Problem 15-8

On December 31, 2013, Rhone-Metro Industries leased equipment to Western Soya Co., for a four-year period ending December 31, 2017, at which time possession of the leased asset will revert back to Rhone-Metro. The equipment cost Rhone-Metro $365,760 and has an expected useful life of six years. Its normal sales price is $365,760. The lessee-guaranteed residual value at December 31, 2017 is $25,000. Equal payments under the lease are $100,000 and are due on December 31 of each year. The first payment was made on December 31, 2013. Collectibility of the remaining lease payments is reasonably assured, and Rhone-Metro has no material cost uncertainties. Western Soya’s incremental borrowing rate is 12%. Western Soya knows the interest rate implicit in the lease payments is 10%. Both companies use straight-line depreciation.

Problem 15-8 (continued)

Part 1: Show how Rhone-Metro calculated the $100,000 lease payments.

Let X = Amount of each annual payment
PV of annual payments: Table 6, 4 payments @ 10% = 3.48685 x X
PV of guaranteed residual value: Table 2, 4 periods @ 10% = 0.68301 x $25,000 = $17,075
3.48685X + $17,075 = $365,760
3.48685X = $348,685
X = $348,685 ÷ 3.48685 = $100,000

Problem 15-8 (continued)

Part 2: How would this lease be classified by (a) Western Soya Co. (the lessee) and (b) by Rhone-Metro Industries (the lessor)? Why?

Lessee and Lessor Criteria:
1. Title transfer? No
2. Bargain purchase option? No
3. Lease term ≥ 75% of asset useful life? Yes, it is 66.7% (4 ÷ 6)
4. PVMLP ≥ 90% FMV? Yes, it is 100% ($365,760 ÷ $365,760)

Additional Lessor Criteria
1. Collectibility of the minimum lease payments is reasonably assured? Yes
2. Any lessor costs yet to be incurred are reasonably predictable? Yes

Therefore: Capital lease for lessee because it meets the 4th criterion. Direct financing lease for lessor. It meets the 4th criterion common to both the lessee and lessor, as well as both of the lessor specific criteria. It is direct financing because cost equals fair market value.
Problem 15-8 (continued)

**Part 3:** Prepare the appropriate entries for both Western Soya Co., and Rhone-Metro on December 31, 2013.

**Western Soya Co. (Lessee)**
- Leased asset $365,760
- Lease payable $365,760
- Lease payable $100,000
- Cash $100,000

**Rhone-Metro (Lessor)**
- Lease receivable $365,760
- Equipment $365,760
- Cash $100,000
- Lease receivable $100,000

Problem 15-8 (continued)

**Part 4:** Prepare an amortization schedule(s) describing the pattern of interest over the lease term for the lessee and the lessor. Both will use the same table:

<table>
<thead>
<tr>
<th>Date</th>
<th>Payment</th>
<th>Interest @ 10%</th>
<th>Principal</th>
<th>Balance</th>
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<tr>
<td>12/31/2013</td>
<td>365,760</td>
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<td></td>
<td>365,760</td>
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<tr>
<td>12/31/2013</td>
<td>100,000</td>
<td>-</td>
<td>100,000</td>
<td>265,760</td>
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<tr>
<td>12/31/2014</td>
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<td>26,576</td>
<td>73,424</td>
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<td>12/31/2016</td>
<td>100,000</td>
<td>11,157</td>
<td>88,843</td>
<td>22,727</td>
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<tr>
<td>12/31/2017</td>
<td>25,000</td>
<td>2,273</td>
<td>22,727</td>
<td>-</td>
</tr>
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</table>

Problem 15-8 (continued)

**Part 5:** Prepare all appropriate entries for both Western Soya and Rhone-Metro on December 31, 2014 (the second lease payment and depreciation).

**Western Soya**
- Lease payable $73,424
- Interest expense $26,576
- Cash $100,000
- Depreciation expense $85,190
- Accumulated depreciation $85,190
- (365,760 – 25,000) / 4

**Rhone-Metro**
- Cash $100,000
- Lease receivable $73,424
- Interest revenue $26,576
**Problem 15-8 (continued)**

**Part 6**: Prepare the appropriate entries for both Western Soya and Rhone-Metro on December 31, 2017, assuming the equipment is returned to Rhone-Metro and the actual residual value on that date is $1,500.

### Western Soya

- **Lease payable**: $22,727
- **Interest expense**: $2,273
- **Accumulated depreciation (4 x 85,190)**: $340,760
- **Loss on residual value guarantee**: $23,500
- **Cash**: $23,500

### Rhone-Metro

- **Cash**: $23,500
- **Asset**: $1,500
- **Lease receivable**: $22,727
- **Interest revenue**: $2,273

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<table>
<thead>
<tr>
<th>Western Soya</th>
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<tbody>
<tr>
<td>Lease payable</td>
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<td>Interest expense</td>
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<td>Accumulated depreciation (4 x 85,190)</td>
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<tr>
<td>Asset</td>
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<tr>
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<td>Interest revenue</td>
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