concentrate - - -

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MR CALLAWAY (Continuing): - - - concentrate goes through the basket which is inside the jig and is collected as a hutch product?---Not the lighter; the heavies go into the hutch and the lighters overflow, cascade over the edge and go onto tailings.

In your jig then you only had two fractions of separation, the heavy and the tailings?---That is right, yes.

Have you ever seen a jig where there are three fractions; a heavy concentrate, a light concentrate, plus tailings? ---Not really; no.

In yours you were only concerned with the good material, the concentrate, and the useless material, the tailings? ---That is right, yes. 10

The good material, the concentrate, you call the hutch product? ---Yes.

Is it correct to say that jigging operates by reference to the density of the different particles that are jigged up and down?---I would say yes.

Or the specific gravity - whichever you prefer?---Yes.

The jig does not operate by reference to the size of the particles. It operates by reference to their density?---Yes. 20

Again, it would be hard to think of another concentrating method which is really like jigging?---No, that is right.

It is a distinct method?---That is right.

What size feed were you feeding into the jigs at Cooglegong? About half inch, minus half inch. 30

Which is about minus 12mm?---Yes.

It was important to get the feed into an appropriate size for the jigs?---That is right.

Again, it was not important to clean it?---No.

That is why, in your affidavit, you say that the purpose of screening was to prepare the ore into appropriately sized feed for the separation process?---That is right. 40

Going back to Shaw River, earlier in time in your experience but in the same area, was that also tin sulphide? ---Yes.

And again it was alluvial?---Yes.

Again, it was a dry river bed?---Yes.



MR CALLAWAY: You took it out of the river bed dry, added water to make it into a slurry and then jiggged it?---That is right.

Were they Wilfley jigs too?---Yes.

They operated in the same way?---Exactly the same way.

At both Cooglegong and Shaw River they were perfectly ordinary jigs?---Yes.

Am I right in thinking that it was the Shaw River tin operation which was owned by a Hancock & Wright company?---Yes.

In your affidavit you give the name of that company as "Pilbara Explorations Pty Ltd"?---Yes.

-10

Are you aware of a company called "Pilbara Exploration N/L"?---No, I am not.

Have you ever had occasion to inspect Hamersley's concentrator at Tom Price? It is an iron ore concentrator?---Yes, I have been there.

You have not worked there, though?---Never.

When did you see the concentrator at Tom Price?---About two years ago.

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In what circumstances did you do that?---Myself and another party - my company and another party - were looking at screening some ferro-silicon for that company and went up there to have a look at the situation - the availability of shed space and stuff like that. I did have the occasion just to briefly have a look at the plant so I don't really understand the operation.

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MR CALLAWAY: You do not understand the operation?---No.

You mentioned ferro-silicon. It is no doubt an obvious point but we should get it onto the record; in the jigs at the tin operations at Shaw River and Cooglegong, again it was just water that was used and there was no ferro-silicon in the water in the jigs?---That's - - no.

There was no other media; it was just water?---Just water.

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It was like the tabling to that extent?---Exactly the same.

Mr Baker, my learned leader said earlier, and you probably heard, that no-one is allowed to leave the witness box without being asked about sieve bends but I would be right, would I not, in thinking that you did not use sieve bends in your lead operation?---No.

And you did not use sieve bends in your tin operation?---No.

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RE-EXAMINED BY MR HEEREY:

MR HEEREY: When you had this visit to Tom Price to discuss screening the ferro-silicon what was that going to involve?---Just that; screening some ferro-silicon that would apparently - - I suspect because it came wet in their stockpile and we were going to just purely rescreen it so they could use it in their plant.

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You would do that. It was contemplated that you would do that at Tom Price?---That's right; just purely as a contractor. That is my game. That's my business.

Who was going to supply the screens for this - you or Hamersley?---I was.

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What sort of screens would they be?---Like a R²otex screen, basically.

Would that have been a wet screen or a dry screen?---Dry.

WITNESS WITHDREW

CHRISTIAN FREDERICK BEUKEMA, sworn:

EXAMINED BY MR SHER:

MR SHER: Mr Beukema, your full name is Christian Frederick Beukema and you live at 4502 - I suppose it is apartment 2A, is it, or flat 2A - Windjammer Lane, Fort Myers in Florida?---That's correct.

Can you hear me?---Yes; I can hear you. I will raise my hand. I have newly acquired a hearing aid which I do not like.

Mr Beukema, your qualifications and experience are detailed in an affidavit sworn by you on 22nd June 1983?---
That's correct. 10

Would you look at this document, please, and identify the signature on the tenth page of that document?---That is my signature.

That is your signature and is that the affidavit sworn by you?---Yes.

I want to take you to a number of paragraphs in it. In detailing your qualifications and experience you did not mention as one such qualification anything in relation to testifying before federal and state congressional bodies in the United States. Have you, indeed, testified as an expert witness before such bodies?---Yes, I have. 20

Has that been in your capacity on occasions as a representative of the iron ore industry of the United States?---Yes; well, the American Iron Ore Association, the American Mining Congress as well as my corporation.

I would like to take you, if I may, to - - -

MR SHER (Continuing): - - - to a number of paragraphs of your affidavit. Firstly, would you look at para.3 which details that on the 16th of August 1982 you inspected the mine operated by Hamersley at Tom Price and the wet-screening and concentrator plants?
---Yes, I did.

Have you returned to that place and inspected it again in company with other people on the 1st of November this year?---Yes.

Was that the occasion on which Mr Grosvenor also attended in company with Mr Heerey and myself and Mr Boughton?
---Yes.

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Were we accompanied on our tour of inspection by Mr Tony Curtis of Hamersley Iron?---That is who I understand he was, yes. I was introduced to him.

On that particular day did you make any observation as to the amount of waste that appeared to be being processed through the screening plant where we were looking at the wet screens and the other parts of the concentrator plant?---I looked at the waste pile. I looked at the float screens and the heavy media screen. First of all, they were only using two of the three drums in the heavy media plant which rather indicated to me that the heavy media section seemed to be light loaded by only operating two-thirds of its drum capacity. I felt there was a very small amount of float on the screens so I went back out on the ramp, the walkway, outside the building to look out at the rock reject pile and I was struck by the smallness of the pile and the very slight dribble of waste rock that was coming off. That was both the heavy media float as well as the heavy media cyclone float.

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What did that indicate to you in relation to the quality of the ore that was being processed through the plant at that time when you were there?---I thought it indicated to me that the plant was getting some pretty high grade material. At least I felt it was certainly not working up to the expectancy on low grade normal heavy media type material I would have expected it would be working on. It seemed to be an awful lot of plant for such little waste being generated.

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Apart from anything else you did there on that day, did you also take the trouble to have a look into this device that has been described on occasions as a chute, on other occasions as a feed box and on other occasions as a pulping box, in which Dr Lynch says there is a scrubbing operation going on? Did you actually look into it on this occasion?---I was very interested in a pulping box because basically I had read the

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affidavits. I had been to the plant previously and at that point in time I had looked at it. The plant was not running at that time. It had one of its labour dislocations on that occasion which was not expected so we did not see it operating, but I had an idea how it was laid out. I studied the prints which are part of Mr Grosvenor's exhibit, so when I received the affidavits for my perusal in Florida, the drafts of them that is, I was immediately impressed with the claims being made for it as a scrubber, because it looked like nothing but a normal chute to me and one of the few engineering background jobs I had when I started my career was actually designing chutes and I had worked at what is probably the world's largest industrial limestone mine and screening plant, and I had designed a lot of chutes, and I have seen a lot of chutes in my day and I never saw a chute that looked like that which was ever called a scrubber; so I was interested to see it, and for that reason I took the time this time when it was running to open the access doors and stick my head in to try and see just exactly how wet it was in there. I had seen the pictures that had been part of Mr Tompsitt's exhibit and I was particularly struck with No.2 of that exhibit, but I could not see if it was very wet - - - 20

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WITNESS (Continuing): - - - very wet.

MR SHER: The photograph to which you are referring is the photograph showing the chute and the feed going in and the sprays in it?---Right.

Perhaps you will identify it so it is clear that you are talking of that photograph?---Yes. That is the picture.

For all those reasons you had a look into it on this occasion? ---Yes, I looked at it.

What did you observe?---I observed the situation looked pretty much like the picture. I had been a bit surprised to find a picture like that could be taken in a situation which was supposed to be so wet and so agitated. I could not understand how there could be any scrubbing because, basically, it was completely alien to any common, normal physics principle that I had learned as an early engineering student, that in a freely falling body, such as that feed had to be - it had to be coming off the lip of that and dropping straight down, as it was - - it is pretty well-known that there could be no abrasion between the particles as they fell. I think everybody who has ever had physics has seen the picture of old man Gallileo leaning out of the Tower of Pisa dropping a shot with one hand and a penny with the other and both hitting the ground at the same time much to the consternation of his friend.

In this country we refer to that gentleman pronounced slightly differently?---Anyway, his principle of freely-falling bodies, both falling equally fast, is quite well-known. Therefore, each particle of iron ore as it comes off that feeder has to fall in that chute equally at the same velocity. That means they cannot possibly abrade against each other. The particles are falling without abrading on each other.

That is no doubt one of the reasons you were looking into it but what did you see?---I saw a mass of iron ore falling, I saw some water splashing down below. There was nothing splashing up. I wanted to verify that because from the prints it had appeared that the sprays - and they are sprays not jets - - if you will look at the prints in Mr Grosvenor's affidavit you will see they are sprays not jets. The water was splashing out and it was attempting to penetrate the ore stream but it was very difficult for me to see that it could and it is impossible that I could have seen how far it went into the ore stream but it was a pretty solid curtain or ore that was falling down with water splashing against the edge.

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MR SHER: I think you have answered what I would have asked in any event. Did you regard what you saw, leaving aside any description and claim and any affidavit, as scrubbing?---I cannot see that it could possibly scrub. Scrubbing has to be abrasion in the presence of water. First of all, I have spoken of the relative impossibility of abrasion that I could concede to it - that, on principle - and the water, it seemed to me, would have little chance at the speed it was going down and the short distance of getting to a point where it could penetrate the ore stream to the point that it would get any significant (except the exterior of that stream) damp - wet - and certainly my feeling would be that I would have designed it much differently if I wanted water in that ore.

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Can I take you back to your affidavit and take you now to para.7 on p.5? The paragraph is, indeed, one sentence only, which commences on the earlier page, but towards the end of the sentence on p.5 you say:

"Nor have I been aware of any royalty term distinction as applied differently to wet from dry screening."

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I gather you are not happy with the way that is expressed?---I am not happy with that and I am glad you have mentioned it.

Would you just tell his Honour what it is that you desired to say there where you are not happy about the expressions used?---I had worked on this affidavit when I was over here and on my way back and upon arrival back in the US with my copy. What I had tried to do, I am afraid, was write a set of words that glossed over what is sort of the aggravation of this case. When I got back I realised it could be interpreted erroneously and that erroneousness could be that somebody would say that "as applied differently to wet from dry screening" - - well, the royalties in the United States - - -

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WITNESS (Continuing): - - - the United States there, is a difference in the amount of royalty. The point I really wanted to make was that I was not aware of any royalty term that excluded the payment of royalty on wet screened ore. That is the point that I really wanted to make and actually as I got back there I saw it could be interpreted differently than I intended.

MR SHER: I take you to para.9 of your affidavit in which you state;

"If the passages in the Hamersley Iron affidavits to which....(reads).... such is plainly not the case."

I wonder if you might just amplify in your own words - perhaps at greater length than you can in an affidavit - what you were saying there?---Yes. I am glad to have the opportunity because I have been sitting back there very uncomfortable about this, because it is obvious that people did not understand what I was saying. I was referring to the thrust of the affidavits of the plaintiff that I had read and as I meant to state; that if they intended to convey the impression that wet screening did not occur without having some process in view that was not the case because there has been wet screening without the view of further process. In other words, the wet screening was the objective. The further process, the much maligned classifiers that occur in the example, were really nothing but a means of recovering the fines that resulted - the wet fines that resulted - that had to be accommodated by virtue of the object of the exercise which was the wet screening in the first instance. In other words, the thrust of the argument of the affidavits of the plaintiff was that the wet screening was for the following process; namely, the concentrating plant. My point was wet screening does exist, has existed, continually exists, and is part of the mineral processing system as long as I have known anything about it, and started on the iron range way back in the early 1900s without any thought toward a following process. The following process that came was strictly to recover the fines that were generated by the object of the exercise in the first instance which was the wet screening or the wet classification, or the wet scrubbing; whichever was the case.

I think you have now made clear what I know I for one for some time at least misunderstood by your affidavit. You refer in that affidavit to, I think, 20 or more plants in para.11; what you call simple wash plants on the

Mesabi Range and at my request, while you have been waiting to give evidence, did you compile a list of such plants?---I have such a list. I cannot recite this list. It runs much more - -

MR SHER: Do not worry. I am not going to ask you for a memory test. How many names have you on that list in fact?---There are more than the Mesabi Range. I would say on the Mesabi Range at all, including the simple wash sections of the wash plants, and that is the primary first section of every simple wash plant, there must be 40 names.

If Mr Hulme is disposed to ask you to name them, are you in a position to do so?---Yes, I am. I will name some from memory but if you want all of them I will have to pull the sheet out of my pocket.

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In para.12 you refer to "since 1962 iron ore plants involving wet screening without further processes" and you then name a whole series of plants, it would seem to me that that may not have expressed exactly what you intended - - -



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MR SHER (Continuing): - - - you intended. What did you mean by para.12?---What I probably should have said there (and I think you are probably quite right)- it does not express exactly what I intended because there are further processes, but it was again in the light of my earlier statement. They were not wet screening again, with a further process in view. The wet screening was the object of the exercise. All the following processes result from the introduction of the wet screening, in every one of these instances.

Aguas Clarus, for example, is an iron ore mine with absolutely beautiful iron - 68 per cent iron. The only reason they have gone to wet screening there, and I have talked to the chairman of the board, O'Hanna, who runs the thing, is primarily to get coarse, clean ore that can be used in blast furnaces. From then on the fines are recovered, some by classifier and go down, and they were wasting a lot of it in the very fine fines and they brought that back with the cyclone because it was so good, to put it through to make a pellet feed for it.

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Two of those plants you mention in this example, the Sherman and the Pioneer. Have you had personal experience with those?---Yes, they were my plants.

Were you responsible for running those plants at some point of time?---Yes.

Can I take you to Mr Herkenhoff's affidavit, the list from the Minnesota School of Mines, which is exhibit 2 to Mr Herkenhoff's affidavit?---I think it is ECH2.

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While it is being looked for, can I ask you this? Subject to the qualifications or alterations which have been necessitated by the questions and answers that have just gone on since you took the oath, is your affidavit true and correct?---To the best of my knowledge it is absolutely true.

I therefore tender the affidavit, your Honour.

EXHIBIT EXHIBIT 36 Witness's affidavit sworn 22nd June 1983.

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MR HULME: I take the same international objection that I mentioned earlier has to be taken.

OLNEY J: Yes. I think that is a matter which I well understand, which no doubt you will mention in due course again.

MR SHER (TO WITNESS): You now have that exhibit we were looking for?---Yes.

You were in court when Mr Herkenhoff gave evidence and I asked him about the way in which it might be compiled - that is, a young clerk ringing up another clerk in an office and having a discussion over the phone. You no doubt understand why I put those questions. What do you say as to that sort of thing happening on occasions?---It might explain some of the things in the listing that I found. I got this list along with a copy of Mr Herkenhoff's affidavit this summer while I was up in Minnesota at my summer place near the iron range. (while retired, I continue to maintain a close affinity with the iron ore industry) and I was instantly struck with several errors in it, including my own plants. While I have received the book annually through the years in which I was running the iron ore operations for United States Steel - - -

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WITNESS (Continuing): - - - United States Steel, I must say I never paid much attention to this particular listing as anything of significance or concern that I should have to ever check.

MR SHER: What do you say as to how well it is regarded as an authoritative statement in the iron ore industry in the United States?---I do not recall any discussion about it as to whether it is authoritative or not at any time in my career and certainly, from what I am looking at now, I cannot say it is authoritative.

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I do not want to take you through it - obviously it would take too long - but I just wonder if we may pick up a few examples. Some of the plants referred to are plants with which you are personally associated?---The first one that struck me as I went through that, I looked for our own plants and the first thing was the Pioneer because I have used that in my affidavit.

Looking at the second page, your Honour, under the heading, Vermillion Range, your Honour will see the Pioneer plant referred to. It is there referred to as the type of plant being screening and washing.

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TO WITNESS: What processes were used, in fact, at that plant?---It is a wet screening plant. It was when it was constructed - put in the head frame for that purpose.

Were you responsible for the construction of it?---I was the purse of the company. I authorised the expenditure of money. I did not go out there and drive the rivets in.

Did it have any dry screening there?---Never; nothing but the kind of thing that scalps off the wood timbers that came out of the underground mine.

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Did it have any special washing plant there?---No; just to gain the recovery of the fines after the washing for the coarse. We were doing this for the coarse. The ore beneficiation cycle in the United States got to the point where we were screening the highest grade of ores and had been in the latter years for the structure.

Let us just pick out a few other examples?---There was another one; the Sherman was listed in one way and the Rouchleau in another.

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Just a moment; you know what you are talking about. Let us get where they are. The Sherman is at the top of the list on p.2 and the Rouchleau is towards the bottom of the second part of the list on the first page?---Yes. The Sherman is listed, "crushing, screening, washing, high density spirals." The Rouchleau, "crushing, screening, sizing." The Sherman and Rouchleau crushing and screening plants are identical. I do not know who added the

word "sizing" and what its significance is when you have screening in there. Likewise, the Sherman does have a washer beyond the Rouchleau but the crushing, dry screening plants are identical in both places. Both plants are of a larger size than the Hamersley screening plant.

MR SHER: Let us take another example, the Meadow plant referred to on the first page, "crushing, screening, washing". What sort of screening did it have there? ---Wet screening.

I think that is sufficient?---I verified that, incidentally, talking to the president of that company just before I came over here.

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Do not say that unless you are answering a question. You have just broken what is called the hearsay rule so you had better not do that. The final thing I want to ask you about is sieve bends. Have you been involved in plant where you were in some position of authority where you were authorised to spend your money on sieve bends?---I must say I was hoping I would be asked that question. I am glad I was not a listener in this hearing before I authorised the last expenditure before I retired from United States Steel because that was for \$25 million to modify the biggest taconite concentrator in the world to put that much dollars-worth of sieve bends in for sizing, not dewatering, and they are doing a magnificent job.

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If you have spent \$25 million of your company's money on dewatering, you have made a mistake, have you?---I would say, for my friend Mr Herkenhoff's benefit, they have knocked down the silica in the concentrate 1 per cent and incidentally, the application was designed and thought of first by his company, the Eyrle Mining Co., after he left the range.

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How would you then describe a sieve bend?---He said, "We exchange information in the industry."

What is the proper way to describe a sieve bend in your view, if you are looking

for a term or terms to describe it?---Well, it is a stationary wedge-shaped screen which is used for screening in the very fine particles, fine sizes, as well as accomplishing a dewatering purpose, depending upon what it is used for. It is not necessarily, as Mr Herkenhoff pointed out, always a sieve bend; indeed he is quite right. To avoid the royalties which that state mines you can get the same job done by buying just a straight wedge-shaped screen and putting it in on the slope, and this is a free bit of consultive advice to all mining engineers - you do not have to pay DSM a royalty rate.

Thank you, Mr Beukema.
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CROSS-EXAMINED BY MR HULME QC:

MR HULME: Mr Beukema, I would just get you to clarify some of the facts you have just given us as to these bulletin entries. I think you said you got the directory each year - you got the actual directory each year?---Yes, I got it every year.

You or the company, or - -?---The company got them and every officer named in the document, printed in the document, got one direct from the school. 10

You might not have been looking at it very carefully, but it was a publication in which your company's affairs were being categorised on a public record?---Yes.

That would be a situation where you would expect someone in the company to take some notice of what was being said about the company?---I think one would think so, at probably the origin of information. However, as you may recall, Mr Herkenhoff has pointed out (and I will verify his advices to this court) that the generations of washing plants, concentrators on the iron range, were changing from time to time and frequently as additional hardware and equipment was being added, and actually as personnel were changing and as advices were I have never known of any formal inquiry in the way of a written form for any of the information - but I can see how errors could creep in. 20

And inconsistencies could creep in?---Yes, I think inconsistencies could creep in. I am sure that the School of Mines intended it to be as accurate as they could and based on the advice they received. 30

Mr Sher was suggesting: "Well, when in doubt the little girley at the university rings the little girley round at the company and she's not thinking very hard but she pulls a word out of the air and that is what the company goes on record for". Assume that happened once, you would expect someone from the company to make sure, if

it was error, that it was not repeated next bulletin?
---I can assure you that if I were going back to the
United States as the president of the company it would
not be repeated.

MR HULME: With the two or three you were mentioning today, can
we start with Pioneer?---Yes.

That, you said, was an ordinary washing screen?---Yes; it is
a wet screening plant and frankly, from the point of
error as we are speaking of it as a - - -

WITNESS (Continuing): - - - as a listing I do not think anybody necessarily would have thought too much of it as being listed as screening washing. They knew they had a screening plant there. They knew that they were washing on it. Therefore I do not think anybody would have called the School of Mines up and said, "You listed that wrongly." Frankly, I have never given as much thought to the differential in the word screening as I have the last week and a half.

MR HULME: It does concentrate the mind when you get things turning on it. It is noticeable, is it not, that what it does not say is "wet screening". It says "screening and washing"?---Yes, that is right. Frankly, I do not see any place in any of the items where it says wet screening. The issue was raised for us by Mr Herkenhoff saying that screening meant dry screening.

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It is noticeable here, is it not, that washing is used very very frequently, if you look through the list?---Indeed.

And in no instance are we told where the washing takes place, whether it is on a screen or in a scrubber or in a washer or anywhere else, it just says "washing"? ---Yes, but that is not surprising.

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What seems to be regarded as the important thing is what is done, not what it is done in or on?---Washing plants I think from the time before this thing originated then the listing originated, actually started before wet screening started on the range. The original washing plants were not wet screening plants, they were log washers, classifiers, those sorts of things - tables. Along came wet screening and they were able to concentrate and do a better job with wet screening as the first application of water.

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Screening was what came in as a means of doing something which was already being done. People knew how to wash before they had screens?---That is right.

The wash ores are called wash ores, not wet screen ores. They are wash ores, are they not?---They develop that terminology by virtue of being brought to a market-able grade by washing, yes. They were not considered wash ores until somebody discovered that.

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That is right but we did not call them wet screen ores?---No.

They were wash ores, ores in which it was necessary in one way or another to wash some of it away and be left with a good ore?---That is right.

MR HULME: That, in the United States' terminology, is the point at which you draw the distinction between the direct shipping ore and the beneficiable ore?
---Make that statement again, please.

There is a class of ore called direct shipping ore?---There are ores which are shipped and when shipped as direct shipping they are direct shipping ores. They are not direct shipping ores until they are so shipped.

No; but there is a category of ores - -?---There are categories in which various mine operators would consider that they were going to exploit that ore body as direct shipping but they are not all direct shipping ores in the sense that by a class they become that and are therefore continued as that all the time. The classes change as the operator actually permits it or operates.

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Yes; but at any time there will be a category of ores which can be sent for shipping after simple crushing and sizing - sizing by screens?---By dry screening?

Yes?---No longer, not on the Mesabi Range. There is no longer any ore marketable on the Mesabi Range.

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I am not saying you have any left on the Mesabi Range?---No, it is not a matter of being left - - -



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WITNESS (Continuing): - - - being left. There is a lot of ore in the ground that was previously considered direct-shipping ore. It will never be mined as direct-shipping ore. It cannot meet competitive demands. The very last major mine on the Mesabi has just been changed to a wet-screening, washing plant; the sizeable, remaining ore body that had been paying direct-shipping ore taxes for years. It was one of my ore bodies. We paid \$25 million ad valorem taxes before we took a spoonful out of it and it is now no longer direct-shipping. It is simply ore going to a beneficiating plant for washing.

10

MR HULME: I am not saying any particular place still has them but there is a known category of ore that is called direct-shipping ore?---I am saying to you that that category no longer exists.

All right. In saying that you are saying, are you not, "We no longer have ores which can be sent to the steel works after only crushing and sizing"? ---That is correct.

We know what the category means. We just do not have any left in that category?---The original direct-shipping - - the original term "direct-shipping" did not even mean sizing. The term direct-shipping really was indeed that. The railroad cars were pushed into the pit, were loaded directly from the bank by the shovels, and it went directly to the ships, to the steel mill. That was the direct-shipping.

20

You have been involved in iron ore leases?---I have been involved in iron ore leases, both to and from us. I have operated fee properties. I have operated properties we operated from the State.

30

Is there not a royalty distinction drawn between ores which can be sent to market after only crushing and screening and ores which cannot - ores which need beneficiating?---The original royalties drawn up on the Mesabi Range made no distinction as to what the royalty rate differences, if any, were. As a matter of fact, some of the original leases provided that the lessee would pay to the lessor the same amount of royalty, no matter how the ore was treated.

40

Now can we answer my question, please, Mr Beukema? Are you not aware of an accepted distinction in the United States as regards royalties between the royalty on ore which can be sent away to sale after crushing and screening and ores which require more than that? ---I am aware that there was that distinction in royalties that we negotiated at such time as we were following the direct-shipping practice.

MR HULME: You say you are aware of that distinction?---That it existed, yes, sir.

It was a common distinction?---It was a distinction.

It is in the standard State of Minnesota statute, is it not?---
It is in the statutes of the Minnesota leases back in 1921.

It is in the standard State lease which is prescribed in that statute?---In 1921.

Which governs the Mesabi Range?---It does not govern the Mesabi Range.

Is not part of that in Minnesota?---It only governs the State properties on the Mesabi. 10

Yes, I accept that?---It has nothing to do with personal properties and personal leases negotiated with property owners.

In drawing that distinction, the way it is expressed there
8A - - there was a distinction drawn, was there not,
between "open pit direct-shipping ore" and "open
pit, wash ore concentrates"?---That was a class
of ore in the State leases. 20

And "open pit, special concentrates"?---Yes. That was a concentrate that was concentrated by more sophisticated means and several washings.

The Minnesota standard statute says:

" 'Direct-shipping, open pit ore' shall be understood to mean all ore lying beneath the final stripped area of the particular mine in which it shall be situated and lying within reasonably safe mining slopes that is shipped in its natural state without beneficiation of any kind other than crushing or dry-screening." 30

WITNESS: Correct.

MR HULME: That is the open pit ore concentrate?---(Inaudible).

OLNEY J: Is it convenient then to adjourn?

MR HULME: If your Honour pleases.

HEARING ADJOURNED UNTIL 10.30AM

FRIDAY, 18TH NOVEMBER, 1983

CHRISTIAN FREDERICK BEUKEMA:

MR SHER: Your Honour, before my learned friend resumes, Mr Beukema advised me not as to what it was but that he had said something yesterday which he felt was incorrect and he wanted to correct it before any further questioning went on. I do not know what it is and I do not know how important it is, or if it is important at all, your Honour, but I thought I would mention it.

OLNEY J: Very well. Mr Hulme, do you have any objection to Mr Beukema volunteering that?

10

CROSS-EXAMINED BY MR HULME QC (Continuing):

MR HULME: I am happy to have you do that, yes?---I have not seen the transcript, of course, but I tried to remember exactly what I said as I was speaking to the early washing plants on the range. I had intended to say that they did not have vibrating screens but had trommels and washers and scrubbers and tables and things of that nature. I do not know whether I mentioned the word "trommels" because of course a trommel is a screen, so the early washers did have screens - but the first washer had a trommel, not a vibrating screen which has been the subject of this discussion in this courtroom so much. I felt it was important that I identify that there was screening.

20

Thank you. I will show you a document and get you to identify it for us. Are you able to identify that as a draft iron ore mining lease of the State of Minnesota under the Minnesota Statute s.93.20?---Yes, sir, that is what it appears to be, a draft.

30

If one looks over onto p.3 you will see the definitions of ore material under each schedule, and it distinguishes between open pit direct shipping ore, which is ore that is shipped in its natural state without beneficiation of any kind other than crushing or dry screening, and then open pit wash ore concentrates, which is concentrates produced from open pits which requires treatment by straight washing to make it suitable for use in a blast furnace, and then open pit special concentrates which require treatment by "roasting, sintering, agglomerating or drying through the use of fuel or by jigging or by heavy medium separation to make them suitable for blast furnace practice"?---Yes.

40

Would I take it that the open pit wash ore concentrates are what are normally referred to in the articles as "the wash ores"?---Yes, that is right. There was a distinction between those and the more complex ores.

MR HULME: So we have the direct shipping ores, which are
ores - crushing or dry screening, it says - - -

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MR HULME (Continuing): - - - it says if you see the definition?
---Yes. That definition went in by amendment in 41.

They are the direct shipping ores and then we have the wash
ores and then we have the ones which have to be
specially concentrated. That distinction of the direct
shipping ores is an established distinction in the
United States terminology?---Is that a question?

Yes?---It is an established specific terminology and specific
classification in the Minnesota ore leases. The term
more commonly used in the majority of leases governing
the Mesabi Range was merchantable ore and that is
what was at arm's length with private property owners
who owned most of the ore.

10

The merchantable ore again is an ore which can be sold after
no more than crushing and/or screening?---In the sense
under merchantable ore they had several classes and,
again, the classes pretty much paralleled this in the
sense of concentrates - they did not get so much into
the complex concentrates but they had a rate for the
merchantable direct ore and then the merchantable concentrates
and then a rate for taconite and then rates for underground
ores.

20

So that the merchantable direct ore is again an ore which is
merchantable crushed and/or screened?---Correct.

I do not want to clutter the place with more exhibits than
necessary. You have heard of Hanna Ore Mining?---Yes.
That was a large mining company.

You have heard of Jones & Laughlin?---Yes, Jones & Laughlin.

30

Again, a substantial company?---It is a substantial steel firm in
the process of merging with another.

Pittsburgh Pacific?---A small firm that "scrammed" ores after
other major companies had left them.

Would you look at these documents I am about to hand you?
I will then be asking you the question whether leases
in that form were being entered into in 1960 and 1966
and 1981?---Yes. This one document is Hanna Ore
Mining executed in 1960, I believe. It has a page
affixed - - -

40

WITNESS (Continuing): - - - affixed to the document, including an extract of the definition page from the Minnesota State Lease. That has that definition term.

MR HULME: You're happy to accept the proposition that leases in the form of the Minnesota Standard Iron Ore Mining Lease under s.93.20 of the Minnesota Statutes were being entered into in 1960, and 1966 and 1981?--- I have not seen the 1981 one. That is the one that is a big surprise to me.

MR SHER: Your Honour, I perceive my learned friend is seeking now to prove, through this witness, that these documents are what they are asserted to be but how can he possibly do that? He can at best only be guessing because he does not know in fact unless he was one of the parties involved, which it is clear he was not. 10

MR HULME: I suppose he could know in fact if his knowledge in fact extended thus far, to the extent of being a consultant or adviser to any of these companies and knowing positively that leases in these forms were being executed.

MR SHER: If that is the fact, it has not been established yet. I do not know that to be the fact from any instructions. 20

OLNEY J: Again, it has not been sought to tender the documents yet.

MR SHER: No, but I assume that will be the end of the trail, as it were. This is the beginning of that attempt. I would object to a witness being shown documents, and asked really to say "Do they seem to you, in effect, to be the sorts of leases?" Unless he has personal knowledge of them, he could not possibly identify them. 30

MR HULME: I am entitled, your Honour, as I understand it, to show documents to the witness and ask him whether, having seen them, he accepts a proposition. This is, after all, a man who has put himself forward as an expert on mining leases. He is used to seeing the formal way in which documents are executed in Minnesota, the way in which the notary public certifies as to signatures, etc. I submit I am entitled to ask him.

OLNEY J: Yes, that is all right, but I am not sure what use these documents are to be put to in these proceedings. If it is to show that in Minnesota, at different times - stages of history - leases with definition clauses were entered into, I am a little at a loss to know how that is going to help me construe a contract without a definition clause. One may be forgiven for thinking that where there is a definition clause you are defining something for the purpose of the contract, whereas where you do not use a definition clause, as in this contract, the words have a meaning that does not need to be defined. 40

MR HULME: That, your Honour, raises questions of relevance rather than admissibility.

OLNEY J: Yes, except, if its weight is so slight then one is entitled to reject it.

MR HULME: We would say in fact, your Honour, that the weight is considerable. - without a definition clause it is true, but you have words which, on any view, are capable of a different interpretation. If there is an accepted industry distinction at a certain point, a distinction which has been found to make sense for a long time, that would be a reason for saying "I think this is a draughtsman's inefficient attempt at drawing the known distinction rather than going off and inventing an absolutely different distinction for himself." 10
As indeed we would say between clauses (a) and (b) of clause 9 - drawing this distinction between ore which is crushed and/or screened, or crushed or screened, and ore under (b) which is beneficiated. One is described as "upgrading" and one is described as "beneficiating". The distinction is being drawn and we would say it is this precise American distinction between the direct-shipping ore - - -

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MR HULME (Continuing): - - - shipping ore and ore which has to be treated in some way and that will be a way in which less ore will come out than went in. That is the essence of the American definition of beneficiation. We say that is the precise distinction between (a) and (b) of clause 9. I do not have the late afternoon transcript. I would have been content to leave it at this being the standard Minnesota statute. I think Mr Beukema used words yesterday suggesting that it was a distinction but was not commercially significant now.

OLNEY J: I thought he said that the statute applied to mines in which the state had an interest whereas in many mines, the vast majority of mines, were privately owned and they adopted some other practice. 10

MR HULME: They adopted different terminology. He said they call it merchantable direct shipping ore.

OLNEY J: Yes, but I think he said that the royalty arrangements were different, too, or certainly the statute did not apply directly to them. As I understand it, from what you have said so far, it seems that it may be, in these contracts at least, the statutory state provisions are applied. Is that what you are getting at? 20

MR HULME: Yes, because these are leases from the state.

OLNEY J: These are all leases from the state, are they?

MR HULME: Yes; the draft form shows: "Between the State of Minnesota party on the first part" - so this is the standard lease for that situation.

OLNEY J: I thought that his evidence was that with land that is privately owned the contractual arrangements between the owner of the land and other people is different. 30

MR HULME: It need not be in this form but he said this morning that terminology draws the same distinction with a different label, "merchantable direct shipping ore."

OLNEY J: Perhaps you had better proceed, Mr Hulme, with your questions.

MR HULME (TO WITNESS): Mr Beukema, I suggest to you that the State of Minnesota was still entering into leases in that form in 1960 and 1966 and 1981?---Yes. That is not surprising. 40

It is a fact?---It is obviously a fact.

May I have those three back? I tender just the draft, on that basis, your Honour.



EXHIBIT

EXHIBIT 37 State of Minnesota iron
ore mining lease.

OLNEY J: This is not so much a draft as a pro forma, I take it?

MR HULME: It is a pro forma, yes.

WITNESS: As a matter of fact it is the boilerplate language,
if I may use that term, that the state conservation
commissioner is obliged by law to put in the document.

MR HULME: The law being what we have referred to as s.93.20,
the laws of Minnesota require the use of that form?
---And this modification of terminology was passed
in an amendment in 1941 and I do not think there has
been a change in terminology since then, regardless of
market conditions.

10

You said earlier, in private leases you can have a different
form?---Yes.

But there is an established distinction between the merchantable
direct shipping ore and other ores?---Yes. All the
leases carry distinctions as between classes of ores
so that the equity interest of the fee owner could be
protected. However the schedule was applicable against
whatever they ran into. It was a wide, broad schedule
of classes that they could run into in pursuing their
mining obligations.

20

The starting category in each case will be the merchantable
direct shipping ore - - -

MR HULME (Continuing): - - - shipping ore?---Would be what?

One of those categories is the merchantable direct shipping ore?---That is one of the categories listed, yes, sir.

In the United States ore which needs to be treated in some way beyond mere crushing and screening will be called "beneficiable ore"?---Well, that term could be used generally. The term "beneficiating" did not, as I remember, occur in all of the leases. "Concentrates" was the - - that automatically - - when you put the term "concentrates" in the rate schedule you automatically implied that they were concentrates from a beneficiating process.

10

You say in your affidavit that you were responsible for U.S. Steel's operations in Michigan?---Yes.

Are you familiar with the Michigan mining law?---Not as acutely as Minnesota, because we did not operate in Michigan in many operations; our properties were not as extensive.

Are you sufficiently acquainted with the laws of Michigan to be able to tell us whether their taxation laws imposed tax according to whether or not ore is beneficiated ore?---I cannot answer that specifically; I could only make a speculation on it.

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Let us now turn to the fields in which you have had experience. Your affidavit says that you were with the United States Army from 1941 to 1944?---Yes.

And "Who's Who in America" says 1941-1946. Are you aware of that? Is that another of these publications you do not look at after it has been published?---Well, no I really have not, and I was not aware of that. Frankly I always felt you got listed in the "Who's Who" to buy the book.

30

It says you were a staff assistant with U.S. Steel from 1946 to 1949?---That is correct, yes.

And it is wrong in saying you were with the army from 1944 to 1946?---I suppose I should remember exactly when I left the service but I cannot be sure. It may be that it was wrong in the affidavit, I do not know. It seems to me that that is a short period for as many years as I remember in the army.

40

Then you went to Michigan Limestone in 1953?---No, I went back to them. I do not know if that affidavit - - I would have to see it. I went there directly out of college in 1940 and then I went to the army service in 1941; in other words I guess I would have to say that we - - -

WITNESS (Continuing): - - - that we shortened up; we did not list every year chronologically in this affidavit.

MR HULME: When you came out of the army did you go to Michigan Limestone?---Yes. I came out of the army; I went back to the position which I had held prior to going into the army. I had had a commission and was called to active duty.

Was that with Michigan Limestone?---Yes; I was with them right from college.

And from then on you were with them and you became general manager, operations, of Michigan Limestone Division in 1953?---Yes, and inbetween that period of time you mentioned something, I thought, about early Pittsburgh; I was in Pittsburgh for a while in there. Did you not mention something about my being in Pittsburgh in 1953? That was when I was back in - - alright, that is fine. 10

Just so we can get a picture of the activities, how big an organisation is the Michigan Limestone Division?---At that point in time it was about - - do you mean big from a standpoint of total personnel? 20

Well, staff first?---The staff at that time, the headquarters staff, was probably 50 people - headquarters in Detroit, Michigan.

That is the headquarters office staff?---In my office, yes, at that time.

Is that in a city or at the mine, or what?---No, that was in Detroit; that was a centrally located place to do the administrative function. 30

Does that division have several limestone mines under it or comprised in it?---I would like to have confined my remarks to what it was then because it has been reorganised substantially and changed and shut down.

Yes, I understand that?---Yes, it had; we had quite a few mines and we also operated ships on the Great Lakes.

So your appointment there was an office appointment at a pretty senior level?---Yes. 40

You had entered the management stream fairly young?---Yes.

And it was a mangement function that you had and have had from then on?---Yes.

Did you at any time, in relation to limestone, have appointments within a limestone mine? Had you ever worked at the limestone face or in the limestone buildings?---Yes,

I did in the early days out of college, back at what we called - -

MR HULME: That is in the 1940/41 time?---Yes, and then subsequent to that period which is sort of in a hiatus in this affidavit, coming back from the war and before I went up to the - -

Yes, and from then on it is the army and Pittsburgh, and then you are back as general manager of operations in limestone?---That is correct - army and limestone operations and Pittsburgh, and back to limestone.

Then you go from there straight as president of the Oliver Iron Mining Division?---Yes.

10

Just to get the terminology straight, is president there the chief executive officer of that division?---Yes.

MR HULME: You would have had reporting to you a number of vice-presidents?---Yes.

Under them, how far down would you have to go to get to the people actually running a mine? That would be how many steps down the hierarchy?---When I went there I inherited a very substantial hierarchy. The organisation was big and I cannot tell you how many steps. I immediately terminated quite a few of the steps.

Have you any idea how many mines were comprised in that division? I wish to get an indication. Can you say it was a dozen or six or 20?---At that point in time it was probably close to 20.

10

Close to 20 mines?---Yes.

Can you remember to whom you would have been reporting? Presumably you were at the top of that division?---Yes.

In US Steel. To whom, as head of that division, did you report?---To an administrative vice-president of the United States Steel Corporation in Pittsburg.

20

1960 was your first appointment in iron ore, was it not?---It was the first direct appointment. I had had responsibilities towards iron ore while I was in Pittsburg for that period before going back to Michigan Limestone.

Then in 1964 you became a vice-president of US Steel?---That is when a complete and total re-organisation of US Steel took place. All divisions and subsidiaries, as such, were terminated. Organisational personnel were put together in one massive organisation and a new skyscraper was built to house it.

30

It would have been an exciting time at headquarters?---At that point in time the progress of reducing personnel really came on full flux to fit this new skyscraper.

That is when you became a vice-president of ore and limestone operations. The United States of America only has one vice-president. How many vice-presidents would US Steel have had, approximately?---It is hard to say. I could not tell you how many. I think that generally speaking if you did not want to give somebody a raise you made him a vice-president.

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Would it be true to say there were something like 40?---I think that is stretching it a bit. It may have been right. I would have to look at the annual report in that particular year.

But that is the kind of number?---There could be that many - - -

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WITNESS (Continuing): - - - that many. I think, if you want to take the court's time, at that point in time I could probably write down all of those who existed and their names.

MR HULME: I am not asking you to do that, Mr Beukema; just stay with my questions. It would be something like 35 to 40 vice presidents?---Yes, it could well be.

And that appointment is a Pittsburgh appointment?---Yes.

And all your subsequent appointments are Pittsburgh appointments? ---Yes. Once you got to headquarters that is where it was, that is where the action was, at headquarters. May I inject this? In speaking of these multitudinous vice presidents you realise that the United States Steel Corporation has a broad conglomerate of many, many activities beyond mining iron ore.

10

Yes. This is what I want to get at; it is a very large, broadly spread company, an enormous company?---Yes.

The man at the head of one of its divisions has many, many people under him and assisting him in all his activities? ---He has assistants, yes. I would not concede to the word "many".

20

Pardon?---If you are speaking in a staff function I would not concede to the word "many"; one thing I prided myself on was having a limited staff always.

That is the actual staff in the administrative sense?---Yes.

For instance, Oliver Iron division had a substantial research division?---Yes, very substantial.

30

That was established in 1949, certainly well before you went there in 1960?---Although I was in Pittsburgh I remember I was involved in its establishment from Pittsburgh at that time.

One of the people reporting to you as president of Oliver Iron would have been a vice president research?---We did not have a vice president research when I became president of Oliver Iron. We did not have that title.

Did you establish one after you became president?---No, I did not. As a matter of fact, we attempted to be as much functionally-headed as possible without as much emphasis on titles.

40

It is true, is it not, that the man at the top takes responsibility for what happens underneath him?---That is generally so.

That does not, in itself, make him an expert in everything that happens underneath him?---No. It does not make him an expert in the details but he has to know what is going on underneath him.

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MR HULME: If the company puts in a tax return of some sort the president would be responsible if it is wrong but that does not make him a tax lawyer. He has to ask his people about that?---I was not involved in the preparation of a tax return or the review of one yet I had practically daily meetings with my tax people about problems they were having.

But the position is the same in other areas though, is it not? The president is not a polymath who knows everything; he is a man who can administer an organisation which includes experts who are there to help the right decisions be made?---Exactly right.

If a plant had to be designed, the normal course would be for management to make recommendations to the president, after investigation, to come up with different ideas and in the end the decision as to what would be done would be made by the president subject to his capital allowances. The fact that he has to make that decision, however, does not, in itself, mean he is an expert in the processes involve, does it? ---He cannot be an expert in what I would call the nitty-gritty details but from the standpoint of the functional aspects of a plant, its conceptual desires and layout, yes, he has to, if he is doing the job as I did - - -

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WITNESS (Continuing): - - - as I did it, review that and be sure he understands that before he would sign his name on it.

MR HULME: So that if the president wants to know some metallurgical matter he will ask his metallurgists? ---Right.

His job is to make sure he has the right metallurgists rather than trying to second-guess them within their expertise which is not his expertise?---Right.

A large and increasing part of his job will be, in fact, what one might call representing the company or the division in public matters, environmental concerns, government inquiries of one kind or another where people expect to see the man at the top appearing for his company? ---That took a lot of my time.

10

And that has become an increasing part of the role of chief executives and chairmen of the board - that kind of public representing of their company?---Yes.

All of which, of course, occupies a lot of time of the person concerned?---Right.

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Mr Beukema, in para.1(e) you say you delivered a major paper to the Annual International Mining Show & Convention of the American Mining Congress on the state of the iron ore industry?---Yes.

That it is fair to say, is not a technical paper at all; for the most part it is a public related paper, the relationship between the iron ore industry and the country?---Well, this was not a company paper; it was an industry paper. I was speaking for the industry in this national forum - international forum at that time - and it was in general about the competitive problems, the economic problems and the status of the industry vis-a-vis those problems, and its vitality.

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Would you just look at that and identify it for me as being the paper concerned?---Yes, sir; that looks like the paper I delivered. I do not think I have one myself; I would like a copy of that.

It is predominantly, I suggest to you, a call for more sensible conduct on the part of the government so that the iron ore companies can get on with their job better? ---Well, I remembered that as the message of the day and probably it still comes through. I remember that as the message I was trying to impart and apparently it has still come through.

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It could not help coming through, Mr Beukema, because in one of your other articles you complained about not having

DOCUMENT 3* - Defendant's Evidence
Evidence of Christian Frederick Beukema



"gotten the message through", so I thought we had better read it carefully. However, the papers you have written on the iron ore industry - none of them is technical?---No, they are not.

MR HULME: That is not the area in which you have been - -?---Well, that is not the area on which I spoke in public. This is the closest to being public, to getting exposed to that which I do not know.

You have not -and I do not suggest you should have; I am just saying - - your career since 1953 has not been - - -

MR HULME (Continuing): - - - not been in the technicalities of processes?---I cannot answer that "Yes" or "No". I applied myself as diligently as I could to understanding processes, because I felt (you spoke of calling in a metallurgist) while I was not a metallurgist, if I called in my metallurgist and wanted advice or understanding on something, I wanted to make sure I understood what he was telling me. That meant I had to do a lot of personal, additional work to bring myself up to a level of comprehensibility on many subjects.

But there is a difference, is there not, between making sure that you can communicate with the expert in the narrow field and decide for yourself the significance of what he has said, and that man working in the field in his specialty having, in his specialty, the internal understanding of what goes on that it is not necessary for you to have to be able to communicate?---Indeed, absolutely. There is a difference, yes, in the level of knowledge. I would not begin to try to present myself as an expert to the level of a person who is trading on his expertise in a discipline in which I was not trained.

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You are in background a civil engineer?---Yes.

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Michigan has a mining school - Michigan Tech?---That is right, a very fine school. It specialises in underground mining.

That was not your school. As you say, you were a civil engineer seeking to understand the significance of processes which experts in those particular fields would have a greater understanding of?---The Michigan Tech specialises in underground mining engineering and certainly that is its specialised, distinct discipline from mining generally. I have always felt that the large, open-pit-type mining is more akin to the earthmoving kinds of capabilities which a civil engineer is versed in, as he may build highways or railways or things of that nature.

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That is the mining. When we get to the concentrating processes and what is happening to different bodies, that is a field where people like chemists and metallurgists would have things to say which you would wish to understand. You would not be able to guess them?---I could not draw on my academic background, no.

40

If water inter-acts with clay and if one wants to know why, one would ask a metallurgist rather than the president?--- Or a chemist, yes.

Because the chemist or the metallurgist is the person whom the president would ask?---I certainly would try to find out.

DOCUMENT 3* - Defendant's Evidence
Evidence of Christian Frederick Beukema
Cross-examination

MR HULME: In para.13 of your affidavit you talk about scrubbing.
Are you familiar with the phrase about setting up a
straw man to knock him down?---I have never heard it.

You would say, would you not, that the washing process - - -

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MR HULME (Continuing): - - - washing process of this ore begins in the chute when the water comes in?---I would say it is a commencement, certainly, of the wetting process. Whether any washing actually takes place, I do not know.

Washing, in your terminology, certainly takes place on the screen?---I would think that washing - - Wet screening conveys with it, in my judgment, automatically a sense of washing.

So washing is taking place on the screen?---I would say washing is taking place on the wet screens. 10

The total washing begins, does it not, with the first application of water?---The first application of water is to get the ore wet. Whether that is the first application of washing or not I would think would depend upon the instant situation. I spoke yesterday about the chute and I do not think much washing went on.

Can you wash the ore without wetting it?---That is the first thing that has to be done, to get it wet. 20

So that if someone says, "Wash this but don't wet it" it is a bit of a contradiction?---It is quite ridiculous, yes.

And the process of that washing begins, does it not, when you first apply the water which wets the ore? Is that not how you would use the word?---I thought I answered that before; I will try again. The wetting of the ore has, as a subjective, the wet screening process which carries with it, of course, the washing that happens on a wet screen so that one can say that the commencement of the wet screening process is as the ore is preliminarily wetted to facilitate the wet screening. 30

What Dr Lynch said in his affidavit was that the putting on of the water was technically a scrubbing effect with the water hitting the ore and that the term "washing" was often used in industry to include what he said was technically scrubbing?---I think I recall - without looking at his affidavit I could not speak positively as to what I understand he said but do you want me to make a comment on what you just said? 40

I am happy to have you make a comment on that?---I think that basically I have never heard of washing in a chute ahead of a wet screen. I have heard of wetting the material in the chute; indeed, it is the process to do, it is the thing to do, if you want effective sizing on that screen, to get it as wet as you can, to make sure, as a slurry, it will flow through the top deck - if there is a two deck screen or a three deck screen - but I have never heard of it termed as "washing."

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Speaking to the subject that Dr Lynch spoke about as "scrubbing", I tried to make a point yesterday under direct examination that I cannot see any scrubbing taking place unless the particles are going to abrade against each other and I do not think any abrasion exists until they hit the bottom of the chute.

MR HULME: If, in fact, particles of matter are being - - -

MR HULME (Continuing): - - - matter are being removed from the material being washed as it gets hit by the water, that in one sense is scrubbing, is it not?---No, I do not think I would call it scrubbing. I recall having heard in this courtroom repeated passages from Taggart being read on that subject of jet scrubbing, and it seemed that that definition, as I recall it, carried with it the necessity that the product or material being scrubbed had to be backed up by something rigid.

You would not say that in one literal sense there is scrubbing because particles are being removed by the washing process in the chute?---One has to accept first that particles are being removed by a washing process in the chute. I do not think I have admitted that, sir.

10

You would say there is no washing taking place there - none; is that right?---I have said I find it very difficult to conceive of washing going on in the chute, recognising the necessity for the ore to be abrading, to loosening particles such as they may exist on larger particles, and the indefiniteness associated with the completeness of the spraying action on the ore, and the shortness of time - it is such a short period of time that whatever happens and whatever benefit could be claimed to be gained would have to be of very, very minimal quality and quantity.

20

In one sense of scrubbing if water is applied in force and for the purpose of removing particles and it is doing so, then scrubbing is going on; it may not be a great deal of scrubbing, but scrubbing is going on?---I suppose if one was not worried about terminology to as exact as possible with the definitions in the absolute as one would like to be, I suppose one could take a literal - - a little liberality with the definition.

30

Yes. I just wanted to see if really terminology is all that is being argued. You say, do you not, that if there is any washing there is some scrubbing - in one sense of scrubbing?---To bring it to the minimal, if the spray of water hits the front curtain of ore, the front edge, and if in so doing in the instant that the ore passes and is impinged by that sprayed droplet of water a particle is knocked off the particle it hits - if one wants to stretch scrubbing to include that they can do so; I cannot.

40

That is not how you use the word "scrubbing"?---No, sir. It is not as I would understand it and as I have seen it in my lifetime in the industry.

However, is it not right to say that there is a literal sense in which all washing involves scrubbing?---I suppose one could say that is true, Mr Hulme, if one remembers how many times his mother has reminded him to "scrub" behind his ears - - -

S11B. 11.31

WITNESS (Continuing): - - - his ears.

MR HULME: Mr Beukema, I am trying to get you to agree with yourself because your own affidavit says at the top of p.8:

"In one literal sense any washing involves scrubbing because particles of foreign matter are being removed from the material being washed."

WITNESS: May I speak to that? I was speaking here, I thought, of the washing as it occurs on the screen at that point. Were we not? 10

MR HULME: What you say there is that "any" washing involves scrubbing in one sense of the word scrubbing - obviously a sense you knew of?---I presume that, yes, as I said, washing - - without any question, if you are washing - washing an automobile, washing yourself, washing an ore - there is a certain amount of scrubbing as part of washing, I suppose.

I three times put the proposition that all washing involves scrubbing in one literal sense of the word scrubbing? ---I understand, sir. 20

You seem to have difficulty with the proposition?---I am sorry if I appear obtuse. I thought that what we were trying to get to was an admission that washing was going on in the chute and hence scrubbing, which basically I cannot commit myself to.

You are then aware of a sense in which the word scrubbing is used, whereby, if material is washed, it is scrubbed, and that is the use there?---Yes. 30

If you put water on under pressure and a particle is removed, that is scrubbing - in one sense, in that sense?--- In one sense, yes.

The main point you make here is that the chutes would not be normally described as scrubbers, is it not?---That is true. I feel quite certain of that.

Of course, Dr Lynch never said they would be?---He said it was specially designed to be a scrubber. 40

MR SHER: I do not think my learned friend is intending to mislead the witness but if the question was designed to suggest that that is all the witness said in his affidavit we would object to it, because it is clear that he has not.

OLNEY J: Yes.

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MR HULME (TO WITNESS): A scrubber, for you, is a particular piece of equipment called a scrubber and meant to do much more scrubbing than you have - -?---That has been the practical experience I have had with them. I have had scrubbers in limestone and ore operations and they were pieces of machinery. There was little question they were doing some work on making sure you knocked off the clay particles.

That is what you mean by a scrubber?---When I see a scrubber, that is the sort of thing I see.

You would have said, I think, that scrubbing does take place on the screen?---There is certainly a scrubbing action which takes place as the particles - - I see scrubbing as an abrasion of particles in the presence of water. In other words, if there was dry it would be simple abrasion, but I see it as abrasion of particles in the presence of water, and the presence of water is to wash whatever is scrubbed off away.

Is what you are saying that the particles must rub? Do you mean abrasion by the rubbing of particles?---Right, or rubbing against a fixed object or something which tends to abrade loos that which can be readily abraded; other than fracturing. I am not thinking of the necessity of a force that is great enough to break it but abrasion just by normal wear.

Imagine the case of one lump sitting there with a jet of water hitting it. The impact of the water on that lump, knocking fines off - is that not a scrubbing effect?---That lump if it is sitting there - - -



WITNESS (Continuing): - - - sitting there, I take it, is backed by something it is sitting on and certainly, by definition as I have heard from Taggart, certainly I could conceive that some scrubbing is going on, on that piece, by the force of the water as that lump is sitting there resisting the force of that water, yes.

MR HULME: Without the lump actually rubbing against another lump or rubbing against the screen, the actual water impact can be a scrubbing effect?---Yes. I think in this case the water was acting with a sufficient force to be causing an abrasion force.

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So the abrasion can either be lump to lump, or lump to backing, or water to lump?---Yes, depending on how firm the stream is. I mean, a jet of water - -

Indeed, there are screens, are there not, used in wet screening which have a blank area for part of the screen where simply the water is hitting the substance which is not yet able to go through the apertures because it is on a blank section?---Yes. There are some screens that have a flat area at the start for the feeding before the material gets to the opening of the deck and then there are screens that have blank areas in between ranges of holes where the water may hit it.

20

So, in this plant, you would say that scrubbing is taking place on the screens - a scrubbing effect?---I think that is a little better.

Yes; but you would not call the screen a scrubber?---No. I would not call a screen a scrubber because, as I said before, scrubbing carries with it, in my mind, a connotation of deliberative endeavour to do what you can with the best means possible for scrubbing the material and that would require a machine for that purpose that is so designed.

30

You have said that is the essence of scrubbing. I think what you are saying is, that is the essence of a scrubber?---Yes.

There is scrubbing on a screen?---Yes, all right, I see what you mean. In other words what you are saying is, does the essence of scrubbing carry over to a scrubber? No, it does not carry over to being a scrubber but there is some essence of scrubbing.

40

There are lots of places where scrubbing takes place which no-one would call a scrubber?---Exactly. I suppose that is right.

The scrubber is the specialist place put there just for that purpose of scrubbing, a specialist piece of equipment? ---That is right. That is the way I see it.

MR HULME: Can I ask you a question about what we always think of as the Beukema point that you came back to yesterday on p.942?---The famous Erickson point? Is that the one you mean, in my exhibit?

That is right. Do you know of any plant where water is added to bone dry ore for the purpose only of sizing?---That plant, I trust you would say, could be any type of plant. Are you limiting this only to iron ore?

Yes; iron ore?---Only iron ore? That narrows the field - - -

WITNESS (Continuing): - - - the field, because I could give you an example in another material. First of all, I have never seen any bone dry iron ore; they all have a certain amount of moisture.

MR HULME: So does a bone, Mr Beukema; it is very dry but not completely dry?---I understand your question; I think I understand the thrust to your question, and I cannot think of one at this point in time, no - for just the sake - -

Just the sake of sizing the ore?---The closest that I can think of on this are the processes which I understand are being used in the case of the Aguas. Clarus, the Lamco - the first application to those on the screens is to make a clean, coarse product; that is what it is for. The Sherman washer, the change I spoke of yesterday with Mr Sher - I had the washer, I had a dry screening plant; I put washers, screened, to make wet screening of dry screening. The purpose was solely to make coarse clean material. We were not getting a cleaned, size plus quarter inch or plus 6mm.

What happened to that ore afterwards?---We washed it. The coarse went direct to product and we recovered the fines in a classifier. The primary purpose, the purpose of the investment and the authorisation of the appropriation to spend the capital funds, was to get the clean coarse so it did not have piggy-back fines when it went into the blast furnace.

But that was all. You were going to have to do a classification, wet, involving the taking away of some of that ore to raise its grade?---Oh no. In the Pioneer the application was not designed to bring up the iron. Actually we lost iron in the fines over the weir of the classifier. We sacrificed that primarily because the essential purpose of why we were doing it was to get the coarse clean material for the blast furnace benefit. We did not have a good, clean product on the dry screen.

So it had to be washed; is that right?---That is exactly why we did it. That is exactly why we put the washing plant in the Pioneer. It was very high grade ore - -

Clayey ore?--- - - the Pioneer ore, but it was not bone dry, that is why I didn't answer you beforehand.

Was it a clayey ore?---Clayey ore - it had a certain amount of loam characteristic in some of the fines, but in trying to screen it dry in the laboratory we could not screen it satisfactorily, so we had to go to the wet screening to make the clean, coarse material.

MR HULME: Is Pioneer a Mesabi ore?---It is a Vermilion Range underground ore.

Is that what is known as a "sticky" ore?---Pioneer was not really a sticky ore in the sense of the "painty" ores of the Mesabi. The Mesabi had some very sticky "painty" ores, as we call them - paint rock type ores - but the Pioneer was not that type and it cleaned up very well with what we did.

But it was ore which required to be washed before being merchantable?---Just so that I do not get misunderstood, we were using every pound of that ore in our own blast furnaces, so they were going to get it, whatever we sent them, but we were trying to improve their performance - - -

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WITNESS (Continuing): - - - their performance by taking the loss of metallics, by improving on our performance so they got a good quality material.

MR HULME: It was an ore which had to be washed?---Yes, sir, but not for the chemistry - not for the chemical upgrade; not at all. It was physical. In other words, what I am speaking of here in these plants that I have cited, is that we are washing for physical structure, as distinguished from chemical upgrade.

That physical structure being what?---What we are attempting to get is a clean, coarse product at one-quarter inch. That is about your 6mm, I believe.

10

When you say "clean" what is going to happen to what gets washed off?---That is what went into the fines and that was what was brought back by the classifier in whatever grade it came back and was then blended with fines from other mines to go down and put on the sinter plant, and then was agglomerated on the sinter plant to products which were again sharp and clean when they went in the blast furnace.

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So as far as the fines were concerned there were several processes coming?---There was everything that was necessary so we could get as much iron back as we could. We took a risk on the loss of iron. You do not do any of these things, you would never put on the water in these kinds of materials, particularly if they are a high-grade material, without realising you are going to lose some iron and that is an expense you weigh out, as to whether it is worth the loss for the benefit you hope to gain in the end process, in the hot metal costs in the blast furnace.

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Addition of water to very dry ores - - you have heard the Pilbara ores are very dry?---This is what I was thinking when you asked me "bone" dry. I do not know any of these ores that I have cited in the examples I used that were bone dry, so that is why I could not immediately, but when I realised you were asking for the question of washing for sizing only, that reminded me that maybe that was what you were after, and that is what we were after.

With dry ores of the dryness of the kind we have in the Pilbara, you have never known them to be wetted for sizing, purely for sizing?---I do not know of any ores - I have had no experience directly with ores - that would be as dry as those of the Pilbara. The closest thing I can think of is the El Pao example in Venezuela. The Savannah country of Venezuela where El Pao is located, up-stream of the Orinoco River, is far wetter than it is here, so I would say to you it cannot be comparable in the nature of dryness. Here again, however, is a high-grade ore which the Venezuelan Government - - Bethlehem Steel, when they ran it, did not wash the ores

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and the Venezuelan Government has decided to meet the competitive demands of the marketplace for a keen type of blast furnace feed ore. They are washing that high-grade ore for size.

MR HULME: Those ores are being washed?---They are washed for size on a screen.

For the purpose of getting them washed?---Cleaned, sized ore, but not up-grade chemistry.

It has been decided that that ore has to be washed?---They cannot screen it and have it clean-screened. There are too many piggy-back fines go over with it.

10

It has been decided, has it not, that that ore, for competitive reasons, needs to be washed?---It needs to be screened and to do the screening it has to be washed on the screen.

No, that will not do, will it, Mr Beukema? That ore needs to be washed?

MR SHER: If your Honour pleases, Mr Hulme is constantly putting to the witness an assertion with which the witness does not and will not agree. In my submission he is entitled to answer the proposition which is all he is doing.

20

OLNEY J: Yes, but he continues to answer it.

MR HULME (TO WITNESS): You said the government wanted clean ore, did you not?---It wants a cleanly sized ore, yes, sir.

"Clean" was one of the two words you used?---It is one of the words I used, yes.

How do you clean ore?---One of the ways I know to clean ore, and one to get the separation, is to wet screen the ore and that means apply water to the ore on a screen to make sure that all of the fines you do not want get through the apertures of the screen.

30

If the ore is to be cleaned it will need to be washed, will it not - - -

J184. 11.51

MR HULME (Continuing): - - - will it not?---I thought I had described to you what I concluded was, in a sense, the washing process on a screen.

Because that ore is required to be washed; the ore needs to be washed in order to be cleaned?---The ore needs to have water sprayed on it, on a screen, which results in a washing away of the fines to make sure that the ore is cleanly sized.

What happens if you dry screen that ore?---As I was saying, they 10
tried it and they had too many piggy back fines going over on the coarse. The fines stuck with the ore and they were not getting the clean size they wanted.

You could screen it quite effectively in relation to the particles as they came for dry screening but the lumps carried on fines. Is that not right?---The lumps carried on across the screen, the plus quarter inch size, which is the desired range - it carries across the screen with adherent fines that they do not want with it.

The screen was screening dry the particles as presented to it 20
but lumps were carrying adhering fines - -?---Across the screen to the product line, yes.

Because it is not the function of a screen to break up particles, is it?---And I am not speaking of breaking up; I am speaking of making the positive separation on the screen and the screen was not making the positive separation because the particles had adherent fines to them.

What was being presented to the apertures was oversized lumps 30
which had fines adhering to them which then went off with the oversized lumps?---I do not know if they were oversized in the sense of what they wanted. I cannot say that. At least they were over the size of the screen deck openings that they did not go through or that the fines that were on them did not go through.

Mr Beukema, we have been using the word "over" and "under" in that sense? I mean overs are what go over and - -?---Yes. I cannot say the lumps themselves were oversized but the fines were sticking on the lumps and going along with them. 40

That is right?---I do not say the lump was oversized by itself; it went across the screen all right and even the lump that was not oversized, with fines stuck on it would go through the hole, but the lump that did go across was carrying fines stuck on it.

And that is what is being called the overs - and I do not mean oversize in any pejorative sense, simply what goes over the screen rather than what goes through it?---In

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other words, you are talking the product of a screen.
The material that goes over the screen I call the product
of that deck.

MR HULME: And what needed to be done was to remove fines
from that product?---From those sizes that were going
over the deck, yes. That is why they introduced the water.

Because if you wanted to get those fines off, water was
necessary?---Right.

That washing process of getting them off was done by wet
screening and the particles having come off they could
then go through the apertures?---The particles could
go through the apertures, not the lump. The piggy back
fines could go through because they were washed off
by the wet screening action.

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Having been detached by washing they could go through the aperture?
---Right.

SHORT ADJOURNMENT



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UPON RESUMPTION:

MR HULME: Mr Beukema, in your affidavit you have expressed agreement with large quantities of the affidavits of Mr Booth and Mr Grosvenor in your para.5?---Mr Booth's?

Mr Booth and Mr Grosvenor?---Paragraph 5 is Mr Booth.

I am sorry; para.4. I will have to ask you some questions about things said in those affidavits. Can I ask you for a little assistance firstly? You have been in the position of making decisions involving the expenditure of money for projects of different kinds?---Yes. 10

If the people under you put up a recommendation for a project you would be concerned, to put it very broadly, with capital costs and operating costs and the benefit to be derived from the product at the end of whatever the project was?---Those are very important parts of the consideration.

In the case of a plant like the one we have here, the beneficiation plant or the concentrator, however it is called, what one is concerned with as regards the plant itself is the efficiency of the product distribution at the end, the ore on one hand and the wasts or tailings on the other?---Yes. 20

How much of the iron that is there in the feed are we getting? How much is going out to waste? How much of the waste has gone out to waste? How much of the waste is still in the ore?---The recovery factor.

The recovery factor; and everything in the plant before then is put in by reference to its effect on the recovery factor?---True. The recovery factor does not mean that you are trying for the absolute. You could spend an awful lot of money sometimes to get to the absolute and maybe the last little bit is not worth it. 30

The bottom line is the profitability of the beneficiator, is it not?---The ore is not ore unless it can be marketed at a profit.

There comes a point where, for commercial reasons, one accepts 97 per cent instead of 98 per cent because that last per cent would cost more than it was worth?---Any capital investment is a large use of money and that costs money - - - 40

EX172. 12.12

WITNESS (Continuing): - - - costs money.

MR HULME: At all points you will have to take into account the
and commercial effect?---Yes.

The decision to instal some other process, extra process, this
process instead of that process will be determined by
the optimum result in terms of the recovery factor and
cost involved?---The economic factor.

If someone came to you and said in relation to such a plant: 10
"Wouldn't it be a good idea to put in a scrubber
over here? We would get better scrubbing.", you would
say: "What would be the effect of that - the cost of
doing it and the effect on the recovery factor?" Those
are the kinds of things which will determine whether
or not you put in the scrubber?---Yes. I would think
that would be - - well, I would hope that somebody
had done that in the design of this plant.

Yes, and that is how these enterprises should be run?---Yes.

And that applies, does it not, from the moment you have the 20
incoming stream of ore coming into the plant, the
ore which is going to be beneficiated? If you do
anything to that stream you would say: "Why are you
doing that? What is its relevance to what is happening
to this recovery factor, etc., at the end?"?---I
would think that the comparative considerations would
commence even before that, at the decision of what you
do with it when you have it in the truck - whether you
should stockpile it for future use or run the risk of
using the capital for the benefits in the immediate
term future. 30

So that at the time you are laying out your processes, when it
is still a concept in the designer's thinking - there
is his vacant block of land, there is his notional
stockpile waiting for him - you say: "Well, we'll have
to have this, and that, and that", each of those being
justified according to whether or not and how they
contribute to what he wants out the end?---Correct.

The whole of what is put there for the purpose of receiving
the ore to be beneficiated and sending it through the
processes which cause it to go out the end, beneficiated, 40
you would call the beneficiation plant?---Yes, the whole
thing. The plant is designed for the beneficiation
objective and the investments all the way along are to
result in a beneficiated product, yes.

And the beneficiating process includes receiving and handling
and sampling and sending away at the end?---Those are
all the expenditures you would undertake that you
would not undertake if you were not going to have the
process to obtain the end objective - - -

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WITNESS (Continuing): - - - end objective.

MR HULME: Have you seen the isometric chart behind you?---Yes.

You would say, "On that the beneficiation plant at Tom Price starts at the grizzly where the ore is directed into the concentrator"?---I would say that is the commencement of the total facilities to treat the ore for which the total facilities are designed. Beneficiation, I would not say, starts at that point. I would say that the beneficiation is some place following in the process because, up to that point, it is material handling but, of course, the objective of the exercise is all to get to that point. 10

I wonder, Mr Beukema, have we here what is basically a verbal distinction? We have a series of processes in the handling of this ore which enables us to start with unbeneficiated ore and have, at the end of it, beneficiated ore?---Yes.

From one viewpoint that is the single, industrial process by which the ore is beneficiated. It comes in in one form and goes out in another?---Right.

In another sense you are saying, "Why do I call that process beneficiation?" and as I take it you say, "It is beneficiation because, in that process, there is a removal of a poor substance and the retention of what then becomes a higher quality product?---Yes. I would put it as the removal of a portion of the feed material that is keeping the feed material from being marketable. It is the removal of that. 20

So, is the essence of beneficiation to you that you finish with less than you started with but it is better?---It is better in the sense that it is marketable, yes. Certainly, chemistry-wise, it is better, generally speaking, yes. 30

And that is how you know it is better, because you have produced a marketable product?---Yes.

Let us now go to Mr Grosvenor's affidavit. Will you turn to p.4, para.5?---Yes.

You will see there that Mr Grosvenor said:

"Beneficiation in its broader sense comprehends treating ore or improving its physical or chemical characteristics." 40

WITNESS: Yes.

MR HULME: Then he goes over to give a narrower sense. You would not yourself describe as a beneficiating process a simple process of dry crushing and screening - - -

MR HULME (Continuing): - - - and screening?---Dry crushing and screening? Would I say it is beneficiation? It certainly is beneficiation in the sense of physical improvement of the ore.

That is not the sense in which you would normally use the word "beneficiation"?---No. I used it in that sense in Minnesota.

An ore which simply needed to be crushed and screened would not be described as a beneficiable ore, would it, in US terminology?---You will recall in the leases which you showed me the modification that was made between 1921 and 1941 was that the direct-shipping ore by that definition included ore treated by crushing and screening, and that was to include the beneficiation aspects of that in that ore.

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It is clear that the scientists would say that if you alter its grade at all to make it better that is beneficiation?---Yes.

You would normally put your description of beneficiation, would you not, to processes beyond crushing and screening where you are going to be eliminating some rubbish and finishing with less but better? ---No, I think no, sir. I think that when you start with a mass of ore, if you do nothing more than crush and screen it to make its handling characteristics better than you had here, you have injected some beneficiation to that ore. I feel that way about it.

20

So you would in that sense be beneficiating right from the moment you began crushing?---Exactly. As a matter of fact I have heard of a definition that carries beneficiation of an ore body to go back to as far as the selectivity of the shovel operator in choosing where to dig, upon instruction. It is a sense of the high-grading effect.

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That is a sense in which you probably would not use the word?---No, I would not use it in that way; no. I think that is too broad. That is a matter of mine planning and, to an extent, a mining plan consonant with the ore to get the quality you want, but I would not call it beneficiation.

40

You would say then that we have the stream coming in from the grizzly and the moment we start doing things to it which make it more suitable for sale, we have started actual beneficiation of that ore? ---Yes. I would say the same is true of the high-grade plant, when they take the high-grade ore and dump it in that crusher and then screen it. I would say that ore has received beneficiation by that work that is done to increase its physical attractiveness.

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MR HULME: Coming forward to the screens, the primary screen,
we have the wet screen - -?---We are jumping the
first scalper and the re-cycler and - -

Jump the rest of it?---Down to the primary washer, primary
wet screens.

The primary wet screen, the 30 to 80 going over, the under-30s
going through. One thing which is clear, is it not,
is that the pieces of ore going out in stream A will
be a better product - - -

JW19. 12.27

MR HULME (Continuing): - - - a better product - better for marketability, better in fact for iron content - than those pieces were when they were coming down towards that screen?---Those specific pieces, if you could put a letter on each one and call them "A", "B", "C", and carry that through - -

That is right, if you could stop the machine?---Are pieces A, B, C and D better than they were when they came in - the pieces themselves are probably not better except they have had removed from them any adhering impurities, but the pieces themselves are probably not better except as they would be taken collectively in the sense of having removed impurities. 10

But the pieces themselves - if you picked them up beforehand and crushed them, ground them and got their iron content, and you picked up the pieces afterwards you would get a different result afterwards than before, would you not?---That runs to the sampling technique and I really do not know whether the chemical sampler would, taking a piece out of an ore body before wet screening, take that piece as it is and whether he would dust off any fines to make sure he was getting the analysis of that piece, if you see what I am getting at. I do not know how the sampler would treat that. If that piece as he picked it up had particles of shale adhering to it and if that very same piece was called piece "A" was in the overs on that belt and such particles of shale as may have been adhering to it are now removed by the wet screening process, certainly that piece would be better, if indeed the sampler sampled the piece with the shale particles adhering to it. That depends upon the technique that is used to develop a sampling. I don't know how they sample. 20 30

Let us think of the whole of that stream A going out: To the extent that there has been breakdown of clays under the water, clays will have had the opportunity to go off on the screen?---To the extent that clays - -

- - that it had clay which has broken off?---It had clay, and to the extent it has come on the screen I would say certainly the washing on the screen should - - if it didn't give it a mortal blow it's got to be very tough clay. 40

Right - you would expect a good deal of the clay to be washed off? ---A good bit of the clay should be washed off on that screen.

And that clay would have a lower iron content than the ore, of course, to which it was adhering?---Yes; the clay will have an iron content, probably, by its proximity in the ore body - but, yes, it is definitely lower in iron than the chunk of iron that you want to win.

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MR HULME: And if the clay has a higher proportion of undesirable contaminants than the ore, the effect of removing the clay which was on it will be, if you grind that lump afterwards, that it will give you a higher iron content and a lower contaminant content than it would have given you had you crushed it when it had the clay on it?---Exactly.

If we then have the adhering fines, which may be ore or may be from other substances - -?---Maybe pieces of shale.

Yes; if they are pieces of shale or something of that sort, the removal of them will lead to better results for what goes out?---Correct.

If, as is the position in the Pilbara, the fines all have a lower content than the lump, then the removal of the fines will mean that the remaining clean or cleaner lump will have a higher - - -

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MR HULME (Continuing): - - - a higher iron content than it would have had, had you crushed it with its fines still adhering to it?---Yes, indeed that is true if that hypothesis is correct. I have heard that the fines are of lesser iron content and I sometimes wonder whether that is because you automatically sample some smaller pieces of deleterious material with it or is it truly that the fines of iron are less good? Do you see what I mean? I have never really got an answer to that. I do not know, unless somebody made a very careful check, that you could tell. 10

In either event, to the extent that you remove a number of them, you will, in fact, have upgraded the iron content of the lump that remains?---To the extent that impurities in clay and shale, in fines, are removed by the screening process with the assistance of the water to make sure that the process is efficient and the product over the screen becomes, therefore, cleaned, yes, it is a better product.

That change taking place there is, to you, beneficiation?---I would call that a beneficiation of that particular segment of the total feed. We are only looking at a segment here at a time of the total feed. 20

Yes. That stream, stream A, has been beneficiated notwithstanding that we are going to do some more beneficiating later?---True; as a matter of fact, that is the first screening of that segment because there has to be additional screening before it can get the ultimate objective of all the investment in this particular case.

OLNEY J: Mr Beukema, you used the term "upgraded" a moment ago, talking about this stream A, the 80 by 30. You said that that stream had been upgraded. Would you use that term in that context as being synonymous with saying it has been beneficiated?---Sir, I was not using it for any particular connotation so I must have used it synonymously with beneficiation. 30

Yes, I thought so?---It was not intentional, I can assure you, to use the word for any specific purpose except that it falls, in my vocabulary, in the same category. 40

As far as you are concerned it was a legitimate use of the term "upgrade"?---I think so. I think sometimes upgrading in specificity might mean something a little different but I am sure your Honour has already gained from this discussion in this courtroom over this last week and a half that there is a lot of interchangeability between words in this business.



OLNEY J: Yes, thank you.

MR HULME: The matter of terminology, Mr Beukema - have you ever heard ores referred to as wet screened ores?---Yes.

Would you not more commonly say they are washed ores?---No.
I would think that the more common usage of it in Minnesota would be that they have been called concentrates in the concentrate process. In the process in these later years which I spoke to you about just before the break, about this washing for physical sharpness of the plus quarter inch, we call those wet screened ores, clean coarse.

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Clean ores or washed ores one understands; I suppose ores that have been through log washers or anything of that sort are - -
Do you have classes of ore such as log washed ores and wet screened ores - - -

MR HULME (Continuing): - - - ores?---No, I think - -

Would you not call them wash ores?---No, I think not, because the ores I am speaking to here were not wash ores. These were ores that would fall into that basic category you were speaking of from these leases, the direct-shipping kind. The point I was making yesterday was the direct-shipping ores as they were conceived are just not marketable any longer and they will have to bring them to a better acceptability by cleaning the coarse.

May I illustrate that? The greatest volume of iron ore that has ever been produced in the US was what we call "Oliver 13". That was the basic standard in the blast furnaces in the US because US Steel's Oliver produced it and it was the basic grade and practically everything went with it. Oliver 13 was first refined to Oliver 13F and Oliver 13C (meaning Oliver 13 fines and 13 coarse). Those were dry-screened from that so-called direct-shipping ore. We found there was not acceptability for 13C - 13 coarse - because of the piggy-back fines that carried over in the dry-screening process. That is why we had to go to the washing, the wet-screening process - the washing on the wet screening, not through a log wash but sizing that product on the wet screen to make sure it was now Oliver 13CC (Oliver 13 clean coarse).

Is there not a category of ores in the US called "wash ores"?
---Yes, there is definitely a category of wash ores.

If reference is made to wash ores, what would you understand to have happened to those ores?---Those ores started, first of all, being very low-grade and were able to be brought to a marketable grade by the wash process.

What do you understand to have happened to those ores?

OLNEY J: At what stage? As I understand it, "wash ore" is a description of a type of ore and to say what has happened to them you would have to identify at what stage?

MR HULME (TO WITNESS): What would you take to be the feature which enabled you to classify those ores as wash ores?---They had the class beforehand. Are you asking me what do you do to them to get them to be able to be accepted as a product?

OLNEY J: What is it that you call wash ores?---They come out as concentrates and washed fines.

MR HULME: What has to be done to a wash ore to get the product which you wish to sell?---You have to take the ore. It has to be washed in, generally speaking, a log washer or a scrubber, then screened.

It has to be washed, does it not?---The wash ore has to deliberate all the fines and it has to be thoroughly scrubbed.

MR HULME: It is ore which requires to be washed?---Washed and generally scrubbed; including in the wash process scrubbing.

That may be done on one of many pieces, or several pieces of equipment?---Probably several in series, yes.

But you do not name that ore by reference to those pieces of equipment. They are called wash ores whether you are going to wash in a log washer or a scrubber or a screen. They are wash ores?---That is what they are in the bank, yes. As they come to the plant that is what they are considered, yes, but when the product comes out they are not called wash ores. 10

No, they are concentrates?---They are concentrates and washed fines.

Yes, concentrates and washed fines. They are not log washer washed fines - - -

MR HULME (Continuing): - - - washed fines; they are washed fines?---The blast furnace does not care what kind of scrubber was used.

The blast furnace does not care; they are concentrates or they are washed fines?---That is right.

You do not sell wet screened ores; you sell concentrates or washed fines?---No, I am sorry - that was the point I guess maybe I did not make clear enough. We did sell wet screened ores, that is why we gave it that special classification, and that clearly carried to the customer. That was the old - - this ore - -

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Can we stay with the ore for the moment? You are not saying, are you, that all ores which are washed on a wet screen are called "wet screen ores"?---Well, the ores which are in the wash plant, which are wet-screened in the screens which are in a wash plant, the wash ores which are wet screened, come out and are called concentrates.

Yes; they have come off the wet screen and they are sold as concentrates or washed fines just as if they had come out of a log washer or a scrubber or whatever else had been used?---Yes. The screen, of course, was the final separation to make the product.

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Yes. If you had ores which you were going to wash on a wet screen and someone said to you: "Where do you wash them?" - -?---You mean if I was trying to sell the ores and the customer said: "Where do you wash these ores?"?

No; I am thinking of someone in the plant with you - you are showing someone around and they say: "Where do you wash the ores?" You would not say, would you: "Oh, we don't wash ores here; we wet screen them"?---Well, I would show him the screen and say: "We wash on that wet screen.

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Yes: "We wash on the screen"?---Right.

The activity is washing, and the place is the screen?---We are wet screening on that screen, and to do that we wash, and to do the washing we wet screen.

He says: "Where do you wash them?" "We wash them on the screen"? ---Right, sir.

40

In the chute undoubtedly ore is being wetted; that is clear, is it not?---"Undoubtedly ore is being wet in the chute" - given the limitation of the many reservations I have already expressed I would say that some ore probably is getting the added moisture of some wetting.

Yes. Can I make the same arrangement with you as with other

witnesses? - whether I say "chute" or "pulping box",
if you assent to a pulping box question that does
not mean - -?---I am not sensitive to "pulping box"
because I will admit at the bottom of that chute it
probably is pulping.

MR HULME: That wetting is a step - - -

MR HULME (Continuing): - - - is a step, is it not, in the processing of this ore as it comes through the whole beneficiation plant?---Certainly the wetting of the ore before putting it on the screen is essential, in my judgment, to get effective sizing on that screen.

The wetting of it which, in fact, takes place in the chute is part of what you were saying to his Honour before of something being done to the ore after it has come into the beneficiation plant as a step in making it the better product that we have at the end? 10
---Certainly the adding of water in the pulping box, as you call it, has the objective of getting the ore wet to enhance the screenability of that ore and increase the efficiency of sizing on that screen.

And that wetting is something you would regard as one further step in the process that has begun much earlier when we have started to alter this material in order to send out the concentrates at the end?---I do not know - -
You are speaking of altering ahead of this, of this point? There has been alteration by size, is that what you mean, ahead of this point? 20

I simply mean this; there is, in fact, a chain of activity from right back at the crushers with this ore all the way through, bringing it from its original form in which we did not want it, into the better form in which it goes out at the end, the marketable form that comes out of the drums and cyclones?---All of those things are involved in the process that is necessary to get to the end point, yes.

That is right and you were saying to his Honour before that you took beneficiation to cover all steps in the treating of the ore to improve its physical and chemical characteristics?---I may have said that. I think that is right. 30

Do you remember a few minutes ago we looked back at Mr Grosvenor's definition and I said "Do you, in fact, use a narrower definition?" and you said, "No", you use the broad definition of Mr Grosvenor?---Yes.

And that one is, in fact, beneficiating it from the time that one starts altering its characteristics for the purpose of making them better; one is beneficiating?---I think we spoke of the crushing and screening of it as being beneficiation. 40

Yes, and you said that was how you understood the term?---Do I understand that term?

Pardon?---I am sorry, I do not know whether you made a question.

MR HULME: I suggested to you that your use of the term beneficiation would not include ordinary crushing and dry screening and you said your use of the term did?---Yes.

You were then asked where the concentrator began and where you would put the beginning of the beneficiation process in there - -?---I do not think you asked me where the concentrator began.

I not only asked you; you told me it began at the grizzly?---I do not think so.

The beneficiation plant - -?---You said "concentrator".

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I am sorry; we use both terms. It is called a concentrator?---That is, in my judgment, a loose use of the word because the concentrator, in my opinion, is indeed the concentrator - - -

WITNESS (Continuing): - - - the concentrator.

MR HULME: I am sorry. My question certainly was in terms of beneficiation plant but I think the documents say both. We have called the whole plant the concentrator? ---The whole thing was the concentrator project. There is no question that Hamersley followed that.

The beneficiation process about which I was asking you, you said began when you first commenced altering the characteristics of the ore with the view to obtaining the better product at the end of the process?--- Right, and I pointed out that very same beneficiation process takes place in the high-grade plant. 10

Yes, and a step in that process of changing the characteristics is taking place in the chute at the moment the ore is wetted? That wetting of the ore is part of that total process from beginning to end?--As I have said, the wetting of the ore is part of the process that is necessary for the end objectives of the total plant, yes, sir.

You have heard about the breaking down of the clays in this material, in this ore, and you have seen the photographs showing the progress?---I have looked at the photographs, yes. 20

Those photographs showing evidence of dirtiness as it proceeds, with the breaking down process continuing?---The photographs definitely show the kind of thing I would expect in a wet, hematite treatment to a plant. I must say that when I first saw the photographs I saw no explanation of them, as to what they were intended or interpreted to say and I have not had time to look again at the photographs of those things against the explanation that is in the transcript. I would therefore, and do intend to, study those photographs against the transcript explanations saying "This photograph shows this" and "This shows this". I know Dr Batterham said this showed to him that this ore was dirtier at this point than this. I would want to go back and look at the photographs along with his testimony, to see if I judged the same thing. I do not know if I would. -- 30

Let me then ask this question on a hypothetical basis. If breaking down of clays is continuing - it has been over the first screen (down the chute, over the first screen)but the nature of the material is such that not all are broken down in time and it will continue to break down, partly by the passage of time, partly by jiggging on the belts, dropping in the surge bin - then one will see, will one not, the importance of wetting that material well before the preparatory screen for the drums?---The time interval - - are you asking me to comment on that statement, sir? 40

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MR HULME: I am asking you this: If you have that kind of material which continues to break down for some time, it is important to get it wetted well before the time when it reaches the drum?---If you take time as the criterion that is necessary for that material to break down, then time that material must be given or you will not accomplish what you must have at the drum.

Were you here yesterday when Mr Booth - - are you aware that at Mt Newman they wet the ore just before the drum?---Just before the drum.

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If the ore does contain material which takes significant time to break down, then you could not wet it just before the drums?---I have seen heavy media plants that have good, mechanical scrubbers very shortly in front of the drums, that do a thorough scrubbing job, and then it goes from there over the screens and to the drums.

You could put up a different type of equipment?---In other words, if what has apparently been chosen here is to try to get time to do what a machine might do better?

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Yes. A machine might do it, perhaps better, perhaps quicker, perhaps more expensively?---I will conclude everything except the last because that mass of conveyer belts and chutes and handling costs money.

If you wanted to do a costing you would need to know the price of fuel oil in the Pilbara and a few things of that sort, would you not?---Sure.

But a scrubber is one way in which it might be done closer - - -

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MR HULME (Continuing): - - - done closer; on the other hand you can say, "Let's not have a separate scrubber there. We'll let time have its effect. We'll get it wet in one place and we'll do some screening there and it having been wet for however long it takes to do the journey we will screen it again and get off the balance." That would be another way of going about it, would it not?---That is another way of going about it but the question on it, in my mind, was whether that was what they had in mind because it is a question of how much retentivity of moisture the product will have over that span of time that it takes from going from those screens all the way through the system until it gets there. It is quite a time particularly including the retentivity in the bin and so, I do not know how much moisture there still is with that ore to continue. I will admit seeing moisture dripping from the bins. 10

You agree, do you not, that the breaking down continues in the retention bin?---As long as there is moisture present to help the breakdown, sufficient moisture. For example, 20 I think a clay particle absorbs a certain amount of moisture. I am certainly not enough of a clay expert, I know that clay gets slippery when wet but to know how much it absorbs before the particles or the chunk of it may break down, how much more it needs, I do not know.

Retention in the bin would significantly effect, would it not, the amount of breakdown?---There is a certain amount of pressure, particle upon particle, just by the sheer weight of gravity as it is piled up in the bin. 30 There is a certain amount of abrasion - -

No, I am talking about moisture?---Moisture? Then I do not know. That is the point I was trying to make. I do not know if the particles, as they carry across the belt and through the transfer chute to get to the top of the bin have enough moisture - I do not know.

When you swore your adherence to the proposition: "Retention in storage bins can contribute significantly to this breakdown" - -?---I said it can?

It can; yes. Are you saying that you meant by that, only while it remains moist?---I believe it only could as long as there is enough moisture to facilitate it. 40

You do not know how long or short that is?---I really do not know how much moisture, relative to the need to propogate the breakdown, is with the ore in, let us say, stream A as it goes to there and gets into that bin. I do not know really how much moisture is relative to those

sizes and chunks that constitute stream A and if it is enough to continue and propogate breakdown as the material is in the bin. I do not know that.

MR HULME: You just do not know?---I can see, if there is enough moisture and if there are still clay particles or clay balls, whatever you want to call them, it would help.

All right; we will leave it there.

LUNCHEON ADJOURNMENT

UPON RESUMPTION:

MR HULME: Your Honour, I wonder if we cannot cut short cross-examination of this witness, going over the other ones? I am going to have a try.

TO WITNESS: Mr Beukema, you are aware of Mr Grosvenor's position as having been at the Colorado School of Mines for 20 years in an academic capacity, studying and teaching, his attention being confined to much more than the broader vision which you have had to have in your various positions?---Yes. 10

And you are aware that Mr Booth has had his attention, likewise, on a narrower band of activities than your own?---He certainly had tremendous attention to the Pilbara.

Yes. You have given your endorsement to their evidence as a man of business with engineering qualifications and background - to what they have said as technical more-closely-confined experts in these particular processes?---I guess - - I don't know. You say I have not; if you read the affidavits that way that is fine with me. 20

I am just wondering whether it would be fair to say that as far as the technical weight of the evidence is concerned, that is the weight of the evidence as professional experts in the particular field, we can take your endorsement of what they have said as being subject to any qualifications which they may have made during cross-examination.

MR SHER: I could answer it, but I think you want the witness' answer. I do not object to the question. 30

WITNESS: In other words are you suggesting that you cross-examined them with respect to technical aspects and that I am going to underwrite their answers?

MR HULME: No, that I have done so - you have heard a lot of it and rather than put all those - -?---I see; you think that I would be sitting here waiting for a chance to correct some mistake I think they made. No, I don't think I have; I thought they did an admirable job. I have read their testimony and I endorse what they have said on the technical questions. 40

You endorse the answers they have given in the witness box?---Yes, sir; I have no problem with that.

If they have made a concession then you are happy with it; you are happy with their testimony?---Yes.

OLNEY J: Just for the record, Mr Beukema, is it a fact that you have been in court throughout these proceedings and have heard the testimony of, particularly, witnesses Booth and Grosvenor?---Yes, sir, I have. 50

OLNEY J: Very well.

MR HULME: If your Honour is happy for me to leave it there, and my learned friend is, then I can save going through it. I should have thought of it earlier and I am indebted to my learned junior for thinking of it. TO WITNESS: That will save us both a bit of trouble. You were saying yesterday when you visited there you found one of the three drums not working?---Yes.

You said it must have been very lightly loaded in comparison with its capacity?---I made that statement in relationship, I think, to the amount of float I saw coming over and the amount of waste I saw going off the end of the belt.

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No; I think there were two different points: One was the amount of waste coming off and the other was that you said if one of the three drums is not working - - -

MR HULME (Continuing): - - - not working, the plant must be very lightly loaded compared with its capacity?
---I did not think that was the way I said it but it may have been the way it came out. I do not remember it that way.

It was at the beginning of your testimony yesterday. You said this at 938:

"First of all they were only using two of the three drums....(reads) ...only operating two-thirds of its drum capacity."

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WITNESS: All right. That is how I said it then.

MR HULME: It may be said it is a bit worse than that. It is perhaps wrong to say that capacity is three. The capacity on the 30 to 80 is one drum?---That is right.

The capacity on the 6 to 30 is two?---Right.

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If they have one of them turned off they have turned off 50 per cent of the capacity on stream B?---Did I say the percentage of turn-down?

You said one-third of capacity. It seemed you were thinking there were three drums?---I should not have said it. You are right.

I am really looking at a different point. If the position is that the plant is built so that a drum can be taken out of service without stopping the plant, that you can still, at any rate for a time, utilising your surge bin, carry on with one drum off, perhaps for maintenance, and another drum running, then you would need to have, would you not, a capacity greater than you expect at any particular time?
---Yes, you would. However, I had thought from Mr Langridge's statement that the fact that plant did not have that standby capability for maintenance was the reason they had the bypass belt.

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I think that has been said in relation to steam A, where there is only one drum. You see, stream B has two drums and you can stop one and use one at full capacity and hold some of the other back in the surge bin, as long as you know your maintenance time is coming?---Yes, if there was maintenance going on.

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If you wished to be able to turn off items and still have the material going through the concentrator, then you would need to have more capacity in equipment than you will be using at any one time?---Yes, I can understand that.

MR HULME: The other matter, the small amount of float which you also mentioned yesterday - what kind of percentage would you have been expecting to find in rubbish float?---It is difficult to say in the way of a percentage, in that I cannot tell what the weight of that float is compared to the weight of the sink. I was looking at float screens, sink screens over here. It is difficult to tell what the percentage weight would be. I would have thought there would have been substantially more float compared to the amount of sink that was coming across the screen. That was just my judgment, on the basis that a heavy media plant, I felt, would be doing more work, upgrading more ore as represented by the discard of the float.

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What kinds of percentages are you used to in your experience? The Mesabi ores are frequently sold, are they not, at very much lower iron contents than the kind of thing we talk about here as 62 per cent and 63 per cent?---As I said, I think, yesterday, the average Mesabi base chemistry is 51-50 for natural ores and it escalated up from that and escalated down when it was not as good as that; but that was the target of the average base ore, 51-50, 51½ per cent.

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Indeed, many of the ores from there - - -

MR HULME (Continuing): - - - from there are, in fact, utilised with iron contents less than that?---Indeed.

Because a lot of your infrastructure is already there, the mines are there, the steelworks are not far away and ore is sometimes sold in the vicinity of 30 per cent, is it not?---Not off the Mesabi.



Below 50?---It has dropped below 50, yes, indeed.

If you are beneficiating those kind of ores, in a process involving the separation of waste, you would expect to get off considerable quantities of waste?---That is true. The percentage of waste in an ore that is dressing up to the best target you can make of below 50 is going to have quite a bit of waste.

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In the Mesabi, if you are trying to get to 50 or 51½, you would not often see the kind of position where you are bringing into the concentrator ores on about 57?---No. It would never come in. That kind of ore probably would not ever be coming in to the concentrator.

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Because over there that is in a marketable condition, probably?---We quit shipping that naturally years ago.

So that your past experience does not tell you what to expect with ores being brought in at about 57 and sent out at about 62?---No. I could not say for sure that that was a percentage appropriate to a 57 iron feed ore. I could not say that.

It is a whole new ball game?---I would recognise it as a whole new ball game and so I would have to say to you that I could not judge it from that. My statement was made noting a full feed pile and a very small waste pile and a big plant in between.

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Mr Beukema, your description of the water coming into the pulping box - you said it was a spray, not a jet. What do you call a jet? The engineer, Mr Langridge, has said that the water comes in as a jet. What do you call a jet and what do you call a spray? ---I think that is best illustrated by taking you back to what you and I and I suppose everybody knows, the nozzle at the end of a garden hose. That nozzle is adjustable usually and can be adjusted to the maximum velocity if you are going to penetrate into the garden. You can dig a hole with the maximum velocity if that is at its very intensity - -

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Maximum velocity and very narrow?---Very narrow.

Like a fire hose?---Yes; you can open it up and you get a spray effect.

MR HULME: You still have the pressure?---There is still the same pressure. You can open the nozzle up. I do not know if you have them over here. We have and you open them up and instead of the intensity of a single, narrow, penetrating stream you will get a spray.

You still have the same pressure and the same water?---The same water. Nobody changes it and puts a reducer valve or anything in the lines, all you are doing is just adjusting the nozzle. You have the same head of pressure behind it and you get a spray instead of a sharp, penetrating, what I call a jet. That is the difference which I am talking about. I think if you look at the diagram of a chute that is an exhibit to Mr Grosvenor's exhibit you will see that, indeed, it says there are spray nozzles in there which are like a hand over the nozzle. The jet of water hits the inside of the hand and spreads it. That is in the print of the chute.

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So the effect of that would be, in general, that you hit at the same speed but not the same bulk of water at the particular spot that you would have with ---

MR HULME (Continuing): - - - with the jet?---Yes, and I think also you do not have the same mass of water with that velocity, so it does not penetrate into the stream of ore as far.

At the single point?---The same as a single one would, yes. A jet, I would think, would have a better chance of penetrating through that curtain of ore and into it, getting some of the inside ore wet. This, I think, is spray and I think the wettest it gets is the surface of the ore which is facing it falling down the chute.

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Of course a single jet would get further inside but in principle would only wet a narrow portion of the outside, because it is a narrow jet?---Yes, sir. I merely made the observation that it was not a jet in my estimation; it was a spray.

Yes. The one reason for that could be to get its force spread over the curtain of ore as a whole rather than just one little part of it?---The installation from the print looks to me similar to a normal spray bar on a screen, moved inside the chute. It looks to me like that is what it is.

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And the purpose of that normal one is to get the water onto the ore with force?---I think on the screen the purpose of this spray bar being spread across the screen with a number of apertures and a nozzle spreading the water is to spread water across the full width of the screen to make sure that all the ore particles which are coming down the screen underneath will get wet, so that you do not get a selectivity of this ore piece getting wet and that one not getting wet; that is the purpose of the spray there. It may be that in this instance, recognising that there are so many jets on that spray bar or the cross-header, it was decided we should spread the water out and hit the full curtain all the way across - but it loses its jet effect; that is the point of my observation.

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It loses the jet effect; it would be a matter of engineering judgment for those running the plant as to how it worked best?---Yes.

Your Honour, I would like to tender as evidence of usage of words, including "direct shipping ore", etc., Mr Beukema's own article, "The State of the Iron Ore Mining Industry".

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EXHIBIT

EXHIBIT 38 Article "The State of the Iron Ore Mining Industry" by witness

MR HULME: Mr Beukema, you mentioned yesterday a Rapifine screen?
---Yes.

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DOCUMENT 3* - Defendant's Evidence
Evidence of Christian Frederick Beukema
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MR HULME: The manufacturers do not call that a sieve bend, do they?---I do not know. It was first marketed by Dutch State Mines and then they made a licence agreement with Dorr-Oliver, and I do not know what they call it any more.

Was not the Rapifine screen invented by the Erie Mining Company?
---No. Erie, to the best of my knowledge - - -

WITNESS (Continuing): - - - my knowledge - - well, it may be that they invented a Rapifine. They have a rap effect. That may be what you are looking at. Erie took the wedge screen and found that they were having some blocking of the apertures by the slurries, so they put an eccentric knocker behind it. It did not vibrate it but it did tap it at regular intervals - came around and tapped it - and that was enough to give it enough vibration to help keep the wedges open.

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MR HULME: It is not vibrating but it gets banged pretty frequently, does it not?---It is at an interval. It is on a cam. It keeps going around and banging it regularly and the purpose of it (and Erie has a patent on it I am quite sure) is to give it enough of a jolt that it helps keep it clean.

Would you see whether you would agree with this? I would suggest to you that it was invented by Erie in about 1965 as a straight plane surface and the manufacturing rights were then acquired by Dorr-Oliver who changed it to a curve?---I do not know that.

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The Dutch State had nothing to do with the development and neither Erie nor Rapifine have ever called it a sieve bend?---That may be. All I know is that there were sieve bends being discussed up there and I knew of the Erie development of this screen and it was called, probably erroneously then as reported to me, a sieve bend adaptation at Yeri, but it was before 1965 that they were using them. I know because I left De Louth in 1964 and it was long before then.

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It was the kind of thing, was it not, that Mr Herkenhoff was telling us of the other day when he demonstrated this straight screen and you could get water through it and fines would go through it. It is a development of that, is it not?---Right.

Are you aware that we have them in Australia in the Savage River in Tasmania and have had for years?---I am not surprised. It was Pickands Mather's development there in Savage River and that is Erie.

40

Would you accept that no-one in this country, as far as we are aware, calls them sieve bends?---You do not call them sieve bends.

It is called a Rapifine screen?---Well, how did we ever get started calling it that here? I did not, I know. Was it not called a DSM screen in Mr Langridge's affidavit? I do not know where it started in this case. I did not start it. That is for sure.

MR SHER: Your Honour, at the moment I have no re-examination but it is conceivable, I suppose, that when we read Mr Beukema's article it may be that we will wish to ask him something. I do not think it likely.

OLNEY J: Very well.

MR SHER: I would just reserve that right, your Honour.

OLNEY J: Yes, I think that is fair enough, in view of the fact that it has only been tendered in the last few minutes.

MR HULME: I am not putting it in as evidence of fact, your Honour, but it does illustrate the issue.

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MR SHER: I would just like to assure your Honour and my friend that if I read everything that has been referred to we would be ready to proceed in this case in about three months' time. There has been a lot of material. I do not wish to ask Mr Beukema anything.

NO RE-EXAMINATION

OLNEY J: Thank you, Mr Beukema. You are excused if you wish to depart.

253. 3.38

NEVILLE OLIVER BOUGHTON, sworn:

EXAMINED BY MR SHER QC:

MR SHER: Your full name is Neville Oliver Boughton and you reside at 6, Sweeting Street, Woodlands in Western Australia?
---Correct.

An engineer by occupation and employed by the defendants and their companies?---Hancock and Wright, that is correct.

You have obviously been taking a very active interest in this matter for some time in the course of your employment? 10
---Yes.

You swore an affidavit on 20th October 1983 last?---Correct.

Would you just look at the document produced to you, together with the exhibits, and would you identify the signature on the 11th page for us, please? Is that your signature?
---Correct.

Is that your affidavit?---That is my affidavit.

Your Honour, save for the following paragraphs, paras.6, 7, 8, the last sentence of para.9 which I do not seek to 20
tender now or hereafter, and paras.12 to 15 inclusive, which I will seek to tender depending on your Honour's ruling, I would tender Mr Boughton's affidavit. As to the exhibits, your Honour, the exhibits I seek to tender at this stage are all the exhibits other than exhibits NOB5, 6, 7 and 8.

EXHIBIT

EXHIBIT 39 Affidavit of witness
sworn 20.10.83, excluding
completely paras.6, 7 and
8 and last sentence of 30
para.9; excluding for the
time being paras.12 to 15
and exhibits 5, 6, 7 and 8

MR SHER: Mr Boughton, you have been to the Hamersley Tom Price plant on quite a number of occasions, and you refer to three visits in para.3 of your affidavit, on 16th August 1982, 19th July and 17th October of this year?---Correct.

You have also been back again on 1st November this year, have you 40
not?---Correct.

On most if not all of those occasions have you taken some photographs?
---Yes, on all occasions.

In relation to the mimic panel in the control room of the concentrator plant, did you take a photograph of the mimic panel which showed the screening section - - -

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MR SHER (Continuing): - - - screening section on the visit you made on 14th August 1982?---Are you referring to the black and white photograph?

Yes, I am?---I did not take that personally, but I was there when that one was taken.

You have looked at it since, have you not?---Yes.

It is an accurate photograph of what you say, I take it?---Yes.

Have you had a blow-up made of the heading on the top of that panel from the photograph to show the words used to describe the control section of that panel?---Yes. 10

Does this control section include the chute as well as the wet screens?---Yes.

Would you have a look at that blow-up from the photograph? Is that the photograph from which the enlargement has been made?---Yes.

What are the words that appear at the head of that panel of that control section?---"Wet screening". 20

I tender the photograph and the blow-up, your Honour.

EXHIBIT EXHIBIT 40 Photograph of control section of panel, with enlargement.

MR SHER: The photographs which have been tendered in evidence in this case on behalf of the plaintiff, made by Mr Tomsitt, have been referred to on occasions and I take it you have seen them and studied them?---Yes. 30

What has been referred to in those photographs has been the fact that this degradation appears progressively as one proceeds down some of the different sized streams?---I have heard that referred to.

In relation to one of those particular streams, is it between some of the photographs referred to and other - - does it have feed coming onto it from more than one source?---In respect of the 6 by ½mm stream, yes.

That is stream C I think?---As I understand it, yes. 40

That initially starts, I think we all now understand, from the bottom deck of the wet screening plant, the primary screens, does it not? That stream in the first instance - is that where it emerges for the first time, 6 by ½?--- No, it emerges through the lower deck of the primary screen, 6 by zero.

Sorry - you are quite right. We start off with 6 by zero in the very bottom deck of the wet screens?---Right.

MR SHER: What happens to that stream - that is the 6 by zero stream?---It then passes down a launder, it forms the feed for the celebrated sieve bend/screen, and then passes onto the flat vibrating screens.

What happens to it then?---It is separated by the sieve bends and the screens into two components, a nominal 6 by $\frac{1}{2}$ and a minus $\frac{1}{2}$ mm.

The $\frac{1}{2}$ mm goes off in slurry form to the whims and is treated there, I take it?---It goes first to the hydro-cyclones and then to the whims.

We can forget about that, I take it, for the time being?---Yes.

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What happens to the 6 by $\frac{1}{2}$ stream after it has been separated? ---The 6 by $\frac{1}{2}$ stream passes off the top of the screens and lands on a conveyer, chutes onto a conveyer. It is then conveyed by two conveyers into a surge bin. From the bottom of the surge bin two feeders feed down onto two conveyers, each of which feed off in the direction of the heavy media cyclone plant.

Does that comprise the whole of the feed of the heavy media cyclone or is it added to at some stage from some other source?---Part of the distance along the first belt from the screens, another conveyer feeds additional material onto the same belt and combines with the product that comes off the top of the secondary screens - - -

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WITNESS (Continuing): - - - secondary screens.

MR SHER: Where does that additional material come from?---That additional material originates from the underflow on the preparation screens for the three heavy medium drums.

So when those preparation screens do their task part of the product is this underflow of six by one-half?---Six by nothing, in fact, from the prep. screens.

Right - so what is added to the six by one-half stream, from the source being the preparation screens, is some six by nothing material?---Not quite.

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I thought I had it but I obviously have not; you had better explain it. I will keep out of it, Mr Boughton?---May I have the pointer?

Yes, perhaps it would be best if you did it that way. You are the author of the colours and the handwriting on that document on the wall, are you?---That is right.

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Would it assist your Honour if we got Mr Boughton to take your Honour through the whole matter? He does have, it seems to me, a very good knowledge of it.

OLNEY J: Perhaps it would be, if we could start from the beginning.

MR SHER (TO WITNESS): Start from the beginning and (if I can remind you) as you did for me on one occasion when we were on our way up to Tom Price would you just explain the process and the colouring on that plan? ---From the very beginning here?

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Yes?---The ore designated as low grade is tipped straight onto the grizzlies which separate the plus 200 from the minus 200; the plus 200 going off is this brown stream through the primary crushers and off into the high grade plant. The minus 200 passes down into the stockpile from which it is extracted by a number of feeders, feeding down onto these conveyor belts.

You have coloured that what colour?---That is coloured an olive green - so that the olive green represents the minus 200 material as it comes from underneath the grizzlies. I have attempted to make each change in colour represent a distinct process in the treatment of the ore. At the scalping screens here which are a nominal 80mm size the oversize passes straight off the scalping screens and into the jaws of the secondary crushers here, which reduce it to a nominal minus 80mm. That is the aqua-green colour. The minus 80mm drops straight through the screens and onto a second and parallel belt; it

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drops off that belt and goes straight through to the feed bins which feed the six wet screening modules in this section of the plant. Up until the end of February 1981 the crushed 200 by 80 material was fed not onto the purple belt but onto the one next to it by extending that conveyor, which has what is called a "shuttle" on the end which enables the end of the conveyor to feed either one or the other belt. If one follows that material around one goes through what is described on one of the Hamersley documents as the "product screens", which your Honour asked about a day or so ago.

This material at that stage, having passed on this belt, was designated to go out through the plant without passing through any of the heavy media drums, cyclones or whims, but being a minus 80 material nominally was too large to form the product and had to be reduced to minus 30mm before it went out as a product stream. This was accomplished by feeding that material first into the dry screening section of the plant - - -

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WITNESS (Continuing): - - - of the plant where the minus 30mm material was removed and passed directly out on that belt through to the lump stockpile. The material which was larger than 30mm went off the top of the screens and returned for tertiary crushing in the tertiary crushers to a nominal minus 30mm where it rejoined the feed to these screens and virtually circulated around and around until it was all crushed down to minus 30mm. That was the function of the product screens. As you will see later on, they also deal with the sinks that come out of a force drum plant which are also 80 by 30 and, therefore, too large to form part of the product. 10

Since March 1981 this conveyor has been retracted and these two streams come together and form a combined feeder which goes into the wet screening plant.

MR SHER: That is 80 by nothing, is it?---It is a nominal 80 by nothing in the sense that the crusher does not size exactly.

We now have the feed going into the wet screening plant which is 80 by nothing nominal size?---That is correct. 20

And that has been the position for the last two years, since March 1981?---Since March 1981 as we are advised.

This material is discharged into one or other of these bins depending on which is empty and there are systems for making sure that the bins are not overfilled or become empty when they are required. There is a feeder from the bottom of the bin which feeds the material out into a certain chute or pulping box where water is applied and it passes onto the top deck of the screens. I do not believe I need to go into this in any detail really. 30

I do not want you to say anything about what anything is called or what happens. I just want you to tell us so that we can follow the lumps of ore, whatever size they are, through to their final destination. You have coloured that particular stream, the 80 by nothing, in which colour? ---The 80 by nothing is coloured in a light purple colour. 40

We have all the 80 by nothing into the wet screens and we know it comes out of the wet screens in four streams, does it not?---That is correct.

What are they?---The 80 by 30 passes over the top of the top stream and has two possible routes. The normal route is onto the conveyor that is coloured in in blue. It drops onto that conveyor and passes along this conveyor, through a surge bin and forms the feed for the coarse

drum plant.

MR SHER: We go through preparation screens, then to coarse drum - -?----I have not gone to there yet. I was just going to stop but if you wish - -

No, I think perhaps your way is better than mine.

We have that going into the coarse drum?----We have that going in this direction. Alternatively, by changing a gate at the top of the chute, that material may be diverted onto this belt here. It is 20C. That is, as your Honour will see, in fact the belt which feeds back into the tertiary crusher and into this recirculating system. So, by the simple device of changing those gates, it is possible either to direct that material through to the coarse drum or to bypass it completely for the drum and straight out through to product.

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What happens to the next stream, that is the 30 by 6?---The 30 by 6 - - Perhaps I should make it clear that when we are talking about these sizes, particularly to go back to the 80 by 30, it is a nominal size - -

Do not worry about those sort of comments, Mr Boughton; just tell us what happens to the 30 by 6, would you?---The 30 by 6 material comes off the top of the second deck in the screens and falls onto the dark green coloured belt. It passes along there and up into this surge bin.

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We will leave it there for the time being. What happens to the - -?---I would like to draw attention to the bypass as I did before. The normal route is out through here to the heavy medium drum plant but there is a possibility of drawing it off from the bottom of the surge bin and feeding it direct onto the product belt as its product size at that point.

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The 6 by nothing stream passes through the bottom deck of the double deck streams - - -

WITNESS (Continuing): - - - double deck screens and, as I mentioned a little while ago, goes down a launder, and forms the feed for the secondary wet screens, comprising the sieve bend and a flat screen deck. The overflow, the oversize from that material, falls as a six by one-half millimetre onto the red belt and comes up into this surge bin and forms the feed for the fines cyclone plant.

MR SHER: There is no bypass there, as I understand it?---There is no bypass evident in this diagram and I have heard evidence given that there is no bypass. Mr Langridge's affidavit in fact says so.

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When that stream has been created, the six by one-half, what happens to the half by nothing?---The half by nothing material which is in a slurry form - - the remainder of the material is sufficiently dry to be carried on conveyor belts; it is surface wet, if you like. The half by nothing is in a slurry form and it is pumped across through the plant. That line, incidentally, is my addition; it is not on the original drawing - but to indicate what happens to it. It is pumped across over here to the hydrocyclones which dry it.

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It is dealt with there. Up to that point of time we have the four streams in four different places, if they have not been bypassed. Has there been any discard from the original stream of 80 by nothing which has come into the wet screening plant?---No.

Now let us go back to what happens to the 80 by 30. We have got it into the bin on the way to the coarse drum; what happens from there?---The 80 by 30 material is discharged onto this conveyor and fed via a split chute here onto the preparation screens where, with the addition of water, it is wet screened again at 6mm; in other words the intention is to remove all the - -

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I would be grateful, Mr Boughton, if you would just not make comments and would just tell us what happens?---Very well.

I am just wanting to get a clear explanation to his Honour. You have a screening device at 6mm, so what happens is that some under-6 comes off that particular preparation screen?---Yes.

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And the rest goes through the coarse drums?---That is correct.

What happens to the under-6?---The under-6 then passes onto a separate small screen with a deck of half a millimetre, in order to screen off the minus half millimetre.

So you then have what has been screened off the 80 by 30 under-6 which is then in turn screened to get it into six by one-half and one-half by nothing?---Correct.

MR SHER: Now, where does the six by one-half go?---The six by one-half lands on this red belt along with the six by one-half from each of these sets of prep. screens, similarly screened by its own little screen here, and returns and lands on top of the six by one-half material which comes off these screens here.

And then it goes with that into the surge bin, does it?---That is correct.

Depending upon where you take your photograph of the six by one-half conveyor belt, you may or may not have a photograph of it coming out of the wet screening plant in the first instance on its own or you may have, if you take this belt which comes out from under the prep. screens after it has been screened down to six by one-half and one-half by nothing, it there - or you may have the combination of the two?---Correct.

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To your observation, how clean was the six by one-half coming off the screens which followed the preparation screens? ---It was not at all clean.

So if that had been joined to the six by one-half which came from the primary wet screens, what effect would that have to your observation on how dirty the six by one-half conveyor belt stream looked?---It would have added a considerable amount of minus one-half inch material to that stream.

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Do you recollect whether or not some of Mr Tompsitt's photographs - - -

MR SHER (Continuing): - - - photographs of the 6 by $\frac{1}{2}$ stream show the 6 by $\frac{1}{2}$ stream after the addition of what has come out from under the preparation screen? ---Mr Tompsitt has a photograph of the material coming off these screens (which is clearly here). He has another photograph of it coming over the end of this belt which is clearly on the other side.

Does he have any in between, as far as you can recall?--- There is an in-between one but it is indicated as being on this belt, without any indication of what location on the belt.

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So it may or may not have had added to it the 6 by $\frac{1}{2}$ which has come from the preparation screens?---Correct.

Let us just tackle the 30 by 6 stream which we had got into the surge bin. Assuming it is not by-passed, what happens to it?---The 30 by 6 stream is drawn off by feeders onto these two conveyers here, each of which splits and carries the material onto a pair of wet preparation screens feeding each drum. So there is a pair here and a pair here.

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Does that again screen off the under 6mm?---That is right - the preparation screen off at minus 6mm.

So the over-6 goes into the medium drums and the under-6 goes onto that conveyer belt and rejoins the 6 by $\frac{1}{2}$ on the - - I take it the 6 by 0 coming off the prep. screens is screened in a 6 by $\frac{1}{2}$ and $\frac{1}{2}$ by 0?---That is the intention on those.

What happens with both the coarse and the medium streams? You have the 6 by 0 coming off the prep. screens. It is then in turn screened in the 6 by $\frac{1}{2}$ and $\frac{1}{2}$ by 0. You have told us what happens to the 6 by $\frac{1}{2}$. What happens to the $\frac{1}{2}$ by 0?---The $\frac{1}{2}$ by 0, although I have not shown it here, is taken over and joins this stream as feed to the hydro-cyclones and subsequently the whims.

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Is that in a slurry again?---Yes.

Is it pumped in those instances as well?---Yes.

So that joins up with the other slurry from the primary wet screens?---Yes.

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Perhaps we can just deal with the stream that goes into the 6 by $\frac{1}{2}$?---We have not gone through the drums, have we?

Yes, perhaps we could deal with that. Both of those streams - that is 30 by 80 and 30 by 6 - go through the different types of drums in each instance, do they?---Yes.

MR SHER: After the drums are they then washed to remove the ferro-silicone?---That is correct. The materials are separated into the drums into sinks which pass over two screens, where the ferro-silicone is washed off and the sinks product falls on this belt and returns, as I mentioned earlier, to be crushed to minus 30 and go out to product.

OLNEY J: Six being plus 30?---No. The feed here is 30 by 80. The sinks are the desired product.

MR SHER: The floats are the big lumps of shale, I take it? ---The floats are simply lumps of ore material which floats in the given density. It may either be shale or it may be a low-quality iron. 10

OLNEY J: The 30 by 80 product goes back for tertiary crushing? ---Correct - and then out finally on this belt here, the product.

MR SHER: What happens to the floats, the bits you do not want? ---The floats come over and there is only one washing screen (here) for the floats.

That is to recover the ferro-silicone, I take it?---Of course; it is very expensive. It plays a very large part in the cost of operating the overall plant. The ferro-silicones wash off here and the floats go onto this grade mark conveyer belt, which carries all of the conveyer tailings out to a tailings pile. 20

That is a tailings pile which is rubbish, I take it?---That is right.

What about the medium drums?---A similar situation pertains in the medium drums. Each one of them separates the feed - in this case 30 by 6 - into two parts. There are two screens for the sinks and one for the floats for washing. In this case, the sinks being of product size go straight to product, and the floats are dumped on the same conveyer as this one and starts going to the waste pile. 30

Let us move up to the 6 by $\frac{1}{2}$ - what do we have up there?--- The 6 by $\frac{1}{2}$ material coming on each belt is split up into a number of preparatory screens. In this case they are screening at $\frac{1}{2}$ mm. 40

So we then get a $\frac{1}{2}$ by 0 coming off that as well?---Which is pumped directly again into the same tank from which the hydro-cyclones draw.

The feed for this particular part of the plant has come initially from the wet screens and also from the heavy and the medium preparatory screens?---That is correct.

This is all 6 by $\frac{1}{2}$? It has 6 by 0 in it as well, has it not?--- It has $\frac{1}{2}$ by 0 in it.

Yes, so it has to be screened to get rid of the $\frac{1}{2}$ by 0?---As a result of the poor screening on these screens - - - 50

WITNESS (Continuing): - - - on these screens.

MR SHER: Yes; that happens there and then you get your half by nothing going off to the plant. What is that plant there called?---This part of the drawing is not particularly well detailed.

Will you just give us a name for it?---It is called the fines treatment plant I believe.

That will do; it goes off to the fines treatment plant.

Now what happens to the six by one-half?---The six by one-half then forms the feed to the hydrocyclones which separate, using heavy media, into sinks and floats once more. On one side, this side, of the hydrocyclones the sinks come out and go onto washing screens, again to remove the media and the product from that marked orange goes off into the dewatering bunker. The tailings are dewatered on the other side of the units, the floats - sorry - are washed on the other side and ferro-silicon taken off and the material goes onto this conveyor and out to waste.

After dewatering the six by one-half, where does that go?---It returns on this belt, bypasses the dryer plant, and goes straight out to any one of these fines stockpiles.

You say it bypasses the dryer plant. You have been there many times, you have seen this substantially constructed drying plant there. In the time you have been with Hancock and Wright have you ever known that to be used? ---No.

I do not know whether your Honour feels that any more explanation is needed from Mr Boughton. That is all I intended to ask him on that description.

OLNEY J: I think I have a better understanding than I had before of what goes on.

MR SHER(TO WITNESS): In relation to this question of the cleanliness of the screening from the screening-off of the under-six and which in turn is screened into six by one-half and one-half by nothing, did you take some photographs which illustrate what you have described as it being fairly dirty?---I did.

Would you just look at these photographs here that I hand to you? There is a total of six. Are there two sets there?---Yes.

Would you hand a set back and we will show them to our learned friends? There are three photos altogether?---That is correct.

MR SHER: When were these taken?---The pair of photographs on the one sheet which depict material coming off the top deck of the primary screens were taken on 19th July 1983.

Where were they taken on?---They are taken of material coming off the top deck of the primary screen, No.4 modular of the primary screen.

Will you just show us where that is on the drawing?---Yes.

That is the nature of the feed that comes from the wet screening plant, the six by one-half?---I am sorry, we may be at cross-purposes here. The pair of photographs shown here are what has been described as stream A.

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That is the 80 by 30?---That is the 80 by 30 material that comes off the top deck.

Will you just turn them around so we can see what you are talking about? Will you put those down for the moment? What is the other photograph?---The other photograph is the one which pertains to - -

That is the only one I am really interested in at this stage, Mr Boughton. We can dispense with those first two, I think; the single photograph was taken on what date?---On 17th October 1983.

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It is a photograph taken where and of what?---It is a photograph taken of the small screens, one or other of those two, which screen the minus 6mm underflow from the preparatory screens on the medium drum plant.

And is this the 6 by nothing or the six by one-half?---If the screens are working as they should be, what should be coming off the top of the screens should be six by one-half.

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You have a photograph there which shows what?---The photograph shows pools of mud along the top of the screen right to the point at which the material is discharged over the end.

What does that indicate to you?---It indicates to me that there is a considerable amount of fine material remaining with this - - -

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WITNESS (Continuing): - - - with this. Material smaller than 4mm - mainly with the material which is discharged off the end.

MR SHER: So this is a photograph taken on the day you have mentioned of the product - the result of the screening which is intended to get the 6 by 0 into 6 by 1/2 and 1/2 by 0 - showing, as I gather you are saying, a lot of much smaller stuff than the 6 by 1/2?---Correct.

That would then be added to the 6 by 1/2 stream that comes from the primary wet screens?---At that point.

At that point there, yes.

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I would tender that photograph, if your Honour please?

MR HULME: Your Honour, there are rules of this court about photographs. We have drawn attention to them. We would be much advantaged if these things could be given to us so that we could look at these features before the cross-examination takes place. Our photographs have been given across. The rules are explicit and it is getting late in the day to ask can it be done. I do not object to the thing itself but we now have to try and get instructions on this over the week-end - the very kind of thing which these rules are supposed to prevent. They should be given to us 10 days beforehand or at least with time. We are inconvenienced with it being 2000km away. If there are any more, could we please have them, so that we can be put in a position to cross-examine on them.

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OLNEY J: Yes, very well.

EXHIBIT EXHIBIT 41 Photograph.

OLNEY J: I am sure those advising the defendants will take note of your comment, Mr Hulme.

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MR SHER: Can I just find out one more thing? Then I can complete because I do not wish to tender some photos on Monday. The other photos, which are of the 80 by 30 stream coming from the primary wet screens, show something too, I gather, which is pertinent to this question of dirtiness and degradation?---They show material which is clearly smaller than 30mm passing over the end of the screen along with the 80 by 30 size material.

When were these taken?---On 19th July 1983.

I seek to tender those as well, your Honour. I take it there will be the same complaint, and I apologise again, and if it were not for the week-end I think I would feel a lot more embarrassed than I do.

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EXHIBIT EXHIBIT 42 Two photos taken 17th July.

HEARING ADJOURNED UNTIL 10.30 AM

MONDAY, 21ST NOVEMBER, 1983

NEVILLE OLIVER BOUGHTON:

OLNEY J: I refer to Mr Hulme's objection to paras.12,13,14 and 15 of the affidavit of the present witness, Mr Boughton, and to the argument thereon.

Having considered the matter I propose to uphold the objection basically for the reasons which were submitted by Mr Hulme in his argument. I will, in the course of determining this matter, deal with the matter in more detail but I think it is sufficient for present purposes to say that in my opinion the paragraphs referred to should not be admitted as evidence.

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MR SHER: If your Honour pleases, that takes with it some exhibits, too, I think.

OLNEY J: I think the exhibits are 5 to 8 inclusive.

MR HULME: I think I overlooked on Friday NOB 4; that goes out with one of the paragraphs already conceded to go out on Friday. NOB 1, 2 and 3 clearly do not but NOB 4 comes in in paragraph 8 which is a paragraph which my learned friend did not press and it comes in at about line 10, para.8. That should go with it.

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MR SHER: That is so, your Honour. The only problem about that is, I cross-examined a witness about this document and I would seek to tender it, therefore, as material upon which cross-examination took place. As your Honour will recall, I put the matters that this letter refers to to Mr Langridge. At that stage it was not anticipated by me that the document would not go in as part of the affidavit of Mr Boughton, in which event I would have sought to have tendered it then, but Mr Langridge will be back tomorrow anyway.

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MR HULME: We would say to your Honour that that is not a basis for my learned friend to tender the document. It does not become admissible simply because he has chosen in good faith at that time to cross-examine on it.

OLNEY J: To make sure that I have the right document, NOB 4 is the H.I. letter to Hancock and Wright of 5th May 1981, is it?

MR HULME: Yes. It is signed by Mr Walker for Mr Mutch[?] who, of course, is not Mr Langridge. Another person's letter and cross-examination on it took place in good faith but that does not make it admissible. It is to do with a subject that has been ruled inadmissible and, in our submission, it should go with that paragraph of the affidavit.

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MR SHER: The only way I put it, your Honour, is that it is the plaintiff's letter so the proof of it is sufficient

but the relevance of it now, notwithstanding your Honour's earlier ruling is, that it relates to this question of diversion of ore and it is material from which it can be seen what explanation was being given in relation to the - - -

MR SHER (Continuing): - - - relation to the question of diversion of ore, and the diversion of ore is relevant to the question of whether you can determine the purpose for which something is done by reference to the end result, if in fact the end result is not achieved - probative of that matter, your Honour. It is an admission, in effect, by the plaintiff of what we would say is diversion of ore which did not go through the whole process.

OLNEY J: That of course is a fact the possibility of which was conceded from the outset by Mr Langridge in his affidavit. 10

MR SHER: Yes, although on a much more limited basis than we would say now appears, your Honour.

OLNEY J: I think in the limited way in which I am able to "assist" (and I put that in inverted commas) the parties in this litigation, I would have thought that the possibility of a diversion of ore at a particular place is something to which I will have to direct attention. The quantification or indeed the motive for that, consistent with what I have said previously, would not appear to have any bearing or be of any assistance to me in construing the contract. 20

MR SHER: It also goes to the credibility of the case that the plaintiff is seeking to make out, your Honour.

OLNEY J: Well, that may be so. I am inclined at this stage - in view of the fact that the document was cross-examined on in good faith and it having been tendered on Friday as part of this exhibit albeit without the supporting identification in the particular paragraph, but as you say, nevertheless it is a document emanating from the plaintiffs - to allow it to remain on the record and I will give consideration to it at the appropriate time. My present feeling is that it is unlikely to advance the case one way or the other in view of other evidence. It may be that what I am saying is that it is marginally relevant or may even be of so little weight as to be of no relevance; I do not know at this stage until I get to the broader task which is in front of me. However, I will allow the document to remain on the record, Mr Sher. It may be that I will later conclude that I should not have done so, in which case I will say so in my ultimate reasons. 30 40

EXAMINED BY MR SHER (Continuing):

Mr Boughton, I want to take you now to two exhibits which were exhibits to the affidavit of Mr Grosvenor; they are NEG1 and NEG4. Mr Grosvenor's affidavit is exhibit 29. Exhibit NEG1 is a letter from the legal department of CRA Services, which appears to

have been taking up the cudgels for Hamersley at that point of time, and NEG4 is the series of extracts from the Allis-Chalmers book and in particular at p.17 of that exhibit there are set out spray water requirements for wet screening depending upon the material and the application. I would direct your attention in particular to that document. It says in relation to iron ore, the application being for sizing, that the GPM (which I take to be gallons per minute per tonne of feed) is recommended to be 5 to 10. There are then some recommendations about the spacing of the sprays and the recommended psi, which is pounds per square inch, which is 40. Have you had a look - - - 10

MR SHER (Continuing): - - - had a look at the figures provided in the letter from CRA Services Ltd, NEGI, concerning the wet screen and pulping box, and to compare those figures after transposing them into imperial measurements with the recommendations in the Allis-Chalmers publication?---Yes, I have.

Firstly, the pressure, which is 450 kPa - what is that in pounds per square inch?---It is a conversion I do not carry in my head, but as I recall the calculations it was 65.

So 450 kilopascals is approximately 65 pounds per square inch?
---Correct.

10

Did you then take the feed rate referred to in this letter for the pulping box and the primary screen, both the top deck and the bottom deck, which come to a total of 205 cubic metres per hour?---Yes.

And did you convert that total of 205 metric measurement, the cubic metres per hour, into US gallons per minute per short tonne hour of feed, which is in effect the equivalent of the Allis-Chalmers recommendation?---I did.

20

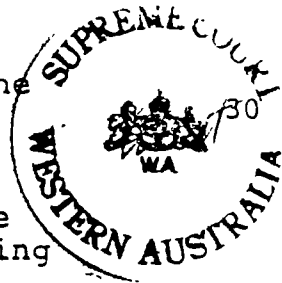
How many gallons per minute (that total measured metrically) per tonne of feed did that amount to?---As I recall, a little over two.

Can you give us the precise figure?---No, I am sorry, I cannot.

You have some calculations worked out on a sheet of paper, have you not?---Yes.

If you refreshed your memory from that could you give us the precise figure?---Most certainly.

I will have to ask you to hand this back to me, so I would like you to check that figure and the next figure where they improved the feed rate. Are you looking at your calculations?---Yes.



What was the calculation gallons per minute for the feed rate on the pulping box and primary screen?---It was 2.4.

So 2.4 gallons against a recommendation of 5 to 10?---Correct.

40

Did you then calculate the feed rate in the second set of figures where there had been obviously a substantial increase in feed in the pulping box and, I think, on one of the decks of the screens?---I did.

What was the total feed rate there?---It was 6.3 US gallons per minute.

MR SHER: How many metric cubic metres per hour was it?---That is 548.

You added up the figures again, got 548 cubic metres per hour, converted it to gallons per minute and it came to how many gallons per minute?---To 6.3.

That is as opposed to a recommendation of between 5 and 10?---Correct.

Have you also had a look at the sheets showing simulation of high scrubbing screening done by Dr Batterham, which is exhibit 16?---I have.

With a view to telling his Honour what your observations and knowledge of what happens at the plant lead you to say concerning how representative these samples in fact were, taken by Dr Batterham?---I don't believe they are representative.

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Would you tell his Honour why you say that?---I have two reasons: The first concerns the amount of minus 6mm material recorded there as having been screened off by wet screening.

We are talking here of the three examples, are we?---No. I am talking of the two examples on belt 11C.

20

Would you have a look at exhibit 16 for us, and we will just get exactly what it is that you are - - -

MR SHER (Continuing): - - - that you are talking about. These examples, of course, are simulated examples that Dr Batterham had?---I understand that.

It is exhibit 16. You referred to 11(c), I think, but I do not think that appears on these documents?---It should have been 14(c).

There was one example from belt 50C and the two from belt 14C?
---Correct.

What were you going to say about the minus 6 feed from that belt?---On both of the 14C examples, if one looks at the right-hand side of the sheets, the amount of minus 6mm material recovered after wet screening for one minute is 61.8 per cent by weight, in the case of test 1, and 64.2 in the case of test 2, an average of 63 per cent. 10

Just to get clear and so as we all understand what Mr Batterham was saying, from his sample from which he simulated wet screening the 100 per cent eventually came into three groups of which 61.8 and 64.2 per cent by weight were minus 6 in size?---Correct. 20

What do you say as to whether that is a representative sample based on your experience and knowledge of this plant?---From figures supplied to us by Hamersley Iron for the period 19 months up to 1961, the average weight of that material was 47 per cent after wet screening.

You said 61; did you mean 81?---I am sorry, yes.

Is that the only figure that you could rely upon to suggest that the sample was not representative?---In addition, I also looked at the monthly totals, month by month, and the highest of those monthly averages was, in fact, 56 per cent. 30

So the total average was well below and the highest monthly average was also significantly lower than these two samples?---Correct.

What else did you observe in relation to these samples of Dr Batterham?---I noted that after having dry screened the material, he took the 30 by 6, completely dried it and then subsequently dry screened again and obtained approximately 10 per cent of fines, that is minus 6mm material, as a result in the second dry screening. That is on the left-hand side of the two sheets. 40

Where do we get that 10 per cent? That is 10 per cent of what?
---By weight.

I follow what you mean. He is saying that the weight of the fines

after the second drying was about 10 per cent of the weight of the 30 by 6?---Correct.

MR SHER: And that was his conclusion approximately in both tests?---That is correct.

What do you say as to whether that is a representative result?
---That seems a very high figure.

Why do you say that?---When one takes a particle of the feed ore from the mine, one can readily distinguish whether it is iron ore or shale simply by the colour. The iron ore is a dark red or dark grey and the shales are white, yellow - - -

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WITNESS (Continuing): - - - white, yellow, pink. It may have dust on the surface but one can readily see what it looks like. If there were 10 per cent of fines - - perhaps I should get this into perspective. If one takes a 20mm particle of ore, 10 per cent by weight of that represents about a 9mm chunk of fines, if they are all put together. It is a sizeable amount. Alternatively, if they are spread over all of the faces, it represents a third of a millimetre crust over the particle, which is much thicker than a number of coats of paint.

MR SHER: So what you are saying is that if you had that much fines you would have the lumps coated with a huge amount, as it were, of what would appear to be dust?---It would be very readily discernible just by picking up the material. 10

Have you ever, yourself, seen it so covered, or seen that amount of fines in a sample?---Not in the normal material as it comes out of the mine in its normal moisture state.

So what do you say as to whether or not the suggestion that you would have about 10 per cent of the total weight comprising fines - - what do you say as to whether that has been your observation on any occasion?---In my observation that is quite a normal condition. 20

OLNEY J: Could you just explain why you say 10 per cent?---The 10 per cent was in fact the order of magnitude figure that Dr Batterham used. If one looks at 14C No.1, at the bottom of the left-hand side the weight result of minus 6 material from the dry screen is 3.4W - 3.4 parts by weight. That represents in fact a little over 8 per cent of the 41.6 weight; although the figure 10 per cent was used in an order of magnitude, if one calculates accurately it is 8, but it still does not change the weight of the figures I have - - 30

MR SHER: I think the ration is probably about 1 to 10 if you compare the weight of the lumps as opposed to the weight of the fines. It is 38.2 as opposed to 3.4 On the other page, your Honour, it is 33.8 as opposed to 2.9, which would be in fact more than 10 per cent.

OLNEY J: Yes. I am afraid I was looking at the wet screening side.

MR SHER: Can I just put it in what I would, with respect, call "laymen's" language? The fines represent dust, I take it, in effect, or very small particles?---They are minus 6mm material by definition. 40

If we are going to really get a sample of ore which has a ratio of one-tenth of the lumps in dust, we would have the lumps very substantially coated with dust?---Indeed.

You would be able to see it quite easily and what you are telling his Honour is that has not been anything like your observation, I take it?---No, not in the normal ore that comes out of the mine, let alone what is dry-screened.

OLNEY J: You would not have something that has a dimension of 6mm being classed as dust, would you?---Not normally, no.

MR SHER: I think that was my word. (TO WITNESS): How big is 6mm in Imperial measurement?---A quarter of an inch.

So we have about a quarter of an inch downwards. We have about 10 per cent, according to Dr Batterham's calculation? ---Correct.

Might I ask you to clear up one thing which I did not understand until a few days ago and I am sure no-one else made the same mistake but just in case they did? When we are talking of an Fe content of 61 or 62 or 63 or 64 per cent, what is the other 36 per cent or 39 per cent comprised of? Is it other particles or is it something else?---Most of it is in fact combined oxygen with the iron.

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Can I put that into lay language so it is clear? If we say that is a lump of iron at 64 per cent, when it is actually melted down and the oxygen is got rid of, we have a smaller lump. Is that in effect what happens?---It weighs less, certainly.

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It may be the same size but it weighs less, but if anyone were to think that the 34 per cent was in effect shale or clay or other rubbish they would be wrong, would they? ---They would indeed.

The 64 per cent Fe content is really this: You take a lump of what appears to you to be iron and when you analyse it you find that that lump has 64 per cent iron in it and the other 36 per cent is oxygen and that sort of thing?---Most of it is oxygen. There are also a number of other - - -

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WITNESS (Continuing): - - - number of other impurities like silica, alumina, phosphorus.

MR SHER: Right - but they are within the lump, I take it?---Yes.

So that the screening process, once it has got rid of the waste - the gangue and whatever you call it - leaves you effectively what looks like to be solid iron, but on chemical analysis you will find it has a lot of oxygen in it and some small quantities of silica and phosphorus and that sort of thing?---That is right.

OLNEY J: Does this then explain the term "refined" - that in order to assess the Fe content you would refine it by assessing or removing those other constituents from the lump?---Yes. What in fact happens in the blast furnace, which is on occasions one of the next stages in the process, is in fact the refining of the ore by the removal of the oxygen and some of the other deleterious elements. 10

MR SHER: Just before I deal with the final matter I just want to find out if your Honour's ruling covers the alternative to the hearsay in para.14? Your Honour will recall my learned friend, Mr Hulme, objected to para.14 as being hearsay; that is the report about the contracts. Assuming that that were in proper form is that also picked up by your Honour's ruling? 20

OLNEY J: Yes, it is my intention that it should be.

MR SHER: I just wanted to get that clear, your Honour. TO WITNESS: Finally, it would probably be helpful if we had from you a description of what exactly happens on the preparation screens. I do not think anyone has really told us; we have been concentrating a little more on the primary screens. What happens on the preparation screens in this wet screening plant?---You mean the screens which are immediately before the heavy medium drums and heavy medium cyclones? 30

Yes?---On the screens before the drums the material is fed down a chute, wetted in the chute and then passes over 6mm screens where it is also sprayed.

I would just ask you to tell his Honour what these chutes look like compared with the chutes at the primary screens? You may not be able to do so, but - ?---As I recall, they are inclined sheets on which the material slides down and is jetted, but I would not be 100 per cent sure about that. 40

And they are sprayed in the chutes here, are they?---Yes.

It then goes on to some vibrating wet screens?---Yes.

MR SHER: And it is screened out to the sizes you mentioned on Friday?---Yes.

Then is fed into the heavy media drums and the cyclones?---Fed directly into the heavy medium drums; for the cyclones, as I recall, there is also a sieve bend ahead of the half millimetre screen, as part of the screening process.

I think it is clear from Mr Hulme's opening and the evidence that was given that there is no discard at any of these screens because what is either screened off through the sieve bend or screened off through the screens then goes to some other process further on?
---Correct.

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Is the first discard after the material has gone through the heavy media drums or the cyclones - the first discard of any waste?---Of the material that goes through the heavy media drums and cyclones that is correct; the first discard is immediately after each of those.

They are called "the floats", I take it?---Yes.

And the discard from the cyclones, what is that called - "floats" as well?---Floats, also.

And of course the slurry has gone off to the fines treatment plant?---Yes.

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What actually happens to the slurry there?---The first thing which happens to the slurry as it goes through the hydrocyclones which remove and discard the minus .04mm material as of now, or previously the minus .063.

So that is the first discard there?---Yes.

The total product from the primary wet screens, therefore, is first subjected to any discard of waste after the drums, the cyclones or the first process in the fines treatment plant?---Correct.

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After the product and the sinks and the floats come out are they then washed to recover the ferro-silicon?---They are.

Thank you.

MR HULME: I would ask your Honour to bear with me a little. Some of my notes relate to matters on which I will now not be cross-examining, and it is just a matter of finding my way through.

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JW19. 11.00

CROSS-EXAMINED BY MR HULME QC:

MR HULME: Mr Boughton, in para.10 of your affidavit you refer to an article by Sir Russel Maddigan. You refer to a statement by Sir Russel Maddigan in the article NOB 2 of the purpose of beneficiation?---Yes.

Can you tell us where in the article Sir Russel says that?
---Yes. It is on p.59 of NOB 2 under the heading, Concentration, the second paragraph. Sir Russel initially states in the first sentence:

"Two concentrators are currently being installed in the Pilbara to beneficiate low grade ore."

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That is the first part of the statement. Later on in the same aparagraph, he says:

"The Hamersley and Mount Newman plants will produce 11 million tonnes per year and 5 million tonnes per year of high grade product from 13 million tonnes per year and 7 million tonnes per year of low grade ore respectively."

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And that meaning of beneficiation is, I take it, the definition which you adopt, is it?---No. I do not think I adopt that as an exact meaning of beneficiation as an all-encompassing term.

What meaning do you attach to the word beneficiation?---I am not sure in what capacity you are asking me that question. I do not believe that I am qualified to give an answer to that as an authority on beneficiation.

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Is beneficiation a term which you use?---It is a term that I have used in relation to the beneficiation of iron ores in this context.

What meaning in this context do you attach to the word beneficiation?---In the specific context that Sir Russel is referring to here, I attach the meaning that beneficiation means an upgrading of the ore - - -



WITNESS (Continuing): - - - the ore, an increasing in the Fe grade.

MR HULME: By taking away lower-grade constituents?---Yes.

If you saw the word used in this country in relation to iron ore, you would understand it to be referring to some process whereby poorer constituents are taken out and what is left is less than the total incoming feed but has a higher quality than the incoming feed? ---No, not necessarily; I would have to know the context in which the word was being used, even in the iron ore industry.

What other kind of thing could be done than taking away the poor material?---It could be crushed and screened. 10

Would that improve the grade of the iron ore?---As a whole, no; it is likely to produce streams of two different grades.

When you say in your affidavit:

"The grade of ore can be increased in two ways....(reads)....material of higher Fe grade than the average"

You are referring there, are you not, to two possibilities²⁰ - either you remove some poor or you bring in some outside higher-grade ore?---Correct.

In the first of those two possibilities is the kind of thing about which we have been talking - removing the poorer constituents and having a higher average than you had at the start?---Yes.

That is one limb of increasing the grade of iron ore?---That is one.

It is one of the two limbs that you have for increasing the grade of³⁰ iron ore?---By removal of lower Fe material.

Yes. The other limb being by importing a higher grade constituent? ---Correct.

Those two limbs together constitute, as I take your affidavit, the two ways in which the grade of ore can be improved?---As I see it, yes.

Those are the two forms which beneficiation may take - one of which any particular process of beneficiation will take?---No. 40 You have suddenly introduced the word "beneficiation" and I do not know what meaning you are attaching to it in that context.

Do I take it you do not adopt Sir Russel Maddigan's definition? Is that what you are saying?---Sir Russel Maddigan's definition is made in the context of this particular plant. Are you asking me do I agree with Sir Russel Maddigan's definition in relation to this plant?

MR HULME: As I take this paragraph of your affidavit, it seems to say "Sir Russel Maddigan says the process of beneficiation at this plant is to produce high-grade product"?---Yes.

You then go on, you are no longer quoting Sir Russel, you are going on yourself and you were saying "You can do that in two ways. You can take out bad constituents, or you can add good constituents - - -"

K74. 11.10

MR HULME (Continuing): - - - good constituents?---Yes.

You then go on to point to the places at which there is discarding of bad constituents in these processes?---Yes.

Am I right that what you are intending to say is no more than this: There are two broad ways in which you can improve the grade of ore; you can take away the poor or you can add the rich?---Yes.

It is true, is it not, that if you have a simple dry crushing and screening plant you do neither of those two things?---I think that depends on how you are looking at the products. 10

In the dry screening plants as operated in the Pilbara you do neither of those two things?---I would not agree with you.

You finish with an average over those two streams identical with what went in before?---The total of what comes out is what went in - the total - but it has been split into several streams which have different properties.

Yes. We will leave that there. These photographs which you put in on Friday - taking first photograph 83-10/1 which became exhibit 41 - did you check these photographs before they were used as exhibits?---What do you mean by "check"? I don't understand - - - 20

WITNESS (Continuing): - - - understand?

MR HULME: You looked at them?---Yes.

I will show you another photograph which was given to us and ask you to identify that?---It is a print made from the same negative, printed back to front and mounted sideways - I am sorry, but merely a production error on our part.

Back to front, sideways - what do you think of the colour? Is not colour important in what you are talking about here?---The colour is different as I would expect from any photograph - a print made from a negative at a different time. 10

So the colour of the evidence depends on when the print was made, does it - the colour of this screening process depends on when the print was made?---No, not at all.

Pardon?---Not at all.

You have just said you expect the colour to vary according to when the print was made. One of the points of this evidence is colour, is it not?---I would say that the chief point of the evidence is the presence of the mud puddles on the top of the material - the presence of the mud puddles on the top of the material. 20

We will come to the mud puddles and whether they are mud puddles. The other photograph which I have just handed you is one prepared from the same negative?---I believe so.

By the same photographic people?---As well as I am aware, but I could not swear to that; I do not know. 30

You see, if the same negative has produced two photographs in different colours it does raise questions as to how accurate the evidence being given to the court is, does it not? If you had given them the other print the evidence of the condition of the ore on the screen would be somewhat different?---If the evidence relied solely on colour.

No - to the extent that colour is relevant the evidence would be different?---To the extent that absolute colour is different as distinct from differential colours. 40

These photographs were taken in colour because black and white was regarded as not as good for the purpose as colour; is that right?---I have long ago given up taking pictures in black and white because colour photographs show so much more detail.

Because - -?---Colour photographs show so much more detail.

MR HULME: Yes, and give a better impression of what is happening?---Of course.

If the colour is right?---Not necessarily.

We do not have, I think, the transcript of your description of these photographs which was in the last session on Friday.

PM
2313/82

DOCUMENT 3* - Defendant's Evidence
Evidence of Neville Oliver Boughton
Cross-examination

21.11.83

F77. 11.11

MR HULME (Continuing): Mr Boughton, you mentioned, I think, the material as coming from the coarse drums or the medium drums?---The medium drum in this particular case.

That will be the under 6mm fines which have come off from stream B at the preparation screen immediately before the medium drums?---Correct.

I think what you said was that that flow of fines had been brought across and had joined this - - The material will be out of the top of the photograph, will it not? The material is coming towards us on the photograph? ---Correct.

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It would have joined before the top of the photograph?---This is a photograph of a screen deck.

The material coming in from the drum would have joined out the top somewhere before the screen deck?---Yes, correct. The feed comes in from the top of the photograph if one holds it that way.

This is a dewatering screen?---No. It is a screen for separating out the minus ½mm material.

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Your Honour, this is, in fact, a classic instance of why I ought to have asked your Honour to apply the mandatory terms of that order. There are, in fact, very difficult technical matters raised by these photographs.

TO WITNESS: There is no evidence here of water coming onto this screen, is there?---Not in that photograph, no.

My instructions are from those who run this plant that it is a dewatering screen and that is why water is not being put onto it. Would you like to reconsider your answer as to whether it is a dewatering screen?---When I said it was for size separation I was considering what happened to the products that went from the top of the screen and the bottom of the screen. If you tell me now that it is intended only as a dewatering screen then I must accept that with some surprise.

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Has this flow from the drums come straight to the point out the top of the photograph where it joins onto here?---The material passing through the deck of the preparation screens has come, as I understand it, straight onto this screen.

40

Would you accept that that is wrong?---It may be; I did not trace it in the plant right through and nor does this diagram give enough detail to show.

When you are talking "mud", you are talking in particular the tiny particles, are you not?---I am talking of minus ½mm material.

AG
2313/82

DOCUMENT 3* - Defendant's Evidence
Evidence of Neville Oliver Boughton 21.11.83
Cross-examination

MR HULME: And when you are talking mud you are talking of, in particular, the fine end of that range? You cannot make mud with sand; you make mud with fine particles? ---Minus $\frac{1}{2}$ mm - - I am sorry. Are you asking me to define what I mean by mud here?

No. You have mentioned mud puddles and I am suggesting to you that particularly relevant to that would be the fine end - - -

MR HULME (Continuing): - - - fine end of the under-6 material coming from the preparation screens?---I do not understand the distinction. I am sorry.

We have agreed that 6mm is about a quarter of an inch. It is very close?---Yes.

You would not get far making mud with pieces sized a quarter of an inch?---Correct.

You would have water and pieces sized quarter of an inch?---Yes.

When you have mud is when you have fine particles?---Much finer than a quarter.

Within the 0 to 6 but at the lower end of that range?---Yes.

10

In particular, the very small ones, the slimes and things of that sort - the below 63 microns or the below 04 and those ultra fines?---They would be part of it.

And a very significant part as regards mud, would they not?--- They would be part of it. My attention here was directed to the minus 4mm material.

They would be not only part of it but they would be a significant part of it?---Again, I do not really know what you mean by "significant" but let us accept they are part of the stream.

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Their presence would make them important contributors to the mud? ---Yes.

You have said that material comes from the feed preparation - the particular preparation screen - over to this stream. Did you know it went through cyclones on the way over? ---No, I did not.

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Did you know the cyclones removed the under-63 microns?

MR SHER: These are being asserted as though they were the fact and incontestably the fact. The witness obviously regards Mr Hulme as authoritative. He may be right; he may not. It is submitted, however, to assert that that is the fact when it has not been established is unfair to the witness.

OLNEY J: Yes. I was just wondering if there is any evidence of these procedures, Mr Hulme?

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MR HULME: This is the difficulty we have by these photographs having been given to us on Friday afternoon, with assertions made as to what they are showing and we say they just do not show it. Your Honour will remember Mr Tomsitt was in the witness box and he described the significance to be attached to certain pairs of photographs that we showed and this evidence is relevant to that. Mr Tomsitt was not cross-examined at all on that issue and then, at the last, we get photographs which, as I take their relevance, are to cast doubt on the contrast. The evidence given by Mr Boughton, after all, is that this feed came from the preparation screens - - -



MR HULME (Continuing): - - - preparation screens. I am entitled to ask him: Does it come direct? Does it go anywhere else in the meantime? He is the man who is giving evidence as to where it came from; he happens to have got it wrong.

OLNEY J: You put to him did he know a certain fact, and he says: "No, I don't know that as a certain fact". He may not know it either because he does not know it or because the fact is not true.

MR HULME: I agree, and no doubt I can ask him on hypothesis; as we happen to have Mr Langridge coming down in the morning he will know and be able to say.

TO WITNESS: Would you look at this flow diagram which I will give you and would you identify if your photograph is taken at the point where we have written on it "NOB photo. 83-10/1"? Also would you follow the green flow line to see if that appears to be the flow line to which you were referring, namely from the drums onto the point at which you took the photograph?

MR SHER: I object to this, your Honour. Mr Tompsitt produced a series of photographs and at this end of the bar table at least we were led to believe that what we were seeing was photographs taken at one end of the process and at the other end, for the purpose of demonstrating a point. There was not the slightest suggestion from Mr Tompsitt that there were other processes in-between those photographs being taken, and in so far as is now being sought to be proved that there were then Mr Tompsitt's evidence is deceptive and it should have been elicited at that stage. For us to be criticised in relation to this matter when my learned friends have clients who can instruct them as to the operation of their plant and who have called a witness who has produced photographs without revealing what is now being asserted to be the fact - that there are other processes in-between - which must cast a new light upon the photographs the plaintiff has tendered (and I might say this is the first we have heard of it) is in my submission grossly unfair to this witness and should not be permitted. If the fact is that there are other steps being taken between the series of photographs produced by Mr Tompsitt then we should have known that long before now, and the necessity of perhaps challenging Mr Tompsitt's evidence would have been more apparent.

OLNEY J: As I understand it - and I am going to ask Mr Hulme whether it is - it is suggested that in the pairs of photographs put in by Mr Tompsitt, which were in the nature of "before and after", as it were, it is the same material coming off the belt at one point and coming off the belt at another point. I understood his

evidence was that effectively all that had happened to that material was travelling along a belt and, I think, being deposited into a surge bin or some such thing. Is it suggested that, in respect of Tompsitt's photographs, other processes apart from the conveyance of that material have taken place, Mr Hulme?

MR HULME: No. It has been joined by feed off the streams A and B, and indeed if your Honour will look at the handwritten flow chart which I handed to you, sir, on the first day, the material from the preparation screens from streams A and B join stream C. That has never been a secret; that is where the fines go when they are taken off at 6mm, so they do not go into the drums - - -

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MR HULME (Continuing): - - - the drums. We take the gist of what Mr Boughton has been saying - and what a number of witnesses have agreed is this continuing process of degradation which we say is illustrated in those photographs - that it is, to some extent, caused by bringing other feed, itself being feed which is degrading; it is the same feed and in the first process has been wet. In relation to this particular incoming from stream B, Mr Boughton's assumption and evidence was that it came direct from the drums; in fact, it goes through cyclones. The ultra-fines are taken off it and do not come onto this screen and what joins the feed out of the cyclones we would say is quite a clean feed, not a dirty feed bringing in mud but a clean feed out of the cyclones although feed which will, itself, continue to degrade.

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I simply wish to make sure that we have identified rightly the place on this flow chart at which Mr Boughton has taken his photograph.

OLNEY J: I do not really know what the question is yet but you have a flow chart there?

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MR HULME: Yes.

OLNEY J: But it is not part of the record at this stage, is it?

MR HULME: No.

OLNEY J: This is something different?

MR HULME: It is a flow chart simply around the drums.

OLNEY J: As to which I have no detailed evidence at this stage. Is that right?

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MR HULME: No, but if he confirms that we have the place of his photograph right, we will then be able to take whatever steps are proper as to showing the course that that ore has followed.

OLNEY J: You can show him the document and ask him what he can say about it.

MR HULME (TO WITNESS): Would you look in the bottom right-hand corner of that photograph? You see a screen there where we have put "NOB photo"?---I see the screen so marked.

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OLNEY J: Do you identify that flow chart as something that you know about?---I have not seen this flow chart before.

No, but can you identify it as relating to any particular equipment that you have examined?---It is labelled "Medium drum plant flow diagram" and given a little time I think I could probably work my way through it.

OLNEY J: That still is not answering the question?---I am sorry.

You have told me that you have seen this plant and you have given me some evidence as to what takes place in different parts of it. Looking at that flow diagram, can you say, "Yes, this is something I have inspected, a schematic representation of what I have given evidence about" or not?---I would have to spend some time examining the chart before I could say that, your Honour.

Perhaps Mr Hulme ought to go on.

MR HULME: I may be able to assist you a little there, Mr Boughton. If you follow the green line up, do you see the medium drums at the top of that diagram? Does it look like a medium drum with a preparation screen?

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WITNESS: I have found the medium drum and I have found the preparation screens ahead of it.

MR HULME: Can you then look at the other end of the green line and see whether that appears to be the screen on which your photographs were taken?

MR SHER: Your Honour, this could take some time and I would be content if I could sort of make as it were an open offer in court through your Honour to my learned friend. This whole matter arises because we were concerned about Mr Tompsitt's photographs which, in effect, show, as your Honour said, before and after. Perhaps it should have been put to Mr Tompsitt but Mr Tompsitt did not mention that the after photograph was not exactly the same as before but there had been additions to it and further it is now appearing from what has been put by my learned friend, Mr Hulme, that those additions are themselves subjected to certain processes. So that rather than the after photograph just being before some time later it is after added to and what is added to has been put through a number of processes.

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The difficulty which has arisen is because Mr Tompsitt did not mention any of that. When Mr Boughton gives evidence which throws some doubt upon that my learned friend in answer to that not unnaturally says, "Oh well, you have produced part of the picture. This is the rest." I would be content, your Honour, from our viewpoint, if my learned friend would be prepared to have your Honour deal with this matter on the basis that at least that series of Mr Tompsitt's photos are photos which really cannot be relied upon by either side as proving, in effect, that the after photo truly reflects just the degradation from the before photo.

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OLNEY J: I thought that was what they were called to prove. I may have misunderstood the evidence but that was my understanding of it except that as I understand it now it is being said that the stream which is shown in the before photo has been joined by something else in the meantime, before the after photo.

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MR SHER: The something else has been subjected to a series of processes about which my learned friend is now asking.

OLNEY J: One would only really be interested in what the something

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else was at the time it joined. We are not really concerned about what has happened to it.

MR SHER: Otherwise, your Honour, we are going to end up spending a lot of time on what really is a subsidiary issue about what are really a few photographs.

OLNEY J: Yes.

MR HULME: It is a little bit - -

OLNEY J: It is more complicated than that, I am sure.

MR HULME: It has been joined by some more of itself. Stream C, when it starts, is the minus 6 mil. We know that the screening at that point of streams A and B is not perfect and at the preparation screen there comes off more, minus 6 mil. It rejoins the original minus 6 mil. Having come out of the cyclones - the stream B - one does so in quite a clean form but, being the same ore as the rest, it will then continue to degrade. It is no different. These are fines which simply did not join stream C at the start but went away with the stream A, went through the preparation screen, came back, went through the cyclones, and joined stream C, which is where they should have been in the first place. So that is all that has happened. It is not a different material put on. It is subject to precisely the same process because it is precisely the same ore, ore which is continuing to degrade while it moves through. That is all that they illustrate.

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OLNEY J: I suppose the only thing one might say is if degradation is something which takes place over a period of time it may be - I do not know because I have not heard any evidence - that that stream which joins the original stream may have taken longer to get there and therefore be subject to degradation over a longer period.

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MR HULME: Except that having just come out of the cyclones any degradation before then, or the great part of it, will have been taken off in there, because that is the purpose of going there. So that is what we say comes out of the cyclones clean but it then continues to degrade.

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As your Honour will remember, Mr Tompsitt used my learned friend's chart up here which was prepared by Mr Boughton to show where these things were happening. There was no secret as to what stage in the process was involved. He was using that wall chart - - -

MR HULME (Continuing): - - - wall chart. I take it, Mr Boughton, you are not able to identify the site of your photograph on that flow chart?---Yes, I am, now you have given me enough time to have a look.

You are satisfied that the point we have marked is the point where your photograph was taken. (I tender that for identification.)

MFI MFI 43 Flow chart.

MR HULME: Can I have your comment on this? I suggest to you that on a screen which is a wet screen where sprays are in operation, that the lighter shale will tend by the activity brought about by the water to be mixed with the ore, the heavier ore - that the water pouring down is causing turmoil on the screen and there will be a mixture of stuff, shaking vibrating together?---Yes.

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And on a de-watering screen, where you do not have water coming down but simply water going away, you will tend to get the lighter shales floating on the top? They have been in water and they come onto the watering screen and the lighter shales tend to be at the top?---I think that depends entirely on the action of the shaking on the screen, as to whether it tends to bring the light or the heavy material up or down.

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I suggest to you that these apparent mud puddles are not mud puddles at all but simply shale on the surface of the de-watering screen and perfectly common?---Mr Hulme, I picked up the material and examined it in my hand and it is minus 1/2mm material.

There is plenty of shale at minus 1/2mm, is there not?---At that stage it is rather difficult to distinguish what there is, when it is so dirty.

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When you described it as mud puddles you had assumed, had you not, that minus 63 micron material had come in from stream B? ---No.

You had not assumed it?---My description of it as a mud puddle is based on my examination of the material in my hand.

If someone had asked you at that point "Has minus 63 material come in from stream B?" you would have said "Yes"?---You meant .063? You meant minus .063 material?

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Is that not 63 micron?---I beg your pardon, yes.

You had assumed that what had come in from stream B was the total range 0 to 6?---Yes.

That total range, of course, includes the 0 to 63 micron?---Correct.

OLNEY J: Where does the 63 come into it? I have .04mm referred to at different places on your original chart?

MR HULME: Yes, there has been a change, but both figures have been used. These particular cyclones - - no figures are given in Mr Langridge's account - - -

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MR HULME (Continuing): - - - Mr Langridge's account for these particular cyclones, but one may assume, I think, that they are the same size as the others so that the change to .04 would have taken place. The other photograph, Mr Boughton, exhibit 42, shows, I think you have said, that the material is not completely cleaned?--What I intended to convey was that that material was not - - that some minus 30mm material was carrying over along with the 30 by 80.

The only significant point that you take from these photographs, is that?

TO HIS HONOUR: That would not be in dispute; some of them, your Honour, are clearly under 30mm.

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WITNESS: That is right.

MR HULME: Mr Boughton, I would just get your water figures. Do you have those back with you?---No, I do not have them here. I beg your pardon; I have NEGl but I do not have the calculation figures which I made.

If one works through NEGl - the 450, then the 205 is adding the 91, the 48 and the 66?---Correct.

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Have you had experience in the screening of iron ore, or indeed of other products - wet screening?---No.

Would you think it likely that if you wanted to know how much water, you would simply look up p.17 of Chalmers and say: "There is a figure for all ore in all parts of the world; that will be the iron ore figure"? That is now how you would understand that figure, is it?

MR SHER: Just a moment; I object, your Honour. This witness is not put forward as an expert in this area and he just said, before my learned friend asked him, that he was not. He has merely given evidence of calculations he has made from the material supplied by the plaintiff.

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OLNEY J: Yes. I think that is as far as his evidence goes, Mr Hulme, and to the extent that he referred to Chalmers recommending certain rates of delivery of water that is really only a matter of being there for anyone to read anyhow.

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MR HULME: Mr Boughton, as an engineer - - -



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MR HULME (Continuing): - - - an engineer, would you judge the correctness of the amount of water being applied in an existing plant by its results or by reference to a publication such as that?

MR SHER: I again object, your Honour. This witness is not an expert, in my submission, in relation to that. The question is meaningless. It would have to be identified as relating to some sort of process. Asked in the air, as it were, about things generally, it would have no probative force at all, in my submission.

OLNEY J: I thought the material was being put up as having some probative value?

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MR SHER: Yes. I asked Mr Pritchard about it and we will be making submissions about it, but I am objecting to this witness, who is not an expert in this area, being asked about it.

OLNEY J: It was put on the basis "As an engineer". I gather his qualifications are in that field. "Do you judge the efficiency of a machine by results or by what some handbook says?" I do not know that his answer is going to be of much help to me, but I think it is a legitimate question to ask him.

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MR HULME (TO WITNESS): As an engineer, would you judge the correctness of the amount of water being applied by reference to its success in doing the job or by reference to a figure appearing in a publication such as the Allis-Chalmers screen book?---Treating it as a piece of equipment, I would need a lot more information. I would not make my judgment in relation to either of those two things you mentioned. I would need to know the whole process that was going on and have a look at it carefully to see where the problem really lay.

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I am not suggesting it is even a problem but a certain amount of water is being put on and you are wondering, as an engineer, if that is the right amount of water. Would you judge the correctness of the amount being put on by reference to what the water was doing, in fact, in that plant - whether or not it was achieving its job - or would you judge it by reference to an amount appearing in a book?---If I had a series of tests in which the amount of water varied and I could determine its effect on the end result, then obviously that is a more practical standard for judgment than what appears in the book.

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The practical standard of judgment would be seeing with that feed, in that plant, whether you were putting on or were not putting on a sufficient quantity of water?---If I had an appropriate series of tests.

OLNEY J: You would want to know to start with what was the object of the process, would you not?---I would.

Without that you cannot make a judgment about the plant at all?--- That is correct. I would also need to know the full range of feed materials to be supplied.

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MR HULME: Because all these processes of handling feed will be governed to a very significant extent by the type of feed you have in the particular plant?---Yes.

OLNEY J: Could I ask you, Mr Sher, whether that chart has been tendered as an exhibit?

MR SHER: I do not think it has. Perhaps it would be better if it were. I tender it then, your Honour.

OLNEY J: In view of the witness's evidence late on Friday, it ought to be, I think. Otherwise I will be looking at a transcript with coloured lines referred to and nothing to relate them to.

EXHIBIT

EXHIBIT 44 Chart.

RE-EXAMINED BY MR SHER QC:

MR SHER: The only photograph about which I wish to ask you is the one of the material on the screen, exhibit 41. Why is it that you took that photograph - - -

MR SHER (Continuing): - - - that photograph?---To show that the material discharged off the screen contained in it a considerable amount of minus ½mm material.

Whether one or the other are different in colour - and I will get them both before his Honour by tendering the other one - does it show that on the photograph?---Yes.

Will you just turn them around so that we can see what we are talking about? You can observe some difference in colour. Can you point to this material that you had in mind on both photographs, the exhibit firstly?---On the exhibit it is this material in the centre distinguished by the lighter colour in relation to the darker background. On the other photograph supplied the same material distinguished in the same way.

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I tender the second of those two photographs, your Honour.

EXHIBIT EXHIBIT 41A Photograph formerly exhibit 40

EXHIBIT 41B Second print of above photograph.

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MR SHER: Leaving aside what the photographs show, what did your human eye see when you took the photograph? What did you actually see there?---I saw fine material on top of the bed on the screen.

Did you observe any of the puddles that are depicted in the photographs?---Yes.

Mr Boughton, leaving aside whether you are right or wrong, you took a photograph of that particular material which you understood rejoined the feed that went from the 6 to ½ size feed into what was, I think, stream C?---Yes.

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Did you understand, until anything was put to you by Mr Hulme this morning, that that particular material was subjected to any further processing through any cyclone or anything else before it rejoined the 6 by ½ stream that had come originally from the wet screening plant?---You mean after leaving the screen on the photograph and before rejoining the screen?

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Yes?---No.

Has anyone ever suggested to you, before Mr Hulme mentioned it this morning, that it was subjected to any further process in a cyclone or elsewhere?---No.

As far as you are aware, is it?---No. I did not understand Mr - -

MR SHER: You did not understand Mr Hulme to be suggesting - -?
---To be suggesting that it was after.

But it has been put to you that something before happens
that goes through some cyclone?---Yes.

Were you aware of that?---No.

Do you know, from your own knowledge, that it does, in fact,
go through some cyclone after it comes off the
preparation screen?---Only in so far as it has been
pointed out on the flow sheet presented to me this
morning.

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Leaving that aside, did you observe any such cyclone?---No.

Is any such cyclone shown on the isometric plan that is
exhibit 44?---I cannot see it.

I understand the point you were seeking to make by that photograph
was that stream C coming from the wet screening plant
6 by $\frac{1}{2}$ depicted in Mr Tompsitt's photographs as leaving
the plant and going into the next process - in other
words the before and after - was joined, during the
course of that journey by this material?---Correct.

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You have a photograph of that material which contains, not
6 by $\frac{1}{2}$ but 6 by nothing?---Correct.

As far as you are aware, from the time of that photograph
onwards, the 6 by nothing which adds to the 6 by $\frac{1}{2}$
- is that 6 by nothing screened to get rid of the
 $\frac{1}{2}$ by nothing or cycloned?---As far as I am aware,
no - - -

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MR SHER: Are you telling his Honour, then, that the 6 by $\frac{1}{2}$
stream from the wet screening plant, before it goes
into the cyclones in the 6 by $\frac{1}{2}$ processing is joined
by a stream which contains 6 by 0?---Correct.

As depicted in your photograph?---Correct.

So any photograph of Mr Tompsitt purporting to depict degradation
of the 6 by $\frac{1}{2}$ stream includes, as shown in your
photograph, material added which includes $\frac{1}{2}$ by 0 material?
---Yes.

I have no further re-examination.

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DOCUMENT 3* - Defendant's Evidence
Evidence of Neville Oliver Boughton
Re-examination. 21.11.83

ERNEST ARCHIBALD MAYNARD WRIGHT, sworn:

EXAMINED BY MR SHER QC:

MR SHER: Your full name is Ernest Archibald Maynard Wright?---Yes.

I think you are known as Peter Wright, are you not?---Yes.

So if anyone has been talking about Peter Wright up until now,
it is you they are talking about?---I think so.

Your address is 193 Stirling Highway, Claremont?---My office
address.

You are one of the defendants in these proceedings?---Correct. 10

You have sworn two affidavits. (I would ask for those to be
handed to you). One of those exhibits a large number
of documents and the other just the one. Was the first
of your affidavits sworn on 20th October 1983? Would
you just take the affidavit, not the exhibits, and
look at the back page where you will see a signature
and a date, I think?---Yes.

Is that your first affidavit?---Yes.

Would you look at the second one, which is a one-page affidavit
sworn on 24th October, I think?---Yes.

Is that your second affidavit?---Yes.

Are the contents of both those affidavits true and correct?---Yes.

I seek to tender both those affidavits and exhibits to them, your 20
Honour.

MR HULME: Your Honour, I rise simply as a matter of precaution,
referring back to what my learned friend said last

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week; the vast mass of Mr Wright's evidence concerns history of negotiations, and my learned friend I think made it plain that he was tendering the material only for the purpose of his argument as to contra proferentum and not for any other purpose. It is evidence which is otherwise inadmissible, in our submission, which we can see the relevance of, or of a great deal of it, as regards contra proferentum so that I cannot object to it as such, but one would object to it being used in any other way.

OLNEY J: Does that still remain your position, Mr Sher?

MR SHER: Yes, it remains our position.

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EXHIBITS

EXHIBIT 45 Affidavit of 20.10.83

EXHIBIT 46 Affidavit of 24.10.83

MR SHER: Perhaps I should say, your Honour, that one of the exhibits, EAW4, has a different use but it is not related to intention; it relates to this knowledge of wet screening. I will take the witness to it, so it is put on that basis, your Honour.
TO WITNESS: I would like to take you, firstly, to para.5 of your lengthier affidavit. If you turn to p.2 you will see at the bottom of p.2, para.5 in which you say that you have read an affidavit by Mr Baker and that you and Mr Hancock were familiar with the operations of the Pilbara tin mine described by Mr Baker. You then refer to a letter to Mr John Honan dated 12th June 1962 in which you referred to those operations, and you exhibit that letter as EAW4. Do you see that there in your affidavit?--Yes, I do.

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Who was Mr Honan?--Mr Honan was the then managing director of Rio Tinto.

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Were Rio Tinto the people with whom you were negotiating before the company, Hamersley Iron, was created as, in effect, a subsidiary of CRA and other companies?--I do not recall it was a subsidiary of CRA; I don't remember. However, it was the company which took over from the contract that we did originally with Rio Tinto.

I would just take you to EAW4; can you just pick that exhibit up - - -

MR SHER (Continuing): - - - exhibit up - EAW4? It is just a letter? This letter deals with a number of matters but in the first page it refers to "Pilbara Exploration

"Pilbara Explorations: A company formed for the purpose of prospecting for oil and other minerals and dependent on its income for productions of tantalite and tin."

That is in the third paragraph?---Yes, I have it.

Then when you look over the page in the last paragraph the following appears - and I think you are the author of this letter, are you not?---I do not know but I assume so. It does not have my initial on it.

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Let us see if this helps you.

"Pilbara Exploration is a company which is short of money....(reads)....who has done a lot to develop this revolutionary method."

Then you go on to talk about what his salary would be. What was the method to which you were there referring?---It was a cone, if I remember rightly - a huge cone about 8 feet in diameter.

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What sorts of materials or aids were used in the process?---Gravity and water.

Was it therefore a wet process?---Of course. It was sometimes used dry, but it could have water included with it.

So you were proposing to Mr Honan to make available to them the information about this wet method of beneficiating iron ore?---Correct.

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Do you know whether or not that matter was followed up by Mr Honan or any of the companies?---Nothing ever came of it. Presumably it was followed a certain distance.

Yes, but you wrote to him making it known to him in June 1962? ---That is right.

Let us go back, if we may, to some of these letters and point to relevant parts of them. (I take it your Honour has a collection of the letters there?)

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OLNEY J: Yes.

MR SHER (TO WITNESS): Would you get exhibit EAW2, the letters, not the agreements? Firstly, what actually happened to compile this dossier, if I could call it that, of letters? ---Would you amplify that statement?

Yes. Perhaps I can lead on this. Did Mr Heerey come over from Melbourne and seek to obtain instructions from you - - -

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MR SHER (Continuing): - - - you about all the correspondence and documents relating to the making of these agreements?---Yes.

Did you arrange for searches to be made through all your files to dig out what you thought was all the relevant letters and agreements?---Yes.

The second affidavit is because you found one after Mr Heerey went back to Melbourne, I take it?---Correct.

Have you found any more since then?---Not to my knowledge.

Is this as comprehensive a compilation of documents relating to the making of the agreement as you have been able to make? ---Such as we found in the files. The files are very old. 10

To go to these letters, the first letter is dated 24th May 1962. do you see that letter?---Yes.

That is from solicitors acting for Rio Tinto (Southern) Pty Ltd and refers to a new agreement sending a draft to you? ---Yes. 20

Was Rio Tinto (Southern) Pty Ltd the people with whom you already had existing agreements?---Correct.

Which related to the mining rights that you had up in the Pilbara? ---Correct.

To turn the page over, on 25th May was there a second letter sent, the next day, and in the second paragraph they refer to forwarding three copies of the draft of the iron ore agreement and commenting on the fact that there was only two and they were going to send another one to Mr Stables?---Yes. 30

Mr Stables was your solicitor I understand?---Yes.

The next letter is 8th June 1962. That is a letter to Mr J. R²od. Was he the solicitor for Rio Tinto (Southern) Pty Ltd?---He was a partner in the firm of solicitors.

That is Arthur Robinson & Co?---Correct.

And was he also on the board of Rio Tinto (Southern) Pty Ltd?---He was on the board of Rio Tinto and of some of their subsidiary companies - he probably was. 40

You were dealing with him, I take it, in his capacity as a member of the board rather than as a solicitor I take it, in this letter? Is that right or not?---I would think it is not right. I think, in the main, he was their lawyer while we were talking to him.

DOCUMENT 3* - Defendant's Evidence
Evidence of Ernest Archibald Maynard Wright
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MR SHER: Is this the position, that notwithstanding Mr Stables you occasionally wrote directly to, as it were, the other side or their solicitors?---Yes, we did.

That letter says that you had submitted the draft to Hubert Stables, the suggested amendments were so extensive that he thought it best to produce a new draft which you enclosed. Did you, in fact, send a new draft of an agreement to Mr Rod?---Would you repeat that, please?

Yes. The letter says that you were sending a new draft of the agreement to Mr Rod. Is that what happened?---Yes.

The next letter is the one we have already referred to as EAW 4 and we can pass over that. On 30th June 1962 you wrote to Mr Rod again saying:

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"We have been expecting your comments on the retyped version of our proposed new agreement."

This was urging him to hurry up, I think?---Correct.

Did you find that things moved with speed in the negotiations or were they a little slow?---They dragged on and on and on.

We can pass over the letter of 9th July. That is another letter to Mr Rod in which you were talking about not being happy on the telephone when "you", that is Mr Rod, "told me that you had not set a date for posting your reactions to Hubert's retyping", complaining, in effect, about the delay and talking about the payment of 20,000 pounds?---Yes.

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Can we then go to the letter from Rio Tinto (Southern) to you and Mr Hancock dated 11th July 1962?---Yes.

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That reads that they had considered with their solicitors, Messrs Arthur Robinson, the altered draft agreement forwarded with your letter of 8th June and then going to the bottom of the page it says:

"While a number of the alterations incorporated in your draft result in improvements.....(reads)....our desire to retain the wording of our solicitor's draft."

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MR SHER (Continuing): Does the letter go on then to discuss a lot of the wording?---Yes.

Would you look over to the second page where it refers to clause 9? ---Yes.

That reads: "Whilst always possible that at some future time....(reads)....to vary the terms of our present arrangement."

Did that clause relate to the payment of royalties and the possibility of beneficiation?---Yes, it would.

If we have a look at the agreements which are exhibit EAW3, I think you will find the first of them is undated, but if we look at the back sheet of it you will find it is drawn apparently by Arthur Robinson & Co. This is the first agreement. Page 15 - do you have it there, the back sheet?---Yes.

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If we look back at clause 9 which is at p.7, that is the royalty clause. It reads:

"Consideration for the transfer to the purchaser....(reads).... in unrefined or unmanufactured form FOB."

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There is no reference there to beneficiation affecting the royalty payments?---No.

Can we then go to the letter of the 14th of July? (Can we call that agreement No.1, your Honour?)

OLNEY J: Very well. It is the first agreement forming part of exhibit EAW3.

MR SHER (TO WITNESS): Now let us go to the letter of 14th July 1962. This again appears to be a letter from Mr Hancock to Mr Honan?---Yes.

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I just wish to draw your attention to the following paragraphs - para.3 on the first page?

"As I understand the position, a new, comprehensive agreement....(reads).... in two respects only from our present arrangement, namely" - and then they are mentioned.

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Then if we look over the page, you will see in the middle of the page, in that substantial paragraph, the second-last sentence:

"To my simple way of thinking, Hubert Stable's draft....(reads)....I feel this latter point may be covered by using Pat Robinson's words, mainly."

Then there is set out a beneficiation clause and then it

says:

"In other words, Rio Tinto is to make no attempt to avoid paying....(reads) the areas covered by the agreement."

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MR SHER (Continuing): That is a letter from Mr Hancock to Mr Honan putting a view forward. The next relevant letter is a copy of a letter of 24th July 1962 to Messrs Hancock and Wright from Mr Stables. The letter starts off:

"My views as to the matters raised in Mr Honan's letter to you of the 11th instant..."

That letter was not exhibited; it was not able to be found, apparently. However, was that a letter which you recall in which the draft of Mr Stables, which had been sent over, was rejected?---May I read the letter?

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Yes. You see, what had happened was that Mr Stables had sent over, or you had sent over, an agreement and then urged it to be signed, and this letter is from your solicitor to you referring to a letter from Mr Honan which he had received after sending over a draft agreement. Was that letter that he had received a letter rejecting his draft?---Yes, it was.

20

And was his draft the second of these agreements which we have exhibited to EAW3, which is obviously in different type?---Would you say that again?

If you look at the second draft agreement there it is headed "draft", "An agreement dated....day of 1962", and the typing is clearly different from the last one? ---Yes, it is a different typing; it is a different date.

Yes. Is that the draft which was drawn up, as far as you can recall, by Mr Stables?---There is no indication on it as to who drew it up. It is a long, long while ago. All I can say is if it came from our files it should have shown its origin. It was presented to me - - if it was presented to me I took it as to fact, that we did get a letter.

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Let us call it No.2 - and look at p.8, would you? That contains a clause relating to royalties; it is different from the last one, but if we read the whole of that clause, including p.9, you will find that the clause does not refer to beneficitation at all and in clause (b) (ii) refers to the concept of an anxious purchaser - a willing but not anxious purchaser. Do you see that? ---Yes.

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If you look on p.9 you will see, right towards the end of that clause, it talks about where the ore is not sold, fixing the price by reference to a "willing but not anxious purchaser"?---Yes.

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MR SHER: Was that Mr Stables' suggestion on your instructions?
---It was a suggestion from our side - - -

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WITNESS (Continuing): - - - from our side, and that makes it sound as if it was Stables'.

MR SHER: Yes. However, there is no reference there to what ultimately found its way into the agreement - "beneficiation other than crushing and screening"? ---None whatever.

I will just ask you this at this point: Was that proposal to have an agreement in that term accepted by the people to whom it was made, or not?---No, it was rejected. As far as I can remember no proposal we ever made was accepted.

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I would take you then to the letter of 8th August to "Dear Strewan"; that is a letter from you, I gather, with the initials E.A.W. on it?---No, this is from Hancock.

There are two on 8th August, I think. I think on 8th August both Hancock and Wright wrote separate letters?---Yes. It has E.A.W. at the top.

That happened on occasions, did it - you would both - -?---Yes, we both said what we felt, apparently.

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Let us look at your letter first: "Strewan" - was that Strewan Anderson of CRA?---Yes.

You had a sort of personal acquaintanship with him?---I think at this time he was Conzinc. I do not think CRA had been formed; it was in the process.

Anyway, he was well enough known to you for you to call him Strewan?---Yes.

And Mr Hancock also called him Strewan?---Correct. He was appointed manager of the Hamersley project.

30

Your letter refers in the second paragraph "that the right words need careful choosing", and then you say in the fourth paragraph: "As we see it, the position is..."? ---Yes.

It then goes on:

"Up to the implementation of the variation now proposed we are entitled.....(reads).....will finally end up iron ore only."

40

Who had proposed the variation to which you had agreed? ---The other side.

If we look over the page, at p.2 you will see there is a discussion about the royalty clause in the third paragraph, and I want to take you to that. "Paragraph 11 of the first

agreement" - was that an agreement dated 11th September 1959?---I think so. It should be in the group; it is the first of five, from memory.

MR SHER: In any event, it was one of the agreements which was ultimately replaced?---Yes.

Paragraph 11 of the first agreement contains the words:

"In respect of all minerals produced by the purchasers on that title and sold.....(reads).....in unrefined and unmanufactured form."

Having quoted it, it says:

"At the time they were used these words meant to us and to Pat Robinson, and I think to John Rod who produced them - -"

Is that true; was it John Rod who had produced them?
---It would be or I would not have said it.

To continue:

"- - just what we had arranged with Pat, namely that we would receive.....(reads).....that left no possible doubt in anyone's mind."

Were you there pointing out that you wanted this royalty clause and these matters dealt with in clear form?---Exactly.

If I might read on:

"Similarly with John's attitude to a licensee as against an assignee.....(reads).....but on every tonne produced no matter by whom."

Mr Hancock's letter, if we can go to that, deals with this question of proposing conditions or making sure that the royalty arrangements - - -

MR SHER (Continuing): - - - royalty arrangements are made satisfactorily. In the third sentence of the first paragraph he said:

"The foundation of our security we feel lies in the recognition of the fact that there is meant to be no cut-off point - -"

WITNESS: I am not with you. Where is that?

MR SHER: I am sorry; it is Mr Lang Hancock's letter?
---Yes, I have his letter.

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It is the first paragraph, the third sentence?---Right.

He comments on the foundation:

" - - our security...lies in the recognition of the fact that there is meant to be no cut-off point whatever in our royalty."



We go down the page to para.2 at the bottom where he says: 20

"We do, on payment on every tonne produced under para.1....(reads)or assignee produced it, for what purpose it was used."

Were these letters from you and Mr Hancock endeavouring to bring to a head a resolution of what was being discussed between you and, as you put it, the other side about the agreements including the payment of royalties?--- They were trying to bring it to a head and also trying to secure what was originally arranged.

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To look at the next letter, 1st October 1962, it is a letter from Conzinc Rio Tinto to you. I want to draw your attention to the following. In the second sentence it says, "We all know that agreements have to be spelt out in black and white" and in the third paragraph it says, "Since you were last here we have made a strenuous effort to produce a draft which is based on the talks when you and Peter were here last which I think is admirably fair. A copy is attached" and he goes on, "It is substantially shorter and less complex than our present contract documents." On the next page down at the very bottom it says; "Comparing the attached draft of the agreement which now governs our contractual relations, it is ever so much more favourable to you" and it is signed M. Mawby. That is Sir Maurice Mawby as he later became?---It was; and he is lying when he said it was more favourable to us.

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MR SHER: Do not worry about that; we are trying to sort that out in this case, Mr Wright. I will take you now to the agreements again and ask you to look at the third of them? It is headed, Arthur Robinson & Co. Draft, 7/9/1962?---Yes.

Shall we call that No.3,your Honour?

OLNEY J: Yes.

MR SHER:Please look at the next one which is headed Arthur Robinson & Co. Draft,1/10/1962 (as amended) Do you see that?---Yes.

We will call that No.4, if we may, your Honour?

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OLNEY J: Yes.

MR SHER: It would seem that there were two drafts sent by Arthur Robinson and this letter of 1st October would appear to be referring to the second of those two drafts, the one dated Draft 1/10/1962(as amended). Those two agreements, they are both headed Draft, one is dated 7/9 and the other 1/10/1962, were they forwarded to you or your solicitors by Arthur Robinson & Co?---Yes.

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Your Honour, looking at the first of them we will find the royalty clause is clause 6.

TO WITNESS: This is the first time something like what we now have before us appears - it is clause - - -

MR SHER (Continuing): - - - clause 6(b). Do you see clause 6(b) in the first of those two agreements?---Yes.

As far as you can recall, who first proposed that sort of terminology for royalty agreements?---Arthur Robinson.

If we look at the second of those agreements, No.4, the royalty agreement is again clause 6. (Your Honour will see that 6(b) is in similar form.) I take you now to the letter of 7th October 1962 to M. Mawby Esq. It would appear to be your letter. It has the initials "PW" on the bottom. What you there say is:

"Dear Maurie, Both Lang and I are grateful to you....(reads)...a form more acceptable, we hope, to both sides."

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Then, in the third paragraph - - you refer to John Rod in the second. You refer to Hubert Stables in the third.

"Stables has told me that Rod and he finished off satisfactorily....(reads)....to your new company to be drafted."

Is that a reference to the creation of Hamersley Iron? ---I would think so.

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You went on to say:

"Lang is at present in Sydney but is returning through Melbourne on Tuesday(reads)....it could be weeks before we hear of it again."

Mr Rod was being a typical solicitor, was he?---Worse.

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The next day, 8th October, you wrote to Mr Rod yourself?---Yes.

You said in your third paragraph, or the second:

"Stables told me on Friday that you and he had agreed on the balance....(reads)....the completed contract to bring back with him."

Is that right?---Yes.

Then on 10th October 1962 Mr Rod wrote to you saying in the second paragraph:

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"I have written to Mr Stables today enclosing copies of the final draft."

Do you see that?---Yes.

If we look at the agreements, we have an agreement, the fifth of the agreements (which I have asked your Honour to number agreement No.5). For present purposes it is relevant only to look at clause 6. (Your Honour will see it carries on in the same terminology as 3 and 4, about iron ore being

beneficiated or otherwise treated.) Then there is disposal, crushing and screening to be part of it. This is in 6(b)?---Yes.

MR SHER: Who was it that drew up - - -

MR SHER (Continuing): - - - drew up this document? Apart from this attempt of Mr Stables to send an agreement over which foundered, who drew up all the documents which were signed ultimately between Hancock & Wright and CRA or Conzinc?---John Rod.

I would go back to the correspondence, if I may, to a letter of 15th October 1962, again to Mr Mawby as he then was from Mr Hancock, referring to a meeting in Melbourne. In the paragraph commencing in about the middle of the page he says:

"You can imagine my surprise at since being told that the agreement.....(reads).....not in accordance with items 1 and 2."

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It asks in the next paragraph for a draft exactly as agreed to, to be sent. Was that document referred to in the letter "as now sent to our solicitor" - - who drew up that document, the document sent to your solicitor?---Arthur Robinson.

If you go to the letter of 22nd October 1962?---From Mawby?

That is a letter to Mr Hancock from Mr Mawby, as he then was, referring as follows:

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"For you to say that we had reached final agreement on 5th October is an over-simplification.....(reads)was outlined by Mr Rod to Mr Stables."

Then, later on in the next paragraph:

"It was made quite clear in answer to a question by you.....(reads)prepared in final form and executed."

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Then:

"In the course of preparing the final draft the need to make some.....(reads).....you will find them unobjectionable."

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Who prepared this final draft?---Arthur Robinson.

The letter of 26th October 1962 from Mr Hancock to Maurie, which would be Mr Mawby; this letter says in the second paragraph, under the heading "Agreed":

"So there can be no doubt as to what the agreed.....(reads)..... and supporting it with a certificate."

That is a certificate from Mr Stables. Did you and Mr Hancock get a document typed up believing it to be the agreement you had reached, sign it and send it over with this letter to the people with whom you were seeking to make a contract?---Say that again?

MR SHER: Did you get a document typed up, sign it and send it over to them?---That is exactly, apparently, what we did do.

What happened to that?---I would not know, but it was not used.

Why was it that you and Mr Hancock were getting so concerned about getting an agreement signed at this stage?---Because we had already reached agreement and we had signed documents; we were happy with the original agreements. We had no objection whatever. They altered them and altered them and altered them, meantime they were holding up money which we desperately needed.

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On 30th October 1962 did Mr Mawby write to Mr Hancock expressing surprise and disappointment at the action you had taken, and saying of the document:

"The document you have submitted is incomplete and not acceptable for a number.....(reads).....and H.D. Stables & Co."

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That was the rejection of your document, was it?---That is right.

On 30th October 1962 - - I do not think we need worry with that; that was a letter from you to your solicitor?---A copy to us - -

I am sorry, yes it is; it is a letter from Arthur Robinson; it is important. It is a letter from Arthur Robinson to Mr Stables, referring to the correspondence between Mr Hancock and Mr Mawby. If we go down to the middle of the page it says:

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"The position at present is that your clients have submitted direct.....(reads).....As a result it is incorrect in a number of respects."

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WITNESS: May I interpose there? It was in accordance with the facts as already arranged.

MR SHER: I know you do not agree with this letter but the point is you were having it made clear to you that the document you had sent over was not acceptable to Arthur Robinson?---Right.

Then on the second page, third paragraph:

"We feel we should also remind you of a question asked by Mr Hancock(reads)....This position has not been reached."

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Referring in other parts of the letter to different clauses, you will see in the large paragraph immediately following that, in the second-last line, some question about double royalties. The next paragraph refers to insertion of a provision to some effect about the sale from Rio Tinto (Southern)?---Where is that?

I am really telling his Honour this. The letter speaks for itself. Clause 22, which is an ingrossment prepared by your firm, is not to be included, and then the last paragraph of the letter on p.3:

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"The engrossments forwarded by Mr Hancock with his letter....(reads)to Mr Mawby, returned herewith."

So you got your agreement back?---That is right.

November 8th, 1962 - a personal letter from you to Mr Strewan Anderson again. You refer in the third paragraph:

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"You will have some idea of our surprise and disappointment....(reads)....to contain four variations in principle."

Was that in fact what happened? A new version was submitted by John Rod?---Correct.

You referred to what had happened in the last paragraph:

"In an attempt to bring the matter for finality simply....(reads).... wholly deficient in the four schedules to which it refers." - and so on.

Then did you, in the second paragraph on the second page, try it again and say in the second and third lines:

"We are enclosing a new document which we have signed"

and did you send another document over in an attempt to get the agreement finalised?---Correct.

MR SHER: What happened to that?---I do not remember but it was not used.

I take you to November 30th 1962, a letter from Mr Hancock to Mr Mawby. If we go to the middle of the first paragraph:

"Surely Maurie must raise a smile over Stewan's third paragraph(reads)....after he had finalised with Stables."

Was that assertion of fact correct?---It would be.

Did you say on p.2 in the third paragraph:

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"Honestly, I can't understand the set-up....(reads)....they will pursue only matters of legal drafting."

WITNESS: But it is Lang's letter.

MR SHER: Was that what you understood the position to be - - -

MR SHER (Continuing): - - - position to be?---Yes.

The personal letter is the next one from Mr Mawby to Mr Hancock acknowledging an agreement for the solicitor to meet Mr Rod and then the letter of 22nd August 1963 referring to:

" - - tidying up a few outstanding minor details. John Rod has asked me to get yourself and Lang to initial the various alterations(reads)....agreement of 12th December 1962"



and enclosing the copy in question. Was that agreement which was finally signed the agreement which is the exhibit in these proceedings to Mr Langridge's affidavit, exhibit CRL 1? Will you just look at it? Is that the agreement that you and Mr Hancock signed and the company signed?---Yes.

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That exhibit as produced by Mr Langridge to the court did not have a back sheet. Would you look at exhibit EAW 1, that is the first exhibit to your affidavit?---Yes.

That is a back sheet. Is that the back sheet to the agreement which was CRL 1? CRL is the agreement of December 1962? ---It is dated December 19 - it does not give any relationship there. I would not know whether it was or not but it probably is.

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The back sheet that you have produced is the back sheet to an agreement made in December 19 something or other between Mr Hancock and others and Rio Tinto(Management), Rio Tinto (Southern) and Hamersley Iron - -?---It would appear to be because they only had one agreement.

Are they the parties to this agreement which is CRL 1?---It would appear to be.

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Is that also in December?---It is with Hamersley Iron.

Does the typing on the agreement appear to match the typing on the top part of the back sheet?---That I would not know. It looks like it.

Mr Wright, in all your negotiations with these companies, CRA, Hamersley, Rio Tinto and the like, did they have solicitors for them?---John Rod acted for them throughout. George Wright in Perth was his agent in Perth.

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Was an agreement ever signed between yourself and Mr Hancock and any of these companies that had been drawn up by either you or your solicitors?---No, not to my knowledge.

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MR SHER: Who had drawn up all these agreements?---Arthur Robinson.
I do not recollect the Perth people ever drawing an
agreement.

LUNCHEON ADJOURNMENT

UPON RESUMPTION:

MR HULME: Your Honour, before I continue with Mr Wright, can I just say something by way of explanation to your Honour as to the contretemps with the photographs?

OLNEY J: Yes.

MR HULME: The photographs concerned do not affect - - your Honour was shown three pairs of photographs. The first two are, of course, not affected by any incoming stream. It is the third pair only. I suppose none of us have quite the facility with flow charts that we might have but at the time when Mr Tompsitt gave his evidence and put in those photographs, he indicated, as the transcript shows, precisely where the photographs were taken. Anyone who knew the flow charts very well could identify the spot and say "Yes, that stream of fines from A and B has joined C by that spot."

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Neither my learned junior nor myself have that acquaintance with the flow charts and did not appreciate that it came in before the photograph.

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Mr Tompsitt, had he adverted to it, yes - of course he knows because he knows the process. He did not draw our attention to the matter, believing - - as your Honour will see from Mr Boughton's evidence, stream C is a big stream. It is 25 per cent of the flow. The amount which comes in from the other streams is small and it has just been washed and it never occurred to him that it might be said that was producing degradation as illustrated by the photographs.

MR SHER: I am sorry to interrupt my learned friend but he really should not give evidence from the Bar table. He is now telling us about what Mr Tompsitt thought and what he believed and what in fact happens. With respect, that really is not an appropriate way for matters of evidence to be put before the court.

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MR HULME: Can I also say this, your Honour? My learned friend's photographs were taken on 17th October. Had my learned friend been aware, when Mr Tompsitt was cross-examined, of the possible fact that the contrast had been affected by the incoming stream, it was proper for it to have been put to Mr Tompsitt. The fact that it was not put to Mr Tompsitt would indicate clearly to me that my learned friend, although the evidence was there for those who could appreciate it, did not appreciate the possibility that the matter was altered by the incoming of that stream. It is a matter which my learned friend would have been required to put to Mr Tompsitt in cross-examination if he was intending to adduce evidence that what he had said was wrong because the contrast was affected by an incoming stream. On any basis of

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cross-examination that would have had to be put to him and it was not and the inference is clear that my learned friend did not regard it as a matter requiring to be put to him, and we would say for the very same reason. I would not wish your Honour to think that there had been any conspiracy from this end of the Bar table to hide anything from the court. Your Honour will recall that throughout, when those photographs were there, we have said they are purely indicative. You are not meant to take quantities from them. They simply show a process taking place.

MR SHER: I think it is regrettable that my learned friend should have to make comments such as that, to suggest that there is no conspiracy at that end of the Bar table, with some thinly-veiled suggestion that there might be one here and criticising us for failing to put material to a witness, after having given evidence from the Bar table and after the fact is that Mr Tompsitt, we submit, misled the court. It is as simple as that.

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Whether or not we think it is appropriate to demonstrate to Mr Tompsitt when he is there present or whether we think it is better to do it later is a matter for us - or whether it was overlooked is another matter entirely as well. It is regrettable, however, that my learned friend thinks it is necessary to make these speeches. The fact is that the credibility of the plaintiff's case has, by evidence already adduced, been shown in certain areas to be worthy of criticism and this is only one further example of it. It cannot be met, we submit, by fine speeches by its counsel. It ought to be met by its witnesses at the appropriate time and I object to it.

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OLNEY J: I think that is probably the nub of the whole episode Mr Sher - that at the appropriate time both counsel have the opportunity of commenting on these things. I think, myself, that a case that runs the length of

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of this case counsel can be assured that so far as I am concerned I will be going back to the evidence of the witnesses and sometimes these explanations do expand and tend to be in the nature of secondary evidence, if you like, but I can assure counsel you need not worry too much about that because I will be looking to the evidence, the testimony of the witnesses.

CROSS-EXAMINED BY MR HULME QC:

MR HULME: Mr Wright, at the beginning of these negotiations what was being sought to be done was to bring into effect a consolidating agreement, was it not - bringing together a single agreement replacing what had been there before?---At the request of the other side. We had no desire for a new agreement. 10

Whosever desire it was, that desire was to replace a series of agreements with a single agreement which picked up the clauses out of the existing agreements and left you with a single agreement to work with?---Correct.

There were to be the two changes mentioned in Mr Hancock's letter of 14th July 1962 - in the third paragraph: 20

"A new comprehensive agreement was to be drawn up embodying all.....(reads).....and fixing a date for payment of 20,000 pounds."

WITNESS: Correct; the first at their request, the second at ours.

MR HULME: The second at your request?---Yes. 30

So there was a request from Hancock & Wright to be met in the new agreement?---No; our request was for the money.

Yes, and the agreement was to provide for the payment of it?---I cannot tell you from memory whether it already did. I think it did, but I am not sure. However, the point is we did not get it so we were trying to get clear when we did get it.

Right. The first agreement you have in the five, the one on which I hope "Agreement No.1" is written - - 40

OLNEY J: It is part of EAW3.

MR HULME: Yes, it is part of EAW3. If you turn to the first of those agreements if you look in clause 9 you find a very simple royalty clause?---Yes.

I will not ask you as to the detail, but it is a short and

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simple one?---May I read it?

MR HULME: Yes. That agreement is the one mentioned in your letter of 8th June, is it not, which you submitted to Mr Stables?---I cannot specifically remember that, but perhaps we could get it from the back of that agreement? Can you tell me the date of that agreement and its relation to the date of my letter? There is no date on the back of it.

If you look at the first letter of 24th May you will see an agreement is forwarded to you?---It is the proposed new agreement.

Yes, the draft for the comprehensive agreement - - -

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MR HULME (Continuing): - - - comprehensive agreement?---Not of the comprehensive agreement. This is the draft of a proposed new agreement. I have no way at the moment of identifying that statement there with this one unless I see the dates.

You have no idea whether this agreement No.1 is or is not - -? ---It is 21 years ago. I cannot relate a general statement in here with this particular - -

If you cannot identify it, Mr Wright, that is that?---I can identify as to the agreement but I cannot identify it as the one that went with this statement unless I can have a reference that shows that is so.

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If it was to be an agreement largely standing in the place of the earlier agreements one would expect it to have a similar royalty clause?---It does not say it is one; it says simply, "A new agreement".

If it is a new agreement which is to make no changes other than in two respects, you would expect the royalty clause to reproduce the earlier royalty clause?---That is correct but my problem at the moment is this; this is a letter dated 24th May, this is an agreement in 62 and I do not know what date that agreement is. It may not be this one or it may be; if it was before this date it very likely is, if it is after this date it could not be, and it is simple as that. I do not know.

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I follow that. We will come back to it in a minute. Mr Stables then made many,many amendments?--Yes, he did.

Having got a draft agreement he made so many amendments that he reduced his to a different draft?---That would appear to be so. I cannot specifically remember.

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Your letter of 8th June, the third letter, says:

"Mr Stables' amendments were so extensive that he thought it best to produce a new draft which I enclose."

WITNESS: That is because of so many proposed changes in our original agreement but I do not know if this is the original agreement or not - presumably it is.

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MR HULME: We can come back to that. You were sent a draft to which Mr Stables made so many amendments that it was thought best to reconstitute the document as the Stables' document?---Correct.

Agreement No.2 is the Stables' draft, is it not?---Agreement No.2 which is, presumably, the second agreement in this list?

Agreement No.2 would appear to be this one.
What is your question?

MR HULME: This is the Stables' draft that you sent to Mr Rod on 8th June 1962?---I do not think I can identify it as that unless I have evidence that it is that. This would appear to be an agreement from Arthur Robinson but I did not do the research on this. Perhaps Mr Sher - -

Can I draw your attention to a couple of features? Would you look at clause 1 on p.3?---Of the second agreement?

Do you see in the sixth line the words "Or Ashburton"?---Yes.

Would you go back to the first agreement and look at the corresponding spot there? In the first agreement it simply says, "Pilbara or West Pilbara - - -"

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MR HULME (Continuing): - - - West Pilbara?---Pilbara, West Pilbara or Ashburton, yes.

The second agreement says "or Ashburton"?---Correct.

The first agreement - Ashburton doesnot get a mention?---Correct. That, presumably, would be because of an agreement dated earlier that was in the Ashburton, which apparently had not been drawn into these agreements. It could have been either side who brought that in.

It had been you and Mr Hancock, had it not, who had been asking that this comprehensive agreement should apply to the Ashburton field as well as the Pilbara and West Pilbara? ---Not necessarily. We had several agreements, one which we will call the "Ashburton" agreement, which was one of five, from memory (it may have been four) that had to be consolidated. Apparently that had been left out because it was in the Ashburton area, not in the Pilbara or West Pilbara areas. Either side, therefore, may have brought that particular agreement in simply on an omission basis.

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Would you go then to clause 9 on p.8 of the second agreement?---Yes.

You will see there a royalty clause drastically different from that which we saw in the first agreement?---Yes.

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Instead of being eight lines it is two and a third pages?---Correct.

It covers a number of specific situations in a manner quite different from that in the first agreement?---It covers situations which were not really covered in the first agreement.

Remember the first agreement just said "All iron ore produce and sold or disposed of". When we get here we get the case of the sale of iron ore FOB Depuch.

30

"(b) the case of any other sale or disposal or treatment."

That is broken down into subclauses (i) and (ii). Then we have a case (c) over on p.9. So it is in a form quite different from what had been in the first agreement?---Yes.

Can I ask you to go to Rio Tinto's letter of 11th July?---Yes.

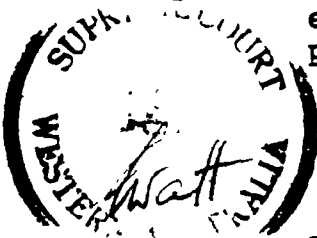
They refer to the consolidating, the relevant provisions of the earlier agreements. Would you turn over to the second page for their comments? Clause 1:

40

"We are considering the question of the possible inclusion.... (reads)....and we would hope to advise you shortly."

It is beginning to look as though this draft 2 is Mr Stable's draft?---Yes.

Would you go onto clause 5 of draft 2?. That is at the bottom of page - - -



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MR HULME (Continuing): - - - bottom of p.4. Do you see on the very last line of that page the words "area covered by this agreement"?---Yes, I do.

If you go back to the Rio Tinto comment on clause 5, it says:

"The alteration of the phrase 'area covered by the mining titles' to 'area covered by this agreement' is not acceptable."

It looks as though this is the Stables draft, does it not?---Yes. 10

Perhaps one more: Would you go over to clause 7?

"The requirement as to forwarding transfers is considered unnecessary.....(reads)....to altering 7 to 14."

WITNESS: Excuse me - what is your comment in relation to para.7?

MR HULME: You see the short comment: "The requirement as to forwarding transfers is considered unnecessary. We have no objection to altering 7 to 14"?---I see. 20

If you look at clause 7 - -?---Yes.

Are you happy to accept that as being the Stables draft?---It appears to be. I certainly will accept it subject to any further evidence that it is not.

There are, you will see, about another 15 clauses at which we could look, but I will not bother?---Thank you very much. 30

Would you look at the comment in the Rio Tinto letter on clause 9, which is the royalty clause:

"While it is always possible that at some future time when more is known.....(reads).....to vary the terms of our present arrangement."

What Rio Tinto were saying, therefore, was: "Let us stay with our existing royalty arrangements"?---Yes. 40

Then if one goes to Mr Hancock's letter of July 14th, on p.2 in the middle of the page Mr Hancock was saying, towards the end of the long paragraph:

"To my simple way of thinking Hubert Stables' draft, with two exceptions, embraces.....(reads).....about beneficiation royalties - -"

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That, with a suggestion that that could be covered
by using Pat Robinson - - Pat Robinson was Rio Tinto?
---Yes, Rio Tinto's general director, managing director
at the time we started negotiations - - -

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WITNESS (Continuing): - - - started negotiations.

MR HULME: Mr Robinson, it would appear, was suggesting a form of words very like - not identical but like - that which is in 9 of agreement No.1, a simple form?---A simple form, yes, but not in the same words.

At that point we have Mr Stables' complicated draft - -?---In Mr Hancock's words.

Pardon?---In Mr Hancock's opinion.

Mr Hancock's comment on it and we have Rio Tinto, having put forward clause 9 of agreement No.1, seeking to stay with something of that kind?---Yes. 10

We go to Conzinc Rio Tinto's letter of 19th July and it refers, on p.2, to Mr Rod coming over on 5th August with a view to having discussions with your legal man, that would be Mr Stables - -?---Yes.

In the paragraph before that there are references to the agreement as being a consolidated agreement putting together what was relevant from the earlier one. Then your letter of July 20th shows Mr Stables as keeping Monday, August 6th, free to talk to Mr Rod - -?---And ourselves. 20

Then, going to Mr Stables' letter of 24th July, he refers back to Mr Honan's letter of the 11th, that was the one we were looking at, identifying the Stables' agreement - do you follow?---Yes, in what paragraph? Where does he refer to that? In what paragraph does he refer to it? I am looking at Mr Stables' letter of 24th July

That is right and it starts by referring to Mr Honan's letter and Mr Honan's letter was the one we were looking at earlier with the various comments on the Stables' draft. Mr Stables deals with them firstly at clause 1 and that is about Ashburton?---Yes. 30

Going over to clause 9, the comment on clause 9, p.3, Mr Stables comments:

"I confess I do not understand precisely what is meant in Mr Honan's letter.... (reads)....and surely precisely the same principles apply in this agreement." 40

MR HULME (Continuing): So Mr Stables is saying "We want the kind of royalty clause I am putting up," not the kind of royalty clause that had come across in the first agreement or that Mr Robinson was referring to?--- The first draft agreement, not the first agreement.

No, the first draft of this?---But he was taking an actual agreement which was to be incorporated in this new agreement and he was saying "We have had these words in an actual agreement. Why cannot we have the words in the new agreement?"

Yes."Words have been agreed in the Barrett-Lennard context. Can we not change the basis here to a basis like Barrett-Lennard's"?---"Can't we use the same deal as we had in the Barrett-Lennard agreement, which we agreed on, in this new consolidating agreement?"

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The Barrett-Lennard agreement was not one of the agreements which was being consolidated in this agreement, was it?---Apparently not, but it was not proposed to be incorporated by their draft. They asked us to consolidate all our agreements and we could see no reason why that one should be left out of there. Mr Stables reflected that view.

20

Just let us be clear about this. The Barrett-Lennard agreement was not an agreement which was being consolidated by this agreement?---We believed it was intended to consolidate all our agreements. The request came to us that they would like to consolidate all our agreements together. Then they selected, apparently, one and left it out. Stables said, and we no doubt at the time agreed with him, "If it is to be consolidation, why should it not be all our agreements?"

Would you look at the agreements referred to in Mr Stables's draft? Do you see the recitals beginning on p.1 of agreement No.2? You will see there is an agreement dated 11th September 1959?---Yes.

30

An agreement dated 1st December 1959?---Yes.

It then refers to an assignment by Rio Tinto?---Yes.

Then it refers to an agreement dated 9th April 1961?---Yes.

Then it says in (e) "In the circumstances as they exist the parties have agreed to consolidate and amend the first, second and third agreement and to enter into this agreement" and a further agreement in relation to blue asbestos?---Yes.

40

Mr Stables, if one believes that recital, was not trying to bring the Barrett-Lennard agreement into this one, though he was conscious of it?---That is so but I think it was because it was only left out. I would think it was only because it was left out by omission, because as I remember it the request to us was for a consolidated agreement to cover all our agreements.

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OLNEY J: There is a Barrett-Lennard agreement referred to in para.24?---Yes.

MR HULME: Your Honour will see that is among other parties and could not be amended without those parties being parties to this agreement. (TO WITNESS): I suggest to you that what Mr Stables is saying is that you would have thought Rio Tinto would go along with this kind of royalty clause that I am suggesting, because they have gone along with it in a different agreement? ---That would be so.

It is clear that, in effect, Mr Stables was standing firm. He wanted his type of royalty clause - - -

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MR HULME (Continuing): - - - royalty clause, not the Rio Tinto type - right - at that point?---It was a Rio Tinto agreement, the other one that he was wanting. It had been prepared by them, not by us. He wanted the clause that had been used by Rio Tinto in another agreement that we had between us.

But it is Mr Stables who puts - -?---That suggestion.

- - his clause 9 of his second agreement into the negotiations?---Yes.

Will you go to the next letter? It is a short letter to Mr Rod enclosing a copy of a letter sent to John Honan. It is dated July 25th?---Yes, from myself to John Rod. Is that the one you are referring to? 10

No. The letter to Mr Honan appears some pages previously. They have got out of order, I think?---The same date, July 25th?

Yes. It appears in mine before the 24th - there are two letters of July 25th that have become split. Can I go to the next letter which is a letter of 25th July from Mr Rod? ---To me? 20

No, that is all right, we will go past those. We saw earlier that Mr Rod was coming over to Perth on Sunday 5th August. Do you remember we noticed that in an earlier letter? ---I do not recall it but I will accept it.

It is in the letter of 19th July from Conzinc Rio Tinto. There were, were there not, discussions between Mr Stables and Mr Rod about that clause 9?---There were or were not?

There were discussions between them? When Mr Rod arrived Mr Stables was putting forward his complicated clause and there are negotiations - - 30

OLNEY J: Yes, Mr Sher?

MR SHER: I take it my learned friend is now seeking to cross-examine the witness about a conversation between two gentlemen at which he was not present. It can only be hearsay at best but there is no evidence he was present and there is no evidence that he knows of it, your Honour.

OLNEY J: I was going to comment myself, Mr Hulme. There is an indication in the earlier correspondence that the meeting was to be between the solicitors and the Hancock and Wright interests but I think you should obtain from this witness whether he was present at whatever took place between Mr Rod and Mr Stables or if he, in some other way, knows about it. 40

MR HULME: Yes.

TO WITNESS: Do you remember Mr Rod coming across to have discussions with Mr Stables?---He came many times.

MR HULME: There were many discussions between
you and Mr Rod?---Many times, yes, between me and Mr Rod,
Mr Stables, Mr Rod.

Did Mr Stables tell you , on a number of occasions, that he had
had discussions with Mr Rod at your request?---I do not
recollect him specifically having them at all.
Usually we had them together.

I am talking in 1962 and you will not have it exactly but
have you any idea how many times Mr Rod came across?
---No, no idea.

Several?---Many; far more often than not we went to the eastern
states - - -

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WITNESS (Continuing): - - - the eastern states.

MR HULME: There was a good deal of physical going backwards and forwards from Melbourne to Perth, you and Mr Hancock to Melbourne, Mr Rod and others to Perth?---Yes.

Various provisions were pushed backwards and forwards, suggestions, acceptance of one part of a clause, rejection of another?---Usually rejection of ours and pressure on us from theirs.

Let us just see - but it was in fact you and Mr Stables who were putting forward this complicated royalty clause in opposition to what Rio Tinto had asked for?
---Apparently.

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Over that weekend and the following days I suggest to you that if you look at your letter of 8th August it is clear that you were a party to discussions. If you look down at the bottom paragraphs, you say:

"Up to the implementation of the variation now proposed we are entitled.....(reads).....with iron ore only."



It is clear, is it not, that there had been discussions as to the royalty clause on either that Sunday or the Sunday and the following Monday 6th and Tuesday 7th, which you would expect if Mr Rod had come over to have such discussion?---I don't know the dates but I presume they are referred to in the letter somewhere. We had discussions at that time.

You had arranged to come on the 5th and on the 8th you are talking of discussions "yesterday, on the 7th". One can infer there had been some negotiating sessions on 5th, 6th and/or 7th?---Yes.

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If you go over onto the next page, p.2 of your letter, you refer in the middle of the long paragraph to - - you use the phrase: "As I understood John Rod yesterday", which means you were negotiating with Mr Rod and others on 7th August?---In the middle of the third paragraph?

Do you see the part: "As we see it, the position is..."?---In which paragraph?

40

That is on its own; it is a whole paragraph. I am sorry, I have the wrong page - on the second page, para.3?---Alright, and what are the words in para.3?

Two-thirds of the way down that there are references to use of the phrase: "As I understood John Rod yesterday.."?---Yes, I have it.

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MR HULME: Then you say: "I think it was." That rather indicates you had had two or three days' negotiations? ---That is correct.

These had apparently started on 5th, and it looks as though those negotiations spread over some three days?---I would agree; they would. That would be normal.

That would not surprise you?---No.

I think we can pass over Mr Hancock's letter of the same date - - -

MR HULME (Continuing): - - - same date, and it seems that following those discussions of August on royalty matters there comes into existence the Arthur Robinson draft of 7th September, which is agreement No.3 which I suggest to you reflects a considerable degree of negotiations since the Stables' draft. That you would expect to be those negotiations of August, would you not, when you were negotiating about royalties?---We were negotiating the agreement.

Yes, and your letter specifically refers to royalty matters? 10
---Correct.

MR SHER: Your Honour, I think with respect it is unfair to leave it like that with the witness who is not a young man any more and no doubt cannot remember all these things. I would direct your Honour's and my learned friend's attention to the last sentence of that paragraph which deals with para.11 in the letter of 8th August. It clearly indicates, I would suggest, that this witness at least was expecting somebody to produce a document containing, as he puts it, "new words used that left no possible doubt in anyone's mind". The next document we have is the draft of 7th September. I think to leave it the way it was would be to leave him with the impression that the letters revealed there had been some agreement reached in those discussions. The letter, we would submit, indicates clearly that he was expecting somebody to produce something. 20

OLNEY J: Yes. I think the thrust of the questions has been that something was produced and it is different from what was first produced by Mr Rod, and I suppose I am being asked to say: "As a result of what took place in the interim"? 30

MR SHER: Yes, but I did not want it left on the basis that - - what was being put to the witness in effect was that his letter was evidence of the fact that these discussions had produced, as it were, an agreement about what the change was to be in relation to the royalty clause.

OLNEY J: Well, I did not understand it that way myself.

MR SHER: Perhaps I am being over-cautious, your Honour, but it would be misleading, in my submission, to put that. 40

OLNEY J: I think the letter indicates that Mr Wright was expecting something to be delivered which was going to be different but would express what they thought they had agreed, or he thought they had agreed.

MR SHER: Yes.

MR HULME: Mr Wright, you had these discussions as to royalties and in particular, as is shown on the second page of your letter, as to what is to be the position in the case of beneficiated ore?--We referred to it, but we had not reached agreement, presumably.

No, right. There is a gap in the letters there. Does that reflect the fact that the file, being put together 20 years later, is not complete?--It could. I do not know.

It could reflect that?---I could not remember anything specifically on that. We never seemed to cease corresponding or talking - - -

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WITNESS (Continuing): - - - or talking.

MR HULME: All right. Is this the position? Mr Stables and Mr Rod were in touch as the solicitors tried to do drafting?---I would say it more likely that they came direct to us.

Face to face?---No, direct to us. I think we picked any other letters to or from Stables out of the file.

On 1st October Sir Maurice Mawby writes to you enclosing a draft. Are you able to tell us what draft that was?---Not without checking through and seeing what references I can get to relate them. I would imagine that has already been done by the person concerned with extracting these things out. I cannot tell you offhand. 10

All right. If one goes over then to your letter of 7th October, there are references to discussions having been held on the Friday. That seems to be spoken of as if it was fairly recently but not yesterday - that is as if you are writing on the Sunday or the Monday or something and referring back to last - -?---Monday, I would think.

What is said there is:

"Stables has told me that Rod and he finished off satisfactorily(reads)....to your new company to be drafted." 20

Just stopping there, it pops up several times. There were difficulties, one senses, as to with whom you were contracting. They kept saying they were going to form a company called Hamersley and that is what is being referred to - "your new company"?---I believe that would be Hamersley Iron. 30

There were also discussions - if they were going to put in a new company without much substance then you might be looking for guarantees from somebody. This particular kind of problem caused a lot of trouble towards the end, did it not?---It did cause some trouble. It was discussed.

So Stables had told you that he and Rod finished off the wording left with them and then you write the next day to Mr Rod and tell him:

"Stables told me on Friday that you and he had agreed on the balance of the formal wording." 40

So the way it was left at that point was that Mr Stables and Mr Rod were to work in harness on finalising the wording following the meeting which took place in Melbourne? ---That seemed to be so.

Then, on the 15th, in your letter to Mr Hancock we now get a date for what you had referred to as the "Friday". It was 5th October if you see Mr Hancock's first line.

"At the meeting in Melbourne on
October 5th, eight people agreed
we had reached a final agreement."

So there was minor drafting to be tidied up"between
our solicitors", which did not affect the substance.
"We agreed there was to be a clause naming and
describing your substitute company" and all the
wording, you heard, had been agreed on with Mr
Stables before he left Melbourne?---This was a
letter from Hancock.

MR HULME: Yes, and you had been - - Mr Stables had made the
same kind of report to you?---Presumably.

There was some concern being expressed, indeed anger, by Mr
Hancock - - -

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MR HULME (Continuing): - - - Mr Hancock that the wording had been changed in several places and saying that he did not propose to read the agreement until it was put back into its original words so the matter was at a bit of a standstill?---There were certainly problems and delays in it.

I note at the end of that letter of Mr Hancock's there is a reference in the last paragraph, "I cannot help feeling that an overriding protective clause as requested in my letter of October 2nd would have done a lot to help". Do you see that?---Yes, I do. 10

Mr Hancock's letter of 2nd October is not in the file?---No, it does not seem to be.

So again it is apparent we do not have a full dossier?
I say it not critically, just the fact?---That letter appears to be missing anyhow.

Then Sir Maurie Mawby writes back and says that what had happened on 5th October was:

"We appeared to have reached agreement on all matters of principle and almost all of the detailed drafting had been completed and agreed." 20

That is in line with what you have said, is it not?---Where does it say that?

In the first paragraph there?---Yes. He says, "For you to say we have reached final agreement is an over-simplification." They are his very first words. 30

Yes, but he is saying the situation by the end was:

"We appeared to have reached agreement on all matters of principle and almost all of the detailed drafting had been completed and agreed."

He does not take it quite as far as Mr Hancock did in his letter?---No, but he said that Mr Hancock had made it an over-simplification.

Yes. He is saying that it was not true that everything had been agreed and it was not true that all drafting had been done but "We appeared to have reached agreement on all matters of principle and almost all of the detailed drafting had been completed". There was not time to agree in detail the provisions necessary to bring in Hamersley - there is the problem of the new company. Then he goes on to say, at the bottom of that page, that in the course of preparing the final draft the need to make drafting alteration become apparent?---"Became" - you are speaking in the past tense. "In the course of" 4

of preparing...the need to make....became apparent".

MR HULME: Yes; and asks you to cause your solicitors to let Arthur Robinson know what you say of the draft of 10th October which we do not appear to have. There is no draft that I can identify as being dated the 10th. There is no reason to think, if we do not have all the letters, that we necessarily have all the drafts?---I guess that is right; it does not appear that we have this draft.

We certainly do not seem to have one dated the 10th.

MR SHER: Perhaps I could just comment here, your Honour, that No.5 was apparently typed in October.

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OLNEY J: Yes; No.4 is 1st October.

MR SHER: Your Honour will recall the letter in which one of my clients pointed out that the document they rejected used their own words so that may explain No.7.

MR HULME (TO WITNESS): Can we go, Mr Wright, to - - -

MR HULME (Continuing): - - - Mr Wright, to your letter of 26th October?---There is a letter of Lang's of 26th October.

I am sorry, yes. Go to that letter, then. He writes to Sir Maurice Mawby and says that the Rio Tinto people seem to have failed to inform him that the final wording "apart from your new company clause had already been agreed upon between our respective solicitors in Melbourne", and that was the view that was taken, was it not, by you - -?---Apparently, at this time it was.

At that time, yes. To show that that is so you enclose a draft agreement with a certificate from Mr Stables, setting out the agreement in the form, apparently, reached by him and Mr Rod following the Melbourne negotiations - the Melbourne negotiations first and then the Melbourne work between Mr Rod and Mr Stables produced, says Mr Stables' certificate, this document?---It looks that way, yes.

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And that is what you were sending back to them?---It looks that way.

That was what was agreed. Under "Agreed" in Mr Hancock's letter virtually everything; not agreed, the new company clause. He encloses a form or a document which, it would appear, includes what Mr Hancock calls "our idea of the new company clause" and you both sign that document and send it?---Apparently.

20

At that stage, therefore, that document was being sent by you with your signatures direct to Sir Maurice Mawby?---Yes.

He does not seem to have regarded that as a step forward in his letter of the 30th. There is then a letter from Arthur Robinson of 30th October to Mr Stables' firm thanking him for his letter of the 26th. That letter of 26th October we do not have in this file; is that right?---Apparently not.

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You are satisfied that one is not there, are you Mr Wright?---It does not appear to be.

Arthur Robinson say they seek to resolve through Mr Stables any outstanding difficulties - - -

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MR HULME (Continuing): - - - outstanding difficulties. There is then reference to a letter of Arthur Robinson that referred to their letter of 10th October and that letter also we do not have?---I did not follow the reference, your last comment - in Arthur Robinson's letter of 30th October?

They refer to their own letter of the 10th of October in the fourth paragraph?---Yes, I have that.

That is sounding like a letter from them to Mr Stables. They do not say to whom it is so it must have been to the same recipient. They say that on 5th October the terms of a draft document had been agreed - discussed and agreed - in principle. That may not say enough but at least that much is true, is it not? You and Mr Hancock would have said more than that was agreed?---I do not think I can answer that. John Rod is making the statement. I would not know now whether it is correct or not. He is talking to Stables and he says "There was not on that day sufficient time in which to draft....(reads).... to carry out the detailed task of checking." He does say, however, it had been agreed in principle but there was not on that day sufficient time in which to draft and do the necessary schedule. Presumably that is correct but I do not know of my own knowledge anything about it.

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You and Mr Hancock had taken the view that more had been agreed than that?---In Hancock's letter, yes, that is right.

At least that much is true - that the parties had met in Melbourne, eight of them - eight parties and advisers?---Yes.

They had had a pretty hard negotiating session and had finished up with agreement in principle on the contents of the document?---We thought so.

Then again there is reference to the inclusion of Hamersley. In the middle of p.2, Arthur Robinson and no doubt Mr Rod, say:

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"It is important that both you and your clients....(reads)....against which certain alterations were proposed to the draft agreements."

These were the alterations referred to in the letter of the 10th which we do not have.

"- - clients would not wish to have defective wording."

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Then again in the bottom part of p.2 reference is made to the position of Hamersley, the question of a guarantee from CRA, they continuing to be the matters causing difficulty at that point?---On the face of it, yes, but this is coming from Arthur Robinson who would not say what our difficulties are. He is only referring to those which he regards as difficulties. We at all times had a great number of reservations. We had the greatest difficulty

in ever getting re-expressed terms and conditions that were agreed verbally. It was the most difficult negotiation anybody could possibly have.

MR HULME: I suppose in most of these negotiations people on each side can form different views?--Of course.

I do not wish to get into rights and wrongs. I just stay with the course of who is proffering which document to whom. Then you write to Mr Anderson on 8th November and you say at the bottom of p.1:

"In an attempt to bring the matter to finality....(reads)....in its simplest possible form to enable you to substitute Hamersley."

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MR HULME (Continuing): He is referring to the one you had signed and sent across earlier?---Apparently.

It goes on, "This document was executed by Lang and me and forwarded." It came back with criticism, your letter says. You discussed that criticism and said:

"Now in a final attempt to finalise the matter completely, fairly and reasonably and in strict accordance(reads)....in John's letter of the 10th."

That is the Arthur Robinson letter of 10th October. You then refer to the various criticisms and at that stage again it is something of a stand-off situation? ---Correct.

Your Honour, there are references in two of these documents to alterations being underlined in red. May I have the original, the actual exhibits, of agreement 4 and 5, for a moment? Can I just say to your Honour that agreement No.4 as exhibited is a carbon copy with sections of it in red type which, in the exhibits coming to us, is indicated with pink highlighting. That may enable that agreement to be identified as Mr Stables' agreement where he is indicating in red the use of words which had not been agreed upon in Melbourne. There is no suggestion in any of the drafts coming the other way of any use of red.

My learned friend points out if has Arthur Robinson & Co. on the top and that is certainly right.

MR HULME (Continuing): Agreement No.5 has a good deal of red typing, and one section of red underlining. Then there is a letter from Sir Maurice Mawby to Mr Hancock dated 7th December in which he says he is pleased to know that you have agreed for your solicitor to meet with John Rod and he "believes they are at present in conference"?---Yes.

I would show you a document: Is that a document headed "Proposed New Agreement between Messrs Hancock & Wright, Rio Tinto (Southern) Pty Ltd and Others; list of suggested alterations to Messrs Arthur Robinson & Co. draft of 10th October 1962 following on discussions between the solicitors to the parties in Perth on 6th December 1962"? 10

MR SHER: If your Honour pleases, I do not know what this document is; it has never been shown to us. It has not been proved in any way.

OLNEY J: It has not been tendered yet.

MR SHER: Well, my learned friend is seeking to cross-examine the witness about the contents of a document which is unidentified and nobody knows what it is. It is submitted, your Honour, that we ought to be shown it at least. This affidavit from Mr Wright has been in the hands of the other side now for at least a month; no answering material has been filed and insofar as there are any gaps in the material, Arthur Robinson, CRA and Hamersley have not sought to fill them, nor have given any explanation that they cannot. We would like to see this document before it is put to our client, your Honour. 20

OLNEY J: I think it is legitimate for Mr Hulme to lay the ground-work for this document. He has shown the witness a document and he has read out the heading. As yet the witness has not answered any questions. 30

MR SHER: He should not have done that, either, with respect your Honour. There is a proper way of proving documents and it is not the witness' document.

OLNEY J: Well, I do not know. At this stage I do not know what it is. 40

MR SHER: Unless it is the witness' document, your Honour, in our submission it is not an appropriate form of cross-examination to merely take a document, read out the heading of the document into the transcript and seek to then question the witness about it unless it is some way identified. The witness is entitled to know what it is he is looking at.

OLNEY J: True enough. I think the witness ought to be asked to identify the document if he can and depending on his answer will depend the use which can be made of the document.

MR HULME: What I propose to do, your Honour, is to ask this witness (a) whether he has seen this document and (b) whether he at that time, early in December, had the contents of it put before him. These relate to verbal amendments which can then be traced into the final agreement actually executed on 12th December, five days later.

OLNEY J: Perhaps you ought to take the first step first, then, Mr Hulme.

TO WITNESS: Mr Wright, you have had a look at a paper which has been put before you. What do you say about that document?---I have not, to my knowledge, ever seen it before, but in 1962 I probably would not say that. I recollect nothing that is in it. It is 20 years.

You recollect - -?---It is 20 years since I saw this document, presumably, because it was not produced in the documents which I identified. I read those and they came from my own files, so I had good reason to believe that they were what they were supposed to be - - -

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WITNESS (Continuing): - - - to be, but my memory is not good enough to go back 21 years and say whether I have seen this document before or not.

MR HULME: Do you remember there being discussions in Perth just before the final execution of the agreement? ---Not specifically. I remember there were discussions in Perth at the time. There were discussions in Melbourne at the time. There were continuous discussions for a long time. It is quite likely that they were in Perth just before final agreement. I have no recollection of it. 10

Mr Hancock's letter which you have exhibited refers to Mr Rod being in Perth at that time, conferring with Mr Stables, that being on 7th December?---There is a letter from Mawby on 7th December. There is one on 30th November.

"I believe they are now meeting"?---Yes.

MR SHER: How would he know that? He was in Melbourne. The meeting was in Perth. He could not possibly know that from his own knowledge. 20

MR HULME: He is saying that is what the letter says.

OLNEY J: I am looking at a letter from Mawby to Hancock. Is that right - 7th December?

MR HULME: Yes, where he says "I believe they are at present in conference" - meaning, no doubt, this is the day.

WITNESS: That is very likely. This came from our files, I understand, so it would be correct. However, I do not recollect it personally. 30

MR HULME: Was there not a visit by Mr Rod just before the agreement was executed for the purpose of cleaning up the last outstanding matters?---There probably was. If this letter says there was, there undoubtedly was. I do not recollect it specifically, though.

What I suggest happened is that during the day there were discussions, probably without you, between Mr Stables and Mr Rod and that Mr Stables reported back to you and Mr Hancock in the evening, having arranged with Mr Rod to do that with Rio Tinto, and that in the morning, on the 7th, the parties agreed - both parties approved - the alterations which their solicitors had agreed upon on the previous day, including the inclusion of one new clause?---What date is this? 40

The evening of 6th December 1962. It gets executed, actually signed up, on the 12th. Do you remember wanting a clause to deal with what would happen if the sale and transfer were not completed and providing that Hamersley would drop out of the picture and references to Hamersley would become references to Rio Tinto (Southern) - - -

MR HULME (Continuing): - - - Rio Tinto (Southern)?---I do not recollect that at all in any shape or form. The letter of December 7th is weeks after this document you showed me which was 10th November. Is it in reference to this document that we are talking?

The document speaks for itself, the document contains this clause and I am suggesting to you that it went in at the last moment - -?---I could not give you any knowledge of it whatever. My memory is a blank on it. 10

(Could the witness please have a copy of CRL 1, that is Mr Langridge's affidavit, the actual agreement?) That is a copy of the actual agreement, I think, Mr Wright?---Yes.

Would you go over to clause 14, p.11, about the middle of the page? Do you see the line, "Or by the purchaser and such associate or by such licensee"?---Yes.

One thing you will remember is that you wanted to tie, not only Hamersley but any associate or licensee?---Correct. 20

And that was a vividly important requirement. You were taking the view, "I don't care what you do, have as many licensees or associates as you like, but the clause is going to provide that we still get our royalty"?---Correct.

Total flexibility but total liability; is that a fair statement? ---True, that is what we sought.

If you look at the document I have shown you, do you see a reference there to clause 13?---In the paragraph we are dealing with which is 14? 30

On the second page of the document that I have shown you.

MR SHER: I object to this. I have already objected to the use of this document and nothing has been done about it, your Honour, and I object to my learned friend now referring to it.

OLNEY J: Mr Wright has no recollection of the document and that being so I do not think it is appropriate for him to be referred to it, Mr Hulme. 40

MR HULME: Remembering, your Honour, that it is 20 years ago, we would say he is entitled to have a look and be reminded from seeing phrases come into this document and go into the agreement, phrases not in the earlier draft, that, yes, he did see this document on that night and approved those amendments.

OLNEY J: I do not think that you have established sufficient about this document - - -

24. 3.47

OLNEY J. (Continuing): - - - this document to use it to refresh this witness' memory of what is in it. You have asked him a number of questions about his recollection of the events surrounding the last week or so of the negotiations, and his evidence is fairly clear; he has no independent recollection.

MR HULME: Mr Wright, is that your end position? Have you, first of all, a recollection of last-minute negotiations just before - -?---No, I am afraid I have not.

Well, if your memory does not go beyond that, it doesn't. In 1982 was it your recollection that the royalty clause in the agreement was the result of negotiations between the two lawyers, John Rod and Hubert Stables, both now dead, and was accepted by both parties as being satisfactory?---I would think that was right. It was accepted as the best we could get. 10

I want you to listen to what I am saying: In 1982 your recollection was that the royalty clause was the result of negotiations between the two lawyers, John Rod and Hubert Stables, and was accepted by both parties as being satisfactory? ---No, I have no clear recollection of that at all. I have only recollection that we were relieved to sign the blasted agreement. 20

Now, Mr Wright, I want you to think; this royalty matter has been a running sore for some years?---Not for some years - - well, two or three years, yes - three or four years - but not for the long period we have been associated.

Your attention has been concentrated on it?---Since the beneficiation plant started, yes. Before that it was never drawn to it. 30

That caused you to think about the origins of the royalty clause? ---When the problems occurred? It drew my attention to the actual agreement, yes.

The problems which have arisen have caused you to think about the origins of the clause which have given rise to the problems?---Yes, of course.

And was it not in 1982 your clear recollection that the royalty clause was the result of negotiations between the two lawyers, John Rod and Hubert Stables, and was accepted by both parties - - - 40



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DOCUMENT 3* - Defendant's Evidence
Evidence of Ernest Archibald Maynard Wright
Cross-examination

21.11.83

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MR HULME (Continuing): - - - both parties as being satisfactory?--That would have to be so because we signed the document.

Obviously both parties found it, in the end, acceptable. They accepted it. That royalty clause had been hammered out, had it not, between Mr Stables and Mr Rod?--With our own input as well from time to time.

Yes, but we had seen Mr Stables first put forward this, the complex form of clause. We have seen Rio Tinto not approving it. It is your recollection that the clause, as we now have it, resulted from negotiations between John Rod and Hubert Stables, with input from time to time by the parties?--What is the question? What is my recollection?

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That is what you regard as having happened, is it not?---
Yes, it did happen but at all times we felt that this agreement was forced onto us, that we could never get what was originally agreed in words and in writing between the principals and ourselves.

I stay with this clause, the royalty clause. Mr Stables had put forward his complex arrangement. Rio Tinto did not like it. There were negotiations between John Rod and Hubert Stables who came up with a result that was accepted by both parties?---It was accepted. We were never happy about any of the contract.

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But that is how it came about?---It was accepted.

That is how it came about?---Correct.

MR SHER: According to the documents that have been hunted out and produced, the first time the beneficiation clause - - the royalty clause refers to beneficiation and crushing and screening when it appears in the Arthur Robinson draft of 7th September 1962. That is the first time it appears in the form in which it was signed. Before that draft, had you seen the royalty clause referring to royalties being affected by beneficiation and referring to crushing and screening as not being included - before that document was produced?---Will you say that specifically again?

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The third of the five agreements you exhibit is a draft headed "Arthur Robinson & Co. draft 7th September 1962". If we look at clause 6(b) of that document we will find (6(b) of p.3) this is the first time in any of the documents you have been able to produce that we will see a clause in that form, which is:

"If iron ore is beneficiated or otherwise treated by the purchaser(reads)....shall not be deemed to be beneficiation or any part thereof."

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Had you seen any clause like that in those words before this draft, with the name after "Robinson & Co." and the date 7th September 1962, was produced?---Not that I know of.

MR SHER: Would you have a look at exhibit CRL8, which is the eighth exhibit to Mr Langridge's affidavit?

OLNEY J: His second affidavit.

MR SHER (TO WITNESS): That is a copy of the agreement dated, 4th May made between Barrett-Lennard, Arthur Franke & Edward, Hancock Prospecting, Mr Hancock, yourself and Wright Prospecting and Rio Tinto (Southern) Pty Ltd. Is that what is described in the letter from - - -

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MR SHER (Continuing): - - - in the letter from Mr Stables to you of 24th July 1962 as the Barrett-Lennard agreement?
---It would be, yes.

Will you look at that letter, that is the letter to you, that is you Mr Wright, of 24th July 1962 from Mr Stables?---Yes.

Will you look at the third page, clause 9?---Yes.

You there say in the second paragraph:

"The basis of the terms set out in our draft has already been accepted by Rio Tinto and in the latest Barrett-Lennard agreement and surely precisely the same principles apply in this agreement."

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Were you there referring to this agreement CRL 8?---Yes, I was.

If we look at the royalty clause in that agreement which is at p.4, para.8 - and I think it will speak for itself - no reference to beneficiation or crushing or screening appears in the whole of that clause. It provides for royalties of 2½ per cent and in the case of sale or disposal by treatment or otherwise there are a number of different steps set out by reference to a willing but not anxious purchaser?---Yes.

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But there is nothing there about beneficiation of ore and crushing or screening?---That is so.

When reference was made to the principles in relation to royalties accepted in the Barrett-Lennard agreement, are these the royalty principles you were referring to?
---Correct.

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So that, at least, at that stage the concept of there being some reduction in royalties if beneficiation occurred, leaving aside crushing and screening, have not found their way into any agreement?---Correct.

That same letter of 24th July, in that same paragraph but in the first part of it, says this:

"Surely the object of this agreement is to set down once and for all the terms which the parties had agreed(reads)....for all reasonable foreseeable factors."

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Was that what you and, as far as you can say from discussions with him, Mr Wright, perceived these agreements to be, that is seeking to govern all the operations in the future and to legislate in advance for all reasonable foreseeable factors?---Correct.

OLNEY J: Mr. Sher, I got the impression you were putting this letter to the witness as his letter.

MR SHER: No, it is not; it is a letter to him.

OLNEY J: Some of your questions seem to suggest that it was he who was speaking.

MR SHER: I really should be saying, "Is what is said in this letter in accordance with your views."

MR HULME: That is evidence of negotiation that is not for the purpose of contra proferentum at all. That is simply evidence of the parties intention to have negotiations and it is totally inadmissible. This is one of our whole worries about this; we had to have the material in for contra proferentum but here it is coming out as to what the intentions of the parties were and this is not what this material is here for. 10

MR SHER: It is relevant to the way in which they would have sought to legislate between themselves, as the letter says, to govern their future and the terminology they would use and the importance of it. Surely having had his evidence tested by reference to this very paragraph - - -

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MR SHER (Continuing): - - - very paragraph I am entitled to find out the extent to which the witness agrees with the matters stated in it, your Honour, if only to restore any credibility, if any restoration is needed, in relation to the cross-examination.

OLNEY J: Yes, you are probably right for that purpose. I will allow it to go ahead, but I appreciate Mr Hulme's concern about it, particularly as I must have misunderstood earlier that you were putting this letter to the witness as though it were his own. 10

MR SHER: Yes. I will not press it, your Honour. I think I will deal with it by way of comment hereafter and not by way of evidence.

OLNEY J: Yes.

MR SHER: Mr Wright, if you look at the letter of 30th October 1962 from Arthur Robinson & Co. to Mr Stables, at p.2 in the third paragraph it reads:

"We feel we should also remind you of a question asked by Mr Hancock.....(reads).....This position has not yet been reached." 20

Did you understand that letter accurately reflected the stance being adopted by Mr Rod on behalf of the parties he represented?---Yes.

Finally - and this does not arise out of cross-examination, your Honour, and rather than deal with it solely by way of comment I wonder if I can direct the witness' attention to it, if your Honour would permit me, giving Mr Hulme a right to further cross-examine if he wanted to? It is a letter of 8th August 1962 from Mr Hancock to Mr Anderson and I want to ask him about the reference in the second paragraph to the Kaiser people. 30

OLNEY J: Hancock to - -?

MR SHER: Hancock to Stewan Anderson, the sentence right in the middle of the second paragraph which reads: "As we see it and as I am sure the Kaiser people see it...", and then it goes on to say something. 40

TO WITNESS: Do you have it there?---What is the date, Mr Sher?

Dated 8th August 1982; it is Mr Hancock's letter, the second page, second paragraph. The assertion there - -
TO HIS HONOUR: Might I ask the witness about it, sir?

OLNEY J: Yes, you may.

MR SHER (TO WITNESS): The assertion there by Mr Hancock is:

PM
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DOCUMENT 3* - Defendant's Evidence
Evidence of Ernest Archibald Maynard Wright
Re-examination

ON APPEAL
FROM THE COURT OF THE SUPREME COURT OF WESTERN AUSTRALIA

B E T W E E N :

HAMERSLEY IRON PTY LIMITED

Appellant
(Respondent)
(Plaintiff)

- and -

1. THE NATIONAL MUTUAL LIFE
ASSOCIATION OF AUSTRALASIA
LIMITED,

2. LANGLEY GEORGE HANCOCK,

3. ERNEST ARCHIBALD MAYNARD
WRIGHT,

4. HANCOCK PROSPECTING PTY
LTD,

5. WRIGHT PROSPECTING PTY
LTD AND

6. L.S.P. PTY LTD

Respondents
(Appellants)
(Defendants)

RECORD OF PROCEEDINGS

PART I
VOLUME IV

Ince & Co.
Knollys House
11 Byward Street
LONDON, EC3R 5EN

SOLICITORS FOR THE APPELLANT
(RESPONDENT) (PLAINTIFF)

WALTONS & MORSE
PLANTATION HOUSE
31-35 FENCHURCH STREET
LONDON, EC3M 3NN

SOLICITORS FOR THE RESPONDENTS
(APPELLANTS) (DEFENDANTS)