

This next candidate has an MBA from an Ivy League university, and comes from a technology background, I think engineering. Let's go ahead and get started.

Interviewer: So your client's company is called Gold Chem, and they manufacture a chemical used to help separate gold from the various impurities that are usually mined, brought to the surface with it, making gold almost 100% pure.

The client is the leading producer of this chemical in the world, but the market is relatively small, as far as chemicals go. A large conglomerate company called Mega Chemicals is a Fortune 500 company that has recently entered the market. They are significantly larger than your client, and the CEO is concerned about this new competitor and in particular, is worried about what Gold Chem should be doing in response to this.

At the same time, the CEO of your client, Gold Chem, has received overtures from yet another competitor – a third competitor called Worldwide Limited – about potentially acquiring the Gold Chem business.

So on the one hand, the client is facing a new competitor that is very large. And on the other hand, there is an invitation to be acquired by a different competitor. So there are two specific questions the client would like you to answer throughout this process.

The first is: given Mega Chemicals' entry into this business, what is the likely impact for Gold Chem? Basically, what does this mean for them? If you have any suggestions for what they should do, certainly that would be appreciated.

The second would be: should the client remain an independent company, or should they agree to have conversations about being acquired by Worldwide Limited?

So that is the background of the situation. Before I ask the first question, I would love to get your...I'll give you a chance to ask any questions you might have, to make sure we have a clear understanding of the situation.

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Candidate: So far what I understand from what you described, Gold Chem has this specialty chemical, which is used to refine gold ores and separate impurities from gold and make it 100% pure. In this industry, there are two other major players – Mega Chem, which is very large; and Worldwide Chemicals, which is another company, which is making overtures to acquire this specialty chemical from Gold Chem.

Interviewer: Correct.

Candidate: The main objective here is that the CEO of Gold Chem wants to figure out: what would be the implications if they were to enter this market with this specialty chemical? And second, if they do so, should they remain independent or have some kind of a partnership or acquisition by one of these companies?

Here the candidate did a nice job in confirming his understanding of the case, and also double-checking on the objective of the client. I mentioned this previously how important that is, and here so far the candidate has done a good job of doing that.

Interviewer: That's correct, I think you understand that perfectly. The first question is— and try to answer these two questions in particular. The first one is around what are the implications for Gold Chem.

What factors would you look at, what are the most important factors you would look at and consider in making such a decision or determination?

Candidate: Can I take a minute at this point to gather my thoughts?

Interviewer: Of course, take your time.

Candidate: The way I'm looking at this problem is trying to understand the implications both for Gold Chem and for the overall industry, if Gold Chem were to launch this specialty chemical in this particular market. To analyze that, I would look into three or four different factors.

First I would look at: who are these customers who are buying these specialty chemicals? Now I understand these chemicals are being used by gold ore companies, so they may be benefiting from the specialty chemical. So how do they use this chemical? What is the demand for it? What different segments of customers do they have? Those would be a few things I would look at to really figure out: what is the value proposition for these customers?

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Interviewer: Okay.

Candidate: Secondly, I would look at the competition. We spoke about— there are two major competitors here, and so in the competitive landscape, I would like to look at: what are the present offerings of these competitors? Are they also targeting the same customer segment? Is their value proposition any different? And overall, I would like to see: what impact does this new specialty chemical create for the

competition? Does it set off a new race for product development? Does it impact the pricing? Does it change the overall market share of these competitors?

Finally in the third bucket, I would look at within this company, Gold Chem – how does this new specialty chemical align with its existing products? Does it mean they would have to spend more in R & D in terms of costs? Does this cost structure align with their existing cost structure? Does this give them an upper hand to compete better with other companies?

And look at the product itself. What is the true economic value that the product creates for its customers? So this would be my overall structure to start with, to find out what other implications there are.

A strong opening – in terms of structuring a particular case problem in any case format, whether it is a candidate-led interview or an interviewer-led one – is to state the hypothesis, state the structure or issue tree structure you're going to use to prove that hypothesis and then, very importantly, explain for each piece of your issue tree (or every piece of data you're looking for) *why* you need it, and how is it likely to potentially change the validity of the hypothesis. It's a very useful habit to get into, and something I encourage you to do. And it was not something that the candidate did in this particular case, which was, I would say, a moderate mistake that the candidate should have done differently.

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Interviewer: Great, and just to clarify, your client Gold Chem is already in this business, and has been in this business for a long time. Mega Chemicals has recently entered the business within the last 12 months. And Worldwide Limited is not currently in the business, but seems to have indications that they seem interested. I just want to make sure that's clear.

In particular, let's take a look at your structure here. I'm curious particularly on... let's pick one area of the customer side. I think one of the questions you had was: how is the chemical used? I'm curious why that would be relevant, and what factors in particular you would be looking for that might help shape the picture that you are trying to form about this situation.

Candidate: Sure, so I think the value of the specialty chemical would be to clean the ore and make the purest form of gold. It could have several implications. One: it could generate a better quality of gold for these customers. So depending on what kind of ore, let's say the segment of customer is based on the impurity of the ore.

So the chemical can hold different values for different segments of the customer, based on this variable. The other thing can be the savings it accrues. The current

chemical, which is available to the customer, maybe they are spending a lot more money going through this process of cleaning and maybe this chemical either shortens the duration, or it reduces the cost of cleaning the ore. That could be the true economic value for the customer.

With that in mind, do we have any information on how these customers are segmented, and what each segment is doing, in terms of growth and market share?

Interviewer: Before we jump into that, I had more specific questions to better understand the structure and relevance of it. Assuming you did know the economic value to the customer, how does that better determine the implications for Gold Chem, in particular? Why is that information useful and relevant?

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Candidate: With that true economic value, Gold Chem can then influence, this will influence its pricing decision. The reason I say that is: you would come to know, based on this information, if this industry is a monopoly, which is what it looks like with Mega Chemical being the largest player and Gold Chem being the second one.

In that case, creating the true economic value for the customers would enable Gold Chem to charge a premium price on top of what it costs to make this type of specialty chemical, or on top of what Mega Chem offers its customers. That could become the benchmark. On top of it, Gold Chem could charge a value much higher than that price, much higher.

Interviewer: Okay, and of the four different areas you mentioned (and if I got it wrong, let me know), I think you had said: customers; you had some things around the competition; some things around Gold Chem itself; and the product itself. Of the four areas, which do you think would be the most important and critical to understand, given Mega Chem is a new entry into this business, this most recent year?

Here what I'm looking for is the 80/20, which is: what is the most important factor that we're looking at? What is the one that make the biggest impact? It's even better if the candidate can proactively provide this information, without the interviewer having to ask.

Candidate: I would start with customers, and try to see: what are the customers using right now? And with the entry of Mega Chem, what are the product offerings being given to them?

Interviewer: Why do you think understanding the customers is the most important, given that this is a new entrant into the marketplace?

Candidate: Because the customers will decide what kind of product they really need. How does the need align with what Mega Chem and Gold Chem both have to offer?

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So the second most important thing would definitely be to look at the product offerings of Mega Chem, and how do they compare with Gold Chem, and how do they fit in with the requirements of the customers?

Interviewer: Okay, that makes sense. So a couple of background points, and then I want to shift gears a bit. In this business, there is essentially only one product and we can make that assumption. There is one chemical that's used; it's the only chemical that can be used to refine gold. So both companies would essentially be providing the same chemical, and in large part let's assume it is a commodity type...it is a commodity, so it is identical across both companies.

Given that information, would you change the factors you would now consider, given that new information?

Candidate: I see. So now we are saying since this is a specialty product, it is now a commodity product?

Interviewer: It is a commodity product in a small industry, let's put it that way.

Candidate: Can I take 30 seconds to gather my thoughts?

Interviewer: Sure.

Candidate: Yes, I think the focus would change, and now I will try to actually look into the capabilities of the company itself. The reason I say that is because while we know this is a small industry and a commoditized product, ultimately it will come down to the variable cost of each of the variable costs incurred by our client.

As long as the client can endure its variable costs that it incurs in making this chemical and selling it, it can grow more profitably and be very competitive as Mega Chem, which has more muscle power.

Here the candidate, I think, ultimately had a reasonable rationale. The problem is it just took a lot of time to get here. The entire process could have been handled much more efficiently had a hypothesis been stated up front, which makes the rest of the problem-solving process much more efficient.

Interviewer: What specifically about variable costs are you hoping to see, or looking for, in order to make the determination?

Candidate: When I think of variable costs, I think of different factors. I think of what are the raw materials, which are used in making this chemical. So cost of raw materials would be one thing. The labor input that goes into making this chemical would be second. Third would be the way this chemical is distributed.

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We haven't spoken yet about the nature of the chemical, whether it is a solid or liquid. So the distribution and delivery costs would again be part of the variable costs. Finally, I would say the acquisition of new customers or retention of existing customers – that could be another component of the variable cost that this client could be concerned about.

Interviewer: Got it. I'm curious – clearly it seems that looking at Gold Chem's cost structure would be important. What would you compare that to, I guess?

Candidate: I would compare that to industry standards, and I would compare that to the competitor, especially Mega Chem. Maybe they enjoy higher economies of scale and scope than Gold Chem does.

Interviewer: On the topic of economies of scale – if that were true, what pattern would you be looking for, particularly in the variable cost side, to prove or disprove that theory?

Candidate: To prove or disprove that, one would hypothesize that the larger volume of specialty chemical sold, the cost it takes to manufacture the specialty chemical reduces. So that would be the economy of scale I would look at.

Interviewer: Okay.

Candidate: And there could be an economy of experience of scope as well. We learned that Gold Chem has been in this business; whereas, Mega Chem is now just getting into it. So Gold Chem enjoys that economy of experience, which maybe Mega Chem doesn't.

Interviewer: So given that information, what is your hypothesis so far?

<p>Notice here how I'm pushing for a hypothesis, and at this point we're about 16 minutes into the case (<i>on original audio</i>), about 10 to 14 minutes too late. I shouldn't say too late, but very late in the process. It would have been better had it been done proactively, or much earlier in the process.</p>
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Candidate: So far, based on this information, I have gathered that since this is a commodity product, the variable costs of the product would be the driving factor to make a profitable business. Our client has been in this business and enjoys certain economies of scale, scope and experience, which would allow it to sell this product at a lower price than the competitor, Mega Chem.

Interviewer: Great, and at this time, I would like to direct your attention to Exhibits 1 and 2 only – not the third exhibit yet. Do you have that handy?

Candidate: Yes.

Interviewer: Why don't you take a few minutes to look at that and digest it? The first question I'll ask you, so you can keep it in mind as you look through it, is: what observations or insights do you notice about that information in Exhibits 1 and 2 that stand out as interesting or unusual?

Candidate: Sure. Based on the information given in Exhibits 1 and 2, this is what I've gathered. Looking at the spot market price and annual shipments – I believe the total annual shipments, am I right?

Interviewer: Yes.

Candidate: Based on that, I gathered that \$800 million is the total size of the market. This I got by multiplying the spot market price per ton by 80,000 tons, which gave me the total market demand.

The second part I looked at – based on the comparison of variable costs and annual production, I see that the raw material cost and transport cost are the ones that give Gold Chem an edge over Mega Chemicals. This could partly be because, as shown in this exhibit, Gold Chem owns some of their sources of raw materials, so that is maybe one reason why Gold Chem's raw material costs are less.

The second thing is the transport costs seem to be lower for Gold Chem as well. We would have to explore why that is so, and how it can either maintain it or further reduce it, and make it a more competitive advantage.

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And more importantly I think, as we see, despite the higher number of tons generated by Gold Chem – 40,000 tons versus 10,000 by Mega Chemicals – the manufacturing costs have still stayed the same for either of them, which tells me there isn't really an economy of scale (that we had earlier talked about in our

hypothesis) that is playing out here. Otherwise, we would have expected manufacturing costs for Gold Chem to be much lower than they are for Mega Chem.

Interviewer: That makes sense. I would like to give you some other scenarios to consider.

For the following exercise, I have three assumptions I would like you to write down. Feel free to write it down on the same page as Exhibit 3, since you will be using that information as well, or you can do it separately.

The first scenario assumes that market consumption remains unchanged at 80,000 tons per year. The second assumption assumes that Mega Chem, with sufficient time, is able to increase its production from the 10,000 tons this year to a peak of 40,000 tons per year, but is not able to produce more than that.

Candidate: From 10,000 tons, they are able to increase it to 40,000 tons over the next year, you mean?

Interviewer: The next couple of years – the time isn't that critical. Then the third assumption is that for every 10,000 tons that Mega Chem increases its shipments annually, Gold Chem's shipments will decrease by 5,000 tons.

Candidate: I see. So that makes sense because if market consumption is staying constant, then Mega Chem – if we were to increase its shipments – should be stealing share from its competitor, Gold Chem.

Interviewer: Exactly right. Now in referring to Exhibit 3, which we will be using in this next exercise, the question that I will be asking you (and it would be helpful if you can walk me through your logic and your math as you do it) is: when Mega Chem reaches its peak production of 40,000 tons per year, what would each company's total variable cost per ton be?

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Candidate: What would be the total cost, or just the variable cost?

Interviewer: Just the variable cost per ton.

Candidate: Okay. What would be the variable cost per ton for both companies when Mega Chem reaches its target of 40,000 tons of production?

Interviewer: Correct.

Candidate: All right. Based on this information, I believe we are looking at overall industry demand and supply. So I would think the next step would be to plot the demand and supply curves. And from there, also look at the variable costs and see what is the slope of those curves, what are the points of inflection? And with this volume of 40,000 tons, what would be the variable costs for each of those companies?

Interviewer: Okay. So using the information provided to you in either Exhibits 1, 2 or 3, or the three assumptions I provided, what would the variable cost per ton be for each company?

Candidate: Can I take a minute to gather my thoughts here?

Interviewer: Please.

Candidate: The way I'm doing it right now – I'm trying to plot from 10,000 tons this year to the next few years, say the next five years, if Mega Chem were to increase its production from 10,000 to 40,000. So I'm trying to plot its supply. I'm also trying to plot the supply of Gold Chem during the same time period. Then we will investigate the slope of these two curves and go from there.

Interviewer: Okay.

Candidate: Is this a fair assumption to make that the next five years will be when Mega Chem can get to that target?

Interviewer: Let's assume it happens immediately, even though in reality, it won't. What we're trying to answer is: when Mega Chem is at its maturity, what does the industry look like and, in particular, how is Gold Chem impacted? For our purposes, to simplify it, let's assume it happens immediately, so assume that Mega Chem goes from 10,000 tons to 40,000 tons.

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Candidate: Right. When Mega Chem goes from 10,000 to 40,000 tons, it has added an additional 30,000 tons. And for each 10,000-ton addition, there is a drop of 5,000 tons on the Gold Chem side. That means Gold Chem's production has come down from 40,000 minus $3 \times 5,000$, which is 15,000, and so $40 - 15$ gives us 25,000 tons.

Interviewer: Okay.

Candidate: So that is where Gold Chem production stands, when Mega Chem is at 40,000.

Interviewer: Okay I agree. What would each company's variable costs be at that level of production, in particular, given Exhibit 3?

Candidate: Okay, yeah because I was going to ask you... now I want to tie the costs to volume to see how they are related. I will look at Exhibit 3. I am looking at Exhibit 3, and it will take a few seconds to do this.

Interviewer: Sure.

Candidate: Okay, I'm looking at two elements – the manufacturing cost and the transport cost for Mega Chem. We have this “before-and-after” scenario. Exhibit 2 gives us the “before” scenario, and I'm trying to play another exhibit for the “after” scenario. For that, now we are looking at raw material costs, and so I'm keeping the raw material cost for Mega Chem the same at \$5,000. However, you see that for every 10,000 increase in production, the manufacturing cost decreases by \$200 per ton.

We know from our calculation earlier that Mega Chem has undergone an increase of 30,000 tons, and therefore, the manufacturing costs decrease by $\$200 \times 30,000$... one second. It is like a step thing – for every 10,000, the cost decreases by \$200. So initially the cost was \$5,000, and after a decrease of 10,000, it came to \$4,800. So there are three steps to this: it is from \$5,000 to \$4,800 for the first 10,000; and from \$4,800 to \$4,600 for the second decrease; and for the third decrease, it is another step of \$200, so we're looking at \$4,400.

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Interviewer: Where are you getting the original \$5,000 from?

Candidate: Sorry, I made a mistake there. It is \$4,000.

Interviewer: Great, that's what I have as well.

Candidate: Sorry. So it should be \$4,000 - \$600 ultimately, and therefore, \$3,400 is the new variable cost of manufacturing for Mega Chem.

Interviewer: Okay.

Candidate: Similarly, we look at transport. For every 10,000-ton increase in production, the transport product costs drop by \$1.20. So I would guess that it would be $\$20 \times 3$, so we're looking at \$60, and that means it would be \$9,640. Sorry, \$940 for the transport cost reduction for Mega Chem. The total variable cost therefore would be the addition of all three of these things – the raw material, manufacturing, and transport costs, which comes to \$9,340 per ton.

Interviewer: Okay.

Candidate: So this would be for Mega Chemicals. Similarly, I'm going to go through the calculations for Gold Chem.

Interviewer: Okay.

Candidate: For every 5,000-ton decrease in production, the manufacturing cost increases by \$200. We know Gold Chem's production dropped from 40,000 to 25,000, and that means again – steps of three.

So we are looking at \$600 per ton production in the manufacturing costs. So from \$4,000 of existing manufacturing cost, we subtract \$600 and it gives us \$3,400 per ton of manufacturing cost, which would be the new manufacturing cost.

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Here the candidate actually made a math mistake, but I didn't catch it on the original interview. So here what I did was... I didn't notice that I didn't quite follow the math, and I wasn't sure *why* I couldn't follow it in the moment. Only looking at the transcript afterwards, I realized he made a math mistake, which is why I couldn't follow it. Ultimately, the second time around, he did fix it. So here he kind of got lucky. Had I noticed the math error originally, I probably would not have passed him, even though the other parts of his case were reasonable. Everything else, if it were a first round, I probably would give the person the benefit of the doubt. But if I had caught this math mistake, then I probably would not have.

Candidate: And similarly, for every 5,000-ton decrease in production, transport costs increase by \$1.50 a ton (*Note from Victor: Candidate made an error, this should have been \$50*). Again, we're looking at an increase of \$1.50 times 350 to the existing number of \$950. That gives us \$1,100 of new transport costs per ton. (*Note from Victor: I didn't follow this. The numbers and math didn't seem to make sense.*)

Interviewer: Could you walk me through your numbers again on the manufacturing? I want to make sure I followed you on that one.

Candidate: Sure. On Gold Chem, I'm looking at: for every 5,000-ton decrease in production, the manufacturing costs increase by \$200 per ton. I had \$4,000 of existing manufacturing costs, and we have three steps of increase, \$5,000 each, 5,000 tons each, and so 200×3 gives us \$600. I have existing costs of \$4,000, so it would be \$4,000 plus \$600, and that makes it \$4,600.

Interviewer: Okay, I agree with that.

Candidate: So we have \$4,600 for manufacturing, \$4,000 for raw materials, and \$1,100 for transportation for Gold Chem. I'll add these up to get the new total variable cost for Gold Chem. Those amount to \$9,700 per ton.

Interviewer: Okay.

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Candidate: Now if you look at these two numbers, the variable costs have gone up from \$8,950. Now they've gone up substantially for Gold Chem, so \$9,700 per ton is the new costs, compared to the variable costs of Mega Chem, which has come down. So it looks like what one can hypothesize from this is that Mega Chemicals was able to enjoy a better economy of scale and therefore, bring down its total variable costs; whereas, Gold Chem lost that economy of scale.

Interviewer: What is the major driver of that change?

Candidate: The major driver of that change—I would say the major driver for Mega Chem is the manufacturing costs, which have been reduced \$600 per ton. And the major driver for Gold Chem's increase in the variable cost is again the manufacturing cost, which has gone up by \$600.

Interviewer: What does that mean exactly? What are the implications of that? Phrased differently, what's really going on here in this industry?

Candidate: Okay, can I take 30 seconds?

Interviewer: Of course, any time you want to, please feel free to do so.

Candidate: What is going on in this industry is: whoever has larger volumes of production enjoys better economy of scale, and is able to contain its manufacturing costs. So the key differentiator to be more profitable in this industry is to keep your manufacturing costs low while producing the specialty chemical.

Here the candidate made a really insightful, very concise comment. Comments like these are exactly what you're looking for out of a candidate, and he made a good one. Again, just as a general rule of thumb, better if these insightful comments are made proactively, and not in response to a particular question from an interviewer.

Interviewer: Okay.

Candidate: Now we can move on and look at the second part of the case, where we talk about whether this company should remain independent. This will have implications with it, and it will also have implications to what price each of these companies get charged in this industry.

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Interviewer: I would say this, given what you know so far, what would you...actually before we get there, let me ask some other questions. So given what you know so far, how do you think this industry will evolve or is in the process of evolving? What does this industry look like after this evolution has taken place?

Candidate: I would say this industry would become less profitable for two reasons. One reason is that there is now a major competition going on between Gold Chem and Mega Chem, so there will be— and we see the total market production has stayed constant at 80,000 tons.

So since there are no new customers, or let's say no new orders being written from even the existing customers – we don't know which of these, but we know for sure the demand is constant. So then the price and customer market share would be the main targets for each of these companies. So they will try to undercut each other in terms of pricing, and the only way they can do that is by reducing, by improving the economies of scale in manufacturing.

The second part I wanted to comment here was: there could come a point where below a certain price, a certain cost of manufacturing, the companies cannot reduce it any further – at which point they will be pressed hard, and may no longer remain profitable, either of them.

Interviewer: Okay. Who has the advantage in this market and why?

Candidate: Unlike what seemed in the beginning, where we know that Gold Chem owned resources of its own raw materials, it doesn't look like Gold Chem has the advantage or the upper hand in this market. Instead it looks like Mega Chem, which is a very large company and therefore may have better economies of scale throughout its value chain, may have an upper hand.

Therefore Mega Chem seems to be doing better going forward.

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<p>Again, this is another insightful comment from this particular candidate. He's doing a very nice job here on making these particular points.</p>

Interviewer: Okay, and given that initial conclusion, let me ask you, in your gut does that seem like a reasonable answer?

Candidate: To me it does, except for this one thread – the raw materials. We haven't looked into where these raw materials are coming from, and how precious these are. If there was a way where Gold Chem could foreclose the supply of raw materials to Mega Chem, then it would tremendously drive up the price of raw materials and the cost of raw materials for Mega Chem. Therefore, whatever advantage and economies of scale it has gained through this kind of manufacturing costs will quickly vanish. So that could be another factor.

Interviewer: Certainly, I would agree with that. What other factors could be or should be considered that haven't been discussed so far that might cause you to change your conclusion that you've reached so far? What other factors would be worth looking at?

Candidate: Economies of experience – we talked about how Gold Chem has been in this industry longer than Mega Chem, and so economies of experience with that. The total aggregate of chemicals they've produced over the years, they have learned some ways to better optimize the process or reduce or remove certain extra steps in manufacturing. They may then be able to come out with a better manufacturing process all together and therefore, may have an upper hand over Mega Chem.

Interviewer: Okay, what else would you consider?

Candidate: Existing customer relations – so if there are existing customer relations that have locked in the customer, there is some kind of switching cost that Gold Chem has built into those contracts, either through long-term contracts or certain prohibitions, it may prevent Mega Chemicals from selling these products to these customers.

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One thing, which I haven't spoken about yet but I looked at in Exhibit 3, is the extra manufacturing capacity that Mega Chem has. That could again be one big reason why Mega Chem is – right now for the time being – able to enjoy that economy of scale. Going forward, once that capacity is fully utilized, then it would be an at par competition and therefore, that economy of experience that I talked about which Gold Chem enjoys would play in it going forward, once Mega Chem has reached its capacity of utilization.

Interviewer: Okay, great. Let's say you're in the client's office building and you walk into the elevator and run into the CEO. She knows you've been working on this for quite some time and asks you, "Given what you've learned so far, what are your

thoughts on my two questions earlier around what is the impact on Mega Chem's entry into this business for us at Gold Chem, and should we remain independent or consider being acquired?" What would you say to that?

Candidate: Can I take 20 seconds to gather my thoughts?

Interviewer: Sure.

Candidate: Okay. So based on my analysis, I think Gold Chem should pursue this route of manufacturing and selling these specialty chemicals, even going forward. Mainly because there is a certain economy of scale that comes with manufacturing, and Gold Chem has been in this business long enough.

Therefore, (1) it has better economies of experience, and can better optimize its manufacturing process than its other competitors. Recognizing that manufacturing is the key cost driver for variable costs and the demand overall, Gold Chem should consider how it can retain its existing customers; further optimize its distribution and delivery network; and, continue to command its own sources of raw materials to maintain low variable costs going forward, because that is going to be the key differentiator.

The third thing: Gold Chem should be cognizant of the fact that its biggest competitor, Mega Chemicals, is a new entrant and is still trying to establish and early on, it has that extra capacity to utilize because originally, it is enjoying these economies of scope. But those will quickly vanish once that capacity has been 100% utilized.

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So ultimately again, it ties back to: since the industry is not growing (it is 80,000 tons constant production), the price of the material – which is again driven by the manufacturing costs and the economies of experience and scope that Gold Chem enjoys – gives it an upper hand.

Interviewer: Let me challenge that conclusion. Looking at your analysis, how can Gold Chem have the upper hand if it is going to lose its #1 market share position and fall behind Mega Chem, once Mega Chem reaches the full capacity it is able to produce at? How would you respond to that comment?

Here the candidate has made a conclusion that did not seem very logical, which obviously is a problem. Let's see how he responds to this particular question in a second.

Candidate: I think as I said earlier, Mega Chem may be able to produce more but it has to sell it to a limited or fixed market overall, which means Mega Chem is going to effectively steal customers or market share from Gold Chem. So if Gold Chem takes steps in regards to keeping its existing customers and maintaining exclusive supplies to those existing customers, it would be able to prevent Mega Chemicals from dumping its extra produced specialty chemicals to its own customers. That is one thing.

The second thing is: Gold Chem can further look into where further additional business process optimization can be done in its manufacturing process to further reduce those manufacturing costs. Third, if it so happens there is some rare raw materials that are being used for this kind of specialty chemical, there is a way for Gold Chem to foreclose this from Mega Chemicals. It will further raise the barrier to entry for Mega Chemicals, and allow Gold Chem to control its market share and profitability.

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Here the candidate has stated a conclusion that really is not supported by the facts. That's a big problem. So far the synthesis is quite poor, and unfortunately – because many other parts of the case, he actually did quite well.

Interviewer: Great. For my own notes, can you repeat the three points again? I know the third one was the sourcing, and the second one was the manufacturing costs, if I recall.

Candidate: Yes, the second one was better, further process optimization. And the first point I made was customer retention – lock in your existing customers and prevent Mega Chemicals from stealing market share.

Interviewer: Okay. Then with respect to the second question the client asked – should the company remain independent or be acquired? What are your thoughts on that, and why?

Candidate: My thoughts on that is: if a partnership or acquisition allows Gold Chem to increase or utilize extra production capacity – say it partners with Worldwide, which may have extra surplus production capacity, which Gold Chem could use very quickly – then Gold Chem may be able to prevent Mega Chemicals from driving down the variable costs, because it will enjoy the same kind of economy of scale or even better.

So in that sense, a partnership or acquisition might make sense. But from a market stealing shares standpoint or gaining new customers, I don't think there is much value to that. Mainly, it is to try to be the economy of scale, and get any kind of surplus capacity for cheap.

Interviewer: Okay, great. Why don't we finish up, and I'll give you some feedback. I would say overall pretty good. I would say there are some small things you can do to refine the opening, and a little bit of refinement on the synthesis at the end would be beneficial.

00:37:59

I've mentioned this before, but one observation I want to make and point out is: in an interviewer-led interview, there are three key areas you need to excel in to do well. The middle section— I'll do sort of out of chronological order. The middle section, which is usually the math computation, people either do it well or they don't. If you're pretty good with math, these are usually pretty easy; if you're not, you typically struggle. So amongst those able to do the math, that tends not to be a distinguishing performance area within an interview. It really seems to come down to your structuring up front and your synthesis. So if you can structure well and synthesize well, and you can do math in the middle, then you stand a very good shot at doing well in this particular interview.

In this particular case, I wanted to give you that background as we dive into the comments I make about this particular candidate's performance.

The middle section was actually quite good, and I have very few comments overall. On the opening of the structure, let's see... I'm trying to think back. I think you could state in slightly more detail justifying the key factors you want to consider. For example, the structure you opened with initially was customers, competitors, the client, and the product – so that's the business situation framework.

I think you did mention some of the relevant points underneath. Actually, it was my fault, I didn't mention the business was a commodity business, which I have now made a revision to my own notes to do that, because I didn't include that in the description.

With that, I thought you did a pretty good job in laying the structure out. It wasn't the one I wanted to use, but I didn't provide enough information to indicate that a different one might have been appropriate – particularly the whole variable cost side, which you did figure out.

One thing to keep in mind on these opening structures is: unlike a traditional case interview, which you might be familiar with from some of my materials, this is a much more interactive process, and quite often in the opening, you're really just structuring and you're not really analyzing.

00:39:54

You notice that you started asking some questions to get data around, I think, customer segments or something along those lines. I essentially, in hopefully a polite way, declined to give you any data. I don't know if you recall that?

Candidate: Yes, I do.

Interviewer: So what we're looking for here, particularly in this format, most of the time is: what is your structured approach? And the thing we're looking for, or at least I'm looking for, is: did you memorize the framework and are you just spitting it back out at me, or particularly in your subcomponents within customers, within competitors...were those things specific to this situation that would be relevant to the question at hand or the hypothesis at hand or issue at hand?

One of the things we want to be aware of – and I think you've done this, but you could do it slightly more – would be: I started asking you why you thought certain pieces were relevant. You had some good answers. So just make sure, whatever you say, that it is linked back to a hypothesis you perhaps have in your head. If you don't have a specific hypothesis, you want the structure to at least be one that is very conducive to testing the hypothesis.

Does that make sense?

Candidate: Yes, I see what you're saying. This is very helpful.

Interviewer: Every piece you mention, you have to further justify why. So it is okay to just say, "customers, competitors, client and product," and then say, "Within customer, I specifically want to know this – X, Y and Z – because if X is this way, then this means *this* conclusion is true. If Y is that way, it means *this* conclusion is true. If Z is this way, then it means the other conclusions are actually false."

So – having a rationale that you have a hypothesis in mind, and that the specific data you want to look at would, in fact, prove or disprove that hypothesis. I think explaining that rationale would be good. I think you had it, but I think you sort of kept it to yourself a little too much, and it would be useful to share it to prove you were being much more thoughtful about this, and not just memorizing and recalling.

Candidate: Great, thank you.

00:41:52

Interviewer: Sure. The next piece here – all the math I think was pretty good. One challenge people have had, and I've been deliberately doing more complicated math

problems that are a little more involved. Keep good notes so you don't get lost – that's always useful. Double check to make sure you don't misread things – that is useful – but overall, I didn't have anything I would improve on, frankly, once we got within a framework, looking at a particular branch. I think your approach was quite logical; you did a good job stating the specific components you were looking at and explaining the math. The biggest risk in that area is always just careless errors.

Then I would say the other feedback area would be at the end, around the synthesis – it could definitely be stronger. I thought your problem-solving logic in the middle was pretty good. Then I think the synthesis would be...so the question originally was: what are the implications for how this new competitor impacts the client?

There were a couple of things that I thought were worth mentioning. One would be, to the CEO: "You're no longer going to be #1," would be one. 2) Perhaps you don't have enough information on this for sure, but it seems like Gold Chem has lower cost position in the marketplace, prior to Mega Chem's entry. It looks like at full maturity, that will no longer be true. So: "No longer will you be #1 in volume, but you'll also be #2, presumably, in cost competitiveness."

So the implication basically would be to the client, "You're not going to be #1 anymore." "You're going to be #2, and you better get used to it" is the message.

Again, it's really important that your synthesis be crystal clear and concise, as to what your conclusions are and your insights are for a particular client.

Candidate: Okay.

Interviewer: Then you could suggest specific things they'd want to do next. I'm not sure you have enough data to make those conclusions firmly yet, so you might want to make those softer. I think the specific feedback I would give you is: I think you jumped directly to providing suggestions on what to do. You skipped the original question, which was: what is going to happen to this business once this company gets in all the way?

00:44:00

You jumped to "how do you fix it," which wasn't the question. So I guess a second feedback point would be to (and I mentioned this to virtually everyone I have given this case interview format to) is particularly at the beginning, it is very important to write down word for word what the objective of the case is, or the questions the client is asking. I would typically write it down on a clean piece of

paper, box it, and probably even rip off... if you're using a pad, rip it off and put it on the side, so you can constantly look back at the original question.

You did do a very good job of synthesizing throughout the case, which some people don't. So after one of the analyses, you – without me prompting – automatically linked it back to what it meant to the client, which I thought was very good.

So at the end, you just want to make sure you answer the specific questions the client asks. I would always answer the questions succinctly first, and then prove it. You were a little light on the proof. So the ideal structure for a synthesis at the closing is: my answer; the answer of what you think is true; and, the specific reasons *why* you think it's true.

The way you did it, there were two problems. One is: you mentioned specific suggestions, as opposed to stating what the outcome would likely be in the industry. That was one area for improvement.

The second was: the suggestions, you didn't really have evidence that they were true. One of them, you mentioned that Gold Chem should stay in the business because they could use their economies of experience to reduce their cost structure, but all the evidence doesn't support— the evidence so far that's available does not support that. It is an interesting idea and could definitely be a hypothesis, but it shouldn't be framed as a conclusion.

Candidate: Got you.

Interviewer: So what you *could* say is something like: "The client was no longer going to be #1, they were going to be #2 – both in share and in cost competitiveness – and will take a back seat to Mega Chem. The key driver of this seems to be manufacturing costs. Whoever has the better manufacturing costs seems to be much more likely to win, even though Gold Chem has this advantage in sourcing. Manufacturing cost competitiveness seems to be a bigger factor that overcomes any advantage Gold Chem has in sourcing of raw materials."

00:46:07

I think the big issue here is this manufacturing cost thing. Then when we talked about the acquisition, I think you did a very good job in stating that the acquisition should be considered only in the context of manufacturing costs. So if being owned by somebody else would reduce the manufacturing costs, you would want to consider it; if not, then perhaps it wouldn't make much of a difference.

I think in that one issue around manufacturing costs, it would be really important to highlight, because I think it is the key issue that really changes the answer quite a bit. It is the most sensitive factor, and having that be a little more prominent in your synthesis, I think would be appropriate.

Candidate: Great, this is very helpful. In your blogs, you say “differentiate yourself from other candidates,” could you show some suggestions?

Interviewer: What will come into play is— there is usually in this format of questions, around the end, around like other factors to consider. I think you had two or three good ones – that’s usually where you want to mention that.

Actually, I much rather like the word “creativity,” so much as like kind of a combination of creativity, business acumen, intuition. And so there is usually a question in there at some point that says, “Give me your list of everything else they should consider” kind of a thing. Or “Give a list of all the other ways you can think of, and not just the most obvious ones which we spent the case on, but what are all the other factors?”

So what we’re looking for there – my suspicion there is sort of insightfulness and breadth. So you have very good logical skills, and so the question there is: are you able to immediately go from linear / logical to like lateral thinking very quickly? That is usually where you, I think, would want to be most creative.

I would say to do well in that section, it is less about coming up with a laundry list of every possibly thing they should consider. It is more noticing and piecing together, given everything you’ve heard, the most important other factors that were not considered. So what would be relevant would be... and I think this is where your economies of experience and scope would come in, because it’s an idea, you don’t have proof of it.

00:48:08

So you might say, “Other factors might be... well, Gold Chem has been in this business a long time. I wonder if there *is* a way to improve their manufacturing process, given their experience. It doesn’t seem like it, given the data, but perhaps there is a way that’s worth exploring further. That would be one thing to consider.”

“The second thing would be: how strongly is client relationships? We haven’t mentioned those at all. Is there any value add in those chemicals coming from Gold Chem from a service aspect, because I know the chemicals are identical? Is there something around the delivery schedule, reliability, any of those soft factors

that would be a factor? That would be another area to consider that might change how this industry evolves.”

So that is typically where I think you have the most business acumen, breadth of thinking, and not just likely any of your ability.

Candidate: Got you, okay.

Interviewer: Okay, so I guess to recap – I was making my own notes here of the big things for you. I would say number one would be: justify your structure up front. So everything you say you think is important, you need to explain *why* it is important. It is better if you volunteer why it is important, rather than having the interviewer ask.

Then certainly I think, let’s see... in the synthesis, I would suggest going back through my materials around the synthesis piece. I think that seems to be your weak spot. If I had to grade you, I would say your linear logic is very good, and probably a 9 or perhaps even a 10. I didn’t notice any major problems. I would say the structure up front is probably a 7 ½ to 8 ½. I think you got the right one, but I wasn’t sure you could *prove* you got the right one, if that makes any sense.

Candidate: Okay, I see it.

Interviewer: I agree with what you said, I just didn’t know if you just got lucky or you were really thoughtful about linking it back to a hypothesis, and had particular reasons for everything you asked for. It was a little unclear, but if you volunteered the justification, then it would have been like a 9 to 9 ½. So I think you were very close up there – it’s already in your head and I think you were thinking it, you’re just not saying it out loud.

00:50:03

In comparison, I think your weakest spot by the widest margin would be on the synthesis. In comparison to everything else, I would put it more around a level 6 out of 10, so both in the structure of it and then the focus of it. So conclusion first, and conclusions always answer the question that was asked, which is sometimes different than what candidates— sometimes the candidates want to answer a different question, one that wasn’t asked. But you want to make sure you answer what the client asked first.

Then I think...so conclusion plus three supporting statements. So I would go back and relook at that structure, both in my Case Interview Secrets videos and Look Over My Shoulder as well, and pay attention to that.

And for practice, I would suggest two things in your case. One would be: think through the other cases you've gotten from the various employers, and redo the synthesis for all of them. I would practice redoing it both on paper, as well as out loud. Sometimes if you write it out, it is easier to see the logic or lack thereof in terms of the organization. Then practicing out loud is...there is definitely a sort of tempo and rhythm to it. I would record it onto an audio recorder and play it back, critique yourself. There was a couple of articles in Success Stories on my website of some people who thought I was really sort of obsessive compulsive and very uptight about the synthesis.

But it really makes a big difference because I can tell, like your logic is clearly on par with other people at this caliber. I didn't see any problems there. But that synthesis – that's when we put you in front of a client and they are going to get confused, or things you said we couldn't prove, and so you kind of put your firm in trouble because you made some conclusions that you couldn't back up. So that was the biggest opportunity for improvement from my point of view.

Candidate: Wonderful! I've written those down, thank you so much.

Interviewer: Good luck and overall, good. I think you're within striking distance – I don't see anything that would prevent you from getting a pretty good job offer from one of the major firms. I think the areas you're a little weak on – those are very fixable. I don't see any structural issues from you doing a lot better.

00:52:02

So my overall take on this particular candidate was: although I would not have passed him in this particular case, I felt the areas he had problems with were areas that were more easily fixable. For example, the analysis portion, which is usually math – either you happen to be good at math or you don't. If you're not that great at math, it's very hard to get that much better very quickly. But on things that are more... things like communication skills, synthesis, having better habits in your structuring, when you've had the right structure but doing it in a certain way to earn a full credit for that, those are all things that can be improved upon.

So this particular case, I thought he was almost borderline, but the areas that kept him from passing the borderline up to "pass" in the case were again things that were ultimately fixable.