

# How To Set Up An Automatic Ownership Reversion

March 27, 2004

MICA has the capability to automatically change the ownership interests in a well based upon a user specified trigger point. This paper discusses how to do this.

**Step 1 – Set up the economic input data.** You must first generate a production forecast and set up the standard economic input data for the well. This would include the Base Data, such as the “Start Date”, a price forecast, expenses, severance taxes, ownership interests, and investments.

Set up the before reversion ownership interests on the “Interest” tab of the Economic Input form as shown below:

The screenshot shows the 'Economic Input - KLAPPROTH 1' window with the 'Interests' tab selected. The 'Interests [8/8]' section contains a table of interest percentages for various categories. The 'Working Int. [%]' field is highlighted with a red circle and set to 100.000000. The 'Revenue Int. - Oil [%]' field is also highlighted with a red circle and set to 80.000000. The 'Owner List' section shows 'V-F PETROLEUM INC.' selected. The 'Carry Forward' button is highlighted with a red circle. The 'Set To Default' button has a checkmark. The bottom of the window shows navigation buttons, a 'Run Economics' button, a 'Close' button, and a status bar with '0%'. On the right side, there are fields for 'IRR [%]' (400.00), 'Payout [Yrs]' (0.00), and 'ROI' (0.00).

Category	Value
Working Int. [%]	100.000000
Revenue Int. - Oil [%]	80.000000
Revenue Int. - Gas [%]	80.000000
Rev. Int. - Water [%]	0.000000
Rev. Int. - Other 1 [%]	0.000000
Rev. Int. - Other 2 [%]	0.000000

In this example, V-F Petroleum will retain a 100% working interest and an 80% net revenue interest until payout. At payout, the working interest will become 50% with an net revenue interest of 43.75% net revenue interest. We will evaluate the V-F Petroleum’s perspective. The other partner, Houston Exploration Company will have a 5% overriding royalty interest until payout. After that point, Houston Exploration Company will participate with a 50% working interest and a 43.75% net revenue interest. V-F Petroleum will pay 100% of the investment to drill the well.

**Step 2 – Set up the reversion data.** Select the “Reversion” tab on the Economic Input form as shown below:

The top part of the form concerns the trigger of the reversion point. You can use three different methods to trigger the ownership reversion. Probably the most common will be the “Rev. Point At Net Cum [\$]”. This method simply examines the net cumulative cash flow of the project and when it reaches the specified point, it will change the ownerships.

For example, if we were to set the “Rev. Point At Net Cum [\$]” to zero then when the net cumulative cash flow reached zero, the ownership interests would be changed. The following example cash flow will help to explain the calculation:

Period	Cash Flow	Cum Cash Flow	Comments
1	-30000	-30000	Initial investments cause a large negative
2	2000	-28000	Each cash flow period causes the cumulative value to be a little less negative.
3	3500	-24500	
4	4000	-20500	
5	8500	-12000	
6	5000	-7000	
7	4000	-3000	
8	4000	1000	At this point the cumulative net cash cumulative flow became positive. Since it was greater than our value of zero, the reversion would be triggered at this point.

The above example of entering a zero in the “Rev. Point At Net Cum [\$]” basically triggered the reversion at 100% of payout. If we wanted a reversion at 200% of payout, we would simply enter the value of the investment. This would cause the net cumulative cash flow to pass through zero and then add up to the investment value before triggering the reversion.

Enter the reversion data as shown below. Be sure to select the radio button next to the type of trigger you want to use. For our example, we will use the “Rev. Point At Net Cum [\$]”. Enter the “Interests After Reversion” also.

The screenshot shows the 'Economic Input - KLAPPROTH 1' software interface. The 'Reversion' tab is active. In the 'Reversion Point' section, the 'Rev. Point At Net Cum [\$]' field is set to 0, and the radio button next to it is selected. The 'Interests After Reversion' section shows the following values: Working Int. [%] is 50, Oil Rev. Int. [%] is 43.75, and Gas Rev. Int. [%] is 43.75. The bottom bar contains a 'Run Economics' button, a 'Close' button, and a '100%' indicator. The IRR [%] is 10.60, Payout [Yrs] is 7.58, and ROI is 2.12.

After you have entered the data click the check mark on the navigator bar.

**Step 3 – Run the economics.** After you have all data set up click the “Run Economics” button at the bottom of the Economic Input form. That’s all there is to it. If you look at the Interest tab using the grid view you will be able to see the version.

**Economic Input - KLAPPROTH 1**

Base Data | Prices | Expenses | Severance Tax | Interests | Discounts | Investments | Reversion | Net Profits Tax

Date	Working Int. [%]	Revenue Int. - Oil [%]	Revenue Int. - Gas [%]	Rev. Int. - Water [%]
05/2011	100.000000	80.000000	80.000000	0.000000
06/2011	100.000000	80.000000	80.000000	0.000000
07/2011	100.000000	80.000000	80.000000	0.000000
08/2011	100.000000	80.000000	80.000000	0.000000
09/2011	50.000000	43.750000	43.750000	0.000000
10/2011	50.000000	43.750000	43.750000	0.000000
11/2011	50.000000	43.750000	43.750000	0.000000
12/2011	50.000000	43.750000	43.750000	0.000000
01/2012	50.000000	43.750000	43.750000	0.000000

\Form\Grid/

Run Economics | Close | 100%

IRR [%] 7.98  
Payout [Yrs] 7.58  
ROI 1.73

**Note:** There is one very important point to be aware of. If you change some economic input data that would modify the payout of the well, you should always go back to the Interest tab and Carry Forward each of the ownership interests.

For example, suppose we lowered the product prices. This would cause the payout to occur sometime later than 9/2011 in our original example. If the payout occurred on 5/2015 and we did not go back and carry forward the original ownerships of 100% - 80%, then the change that occurred on 9/2011 would still be there. And when the reversion did proceed on 5/2015, the ownership interests would already be set at that date (and actually back to 9/2011) to 50% - 43.75% from the prior run.

To observe how the economics would appear from the perspective of the other partner in this well, Houston Exploration Company, you would have to set up another well. After entering other pertinent data you should do the following. On the Base Data tab of the Economic Input form, set the "Use Forecast From File" to the other well. Alternatively you could have copied the forecast from the other well into this one.

**Economic Input - PARTNER'S PERSPECTIVE**

Base Data | Prices | Expenses | Severance Tax | Interests | Discounts | Investments | Reversion | Net Profits Tax

Use Forecast From File

Start Date:   
 End Date:

Apply Economic Limit  
 Look-back Analysis

Purchase Price:

Gas/Oil Equivalence Ratio:

Comments:

Last Run:

Run Count:

Navigation:

IRR [%]  
 Payout [Yrs]  
 ROI

On the Interest tab, set up the before reversion ownerships. In this case it was a 5% override and is shown below. Don't forget to carry them forward.

**Economic Input - PARTNER'S PERSPECTIVE**

Base Data | Prices | Expenses | Severance Tax | Interests | Discounts | Investments | Reversion | Net Profits Tax

Interests [8/8]

Date:

Working Int. [%]:

Revenue Int. - Oil [%]:

Revenue Int. - Gas [%]:

Rev. Int. - Water [%]:

Rev. Int. - Other 1 [%]:

Rev. Int. - Other 2 [%]:

Owner List:

Form/Grid/

Navigation:

IRR [%]  
 Payout [Yrs]  
 ROI

After you have set up the ownership interests, set up the Reversion data as needed. Only in this well, you will need to set the trigger point to the same date that the original well reverted. This is done by selecting the “Reversion Point From File” radio button and then clicking the “Select” button and selecting the other well, Klapproth 1. Then enter the after reversion interests on the lower panel

When you click “Run Economics”, MICA will calculate the economics with the ownership interests changed on the same date as the other well. This is shown below:

Date	Working Int. [%]	Revenue Int. - Oil [%]	Revenue Int. - Gas [%]	Rev. Int. - Water [%]
06/2011	0.000000	5.000000	5.000000	0.000000
07/2011	0.000000	5.000000	5.000000	0.000000
08/2011	0.000000	5.000000	5.000000	0.000000
09/2011	50.000000	43.750000	43.750000	0.000000
10/2011	50.000000	43.750000	43.750000	0.000000
11/2011	50.000000	43.750000	43.750000	0.000000
12/2011	50.000000	43.750000	43.750000	0.000000
01/2012	50.000000	43.750000	43.750000	0.000000
02/2012	50.000000	43.750000	43.750000	0.000000

IRR [%] 400.00  
Payout [Yrs] 0.00  
ROI 0.00

Step Review:

**Step 1 – Set up the economic input data.**

**Step 2 – Set up the reversion data.**

**Step 3 – Run the economics.**