There are two examples here: APA and RRC.

Such APA, RRC are the ticker of companies.

Procedure:

Step 1: For given raw data, copy the columns to the right.

Hints:

1. Copy ticker-yyyymmdd to the file\_header column.
2. There are two cases that you don’t need to copy the tables. In first case, there is **no volume data** (RRC example, line 21 to line 36). In the second case, the table just repeated what it has before (RRC example, line 39 to line 50 just repeats the table in line 2 to 17). For the second case, copying one table out of the duplicates are enough.
3. Copy the row number if you can. But some cases it can be more difficult, such as the APA example. In this case, just ignore it.
4. Be careful of the **unit**\_hedge. Sometimes it is the column header in the original table, sometimes it is together with the volume\_hedge. Also, if it has “000” or “thousands” in the unit hedge, also copy that down. [For example, APA file row 78~80].
5. Sometimes there are **many prices**. If the prices are in different cells, keep them as price1, price2, price3, and make sure you copy the names of those prices in the Price1\_name, Price2\_name, Price3\_name. [For example, APA row 25~32] If such names of columns are multiple rows, use “concatenate” function in excel to merge them and copy. [See APA example, row 24 column H] You can use other methods, as long as the full price names are copied, I am fine.
6. If the column header has some information saying that it is for per day, then input a “1” into the “daily\_volume”, **especially when the “/day” doesn’t show up in the unit**
7. The prices may have many odd characters, such as $ (US dollar sign), C(Canadian dollar sign), “(“ and “Neg” (incomplete braces). Copy them as they are into the price cells.
8. In RRC example, the volume and the units are in the same cell. In this case, copy the cell to the price and leave the “unit\_hedge” blank. We will have codes to handle them systematically.
9. There are some difficult case, like the following [APA example, row 62-71]:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Fixed-Price Swaps | |  | Collars |  | Call Options | |
| 2 |  |  | Weighted |  | Weighted | Weighted |  | Weighted |
| 3 |  |  | Average |  | Average | Average |  | Average |
| 4 | Production Period | Mbbls | Fixed Price(1) | Mbbls | Floor Price(1) | Ceiling Price(1) | Mbbls | Strike Price(1) |
| 6 | 2009 | 368 | $67.95 | 9321 | $63.39 | $80.14 |  |  |
| 7 | 2010 | 2018 | 70.87 | 6016 | 62.11 | 77.44 | 368 | 129.5 |
| 8 | 2011 | 3285 | 71.16 | 4377 | 65.83 | 84.41 | 1095 | 134.17 |
| 9 | 2012 | 2926 | 71.34 | 1456 | 66.88 | 85.52 | 364 | 138 |
| 10 | 2013 | 1086 | 71.34 |  |  |  |  |  |

In this case, you need to judge several columns are for the swaps, several are for the collars, and some are for call options. [I added the border here. The original table does not provide this border.] How?

First way is that, you can check whether the volumes or prices have been repeated. Here, the volume column (Mbbls) have been repeated. So you can decide the break should be right in front of the Mbbls.

Second way is that, you can go to the link we provide here. If you click on that and search on that website, you find the original table:

|  |  |
| --- | --- |
| **3.** | **HEDGING AND DERIVATIVE INSTRUMENTS** |

The Company is exposed to fluctuations in crude oil and natural gas prices on the majority of its worldwide production. Management believes it is prudent to manage the variability in cash flows on a portion of its crude oil and natural gas production. The Company utilizes various types of derivative financial instruments to manage fluctuations in cash flows resulting from changes in commodity prices. Derivative instruments typically entered into by the Company and designated as cash flow hedges are swaps and options.

As of December 31, 2008, we had entered into the following crude oil derivative instruments:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | **Fixed-Price Swaps** | | | | | |  |  | **Collars** | | | | | | | | | |  |  | **Call Options** | | | | | |  |
|  |  |  | |  |  | **Weighted** | |  |  |  | |  |  | **Weighted** | |  |  | **Weighted** | |  |  |  | |  |  | **Weighted** | |  |
|  |  |  | |  |  | **Average** | |  |  |  | |  |  | **Average** | |  |  | **Average** | |  |  |  | |  |  | **Average** | |  |
| **Production Period** |  | **Mbbls** | |  |  | **Fixed Price(1)** | |  |  | **Mbbls** | |  |  | **Floor Price(1)** | |  |  | **Ceiling Price(1)** | |  |  | **Mbbls** | |  |  | **Strike Price(1)** | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  | 368 |  |  | $ | 67.95 |  |  |  | 9,321 |  |  | $ | 63.39 |  |  | $ | 80.14 |  |  |  | — |  |  | $ | — |  |
| 2010 |  |  | 2,018 |  |  |  | 70.87 |  |  |  | 6,016 |  |  |  | 62.11 |  |  |  | 77.44 |  |  |  | 368 |  |  |  | 129.50 |  |
| 2011 |  |  | 3,285 |  |  |  | 71.16 |  |  |  | 4,377 |  |  |  | 65.83 |  |  |  | 84.41 |  |  |  | 1,095 |  |  |  | 134.17 |  |
| 2012 |  |  | 2,926 |  |  |  | 71.34 |  |  |  | 1,456 |  |  |  | 66.88 |  |  |  | 85.52 |  |  |  | 364 |  |  |  | 138.00 |  |
| 2013 |  |  | 1,086 |  |  |  | 71.34 |  |  |  | — |  |  |  | — |  |  |  | — |  |  |  | — |  |  |  | — |  |

In this case, you know where the break is. Fortunately, we don’t have so many these cases.

1. In some cases, if **you rearrange the order of the columns on the right, it makes your copy-paste much faster**. For example, in RRC, you can see I rearrange the order of the columns. So in this case, I simply copy the left and paste to the right without much efforts.
2. In some cases the table looks like the following (CLR)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Period and Type of Contract** |  | **Volume in MBbls** |  | **Swaps Weighted Average** | |  | **Collars** | | | | | | | | | | |
|  |  |  | **Floors** | | | | |  | **Ceilings** | | | | |
|  |  |  | **Range** | |  | **Weighted Average** | |  | **Range** | |  | **Weighted Average** | |
| January 2010—March 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Swaps |  | 343 |  | $ | 84.00 |  | $ | — |  | $ | — |  | $ | — |  | $ | — |
| Collars |  | 148 |  |  | — |  |  | 75.00 |  |  | 75.00 |  |  | 96.40 |  |  | 96.40 |
| April 2010—June 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Swaps |  | 410 |  |  | 84.22 |  |  | — |  |  | — |  |  | — |  |  | — |
| Collars |  | 228 |  |  | — |  |  | 75.00 |  |  | 75.00 |  |  | 96.40 |  |  | 96.40 |
| July 2010—September 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Swaps |  | 414 |  |  | 84.22 |  |  | — |  |  | — |  |  | — |  |  | — |
| Collars |  | 598 |  |  | — |  |  | 75.00 |  |  | 75.00 |  |  | 94.50 - 96.40 |  |  | 95.23 |
| October 2010—December 2010 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Swaps |  | 414 |  |  | 84.22 |  |  | — |  |  | — |  |  | — |  |  | — |
| Collars |  | 598 |  |  | — |  |  | 75.00 |  |  | 75.00 |  |  | 94.50 - 96.40 |  |  | 95.23 |

But in excel, we record as

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Period and Type of Contract | Volume | SwapsWeightedAverage | | Collars |  |  |  |
|  | in |  | Floors |  | Ceilings |  |  |
|  | MBbls |  | Range | WeightedAverage | Range | WeightedAverage | |
| Swaps | 343 | $84.00 |  |  |  | $ | January 2010 March 2010 |
| Collars | 148 |  | 75 | 75 | 96.4 | 96.4 | January 2010 March 2010 |
| Swaps | 410 | 84.22 |  |  |  |  | April 2010 June 2010 |
| Collars | 228 |  | 75 | 75 | 96.4 | 96.4 | April 2010 June 2010 |
| Swaps | 414 | 84.22 |  |  |  |  | July 2010 September 2010 |
| Collars | 598 |  | 75 | 75 | 94.50|96.40 | 95.23 | July 2010 September 2010 |
| Swaps | 414 | 84.22 |  |  |  |  | October 2010 December 2010 |
| Collars | 598 |  | 75 | 75 | 94.50|96.40 | 95.23 | October 2010 December 2010 |

In this case, be careful of the price2\_name and price4\_name, where you should input: “Floor WeightedAverage” as the Floor covers both the “range” and the “WeightedAverage” columns.

1. In some cases, it is easier to transpose the table and then copy paste. See “APC\_3waycollar\_example\_GC.xlsx”
2. You don’t have to check the links always. The links help us to solve issues when we are confused. If you are very confident about what to put into the fields, just use the excel files I give you will be enough.

Feel free to email me any time if you have questions, especially at the beginning of the work.

Step 2: After you finish copy-pasting on the right. Copy the right and paste to a separate sheet. Remove the empty rows. [One easy way to remove the empty rows is to sort on File\_header and row\_num, if you always have the row\_num.]