A Tale of Two Charts: North Slope Profitability, SB 21 and ACES (Revised)

By Richard A. Fineberg
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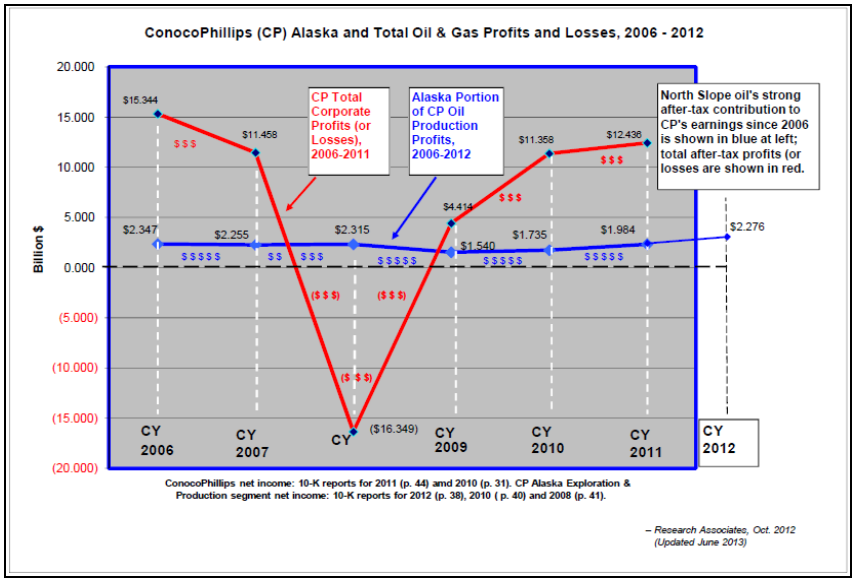
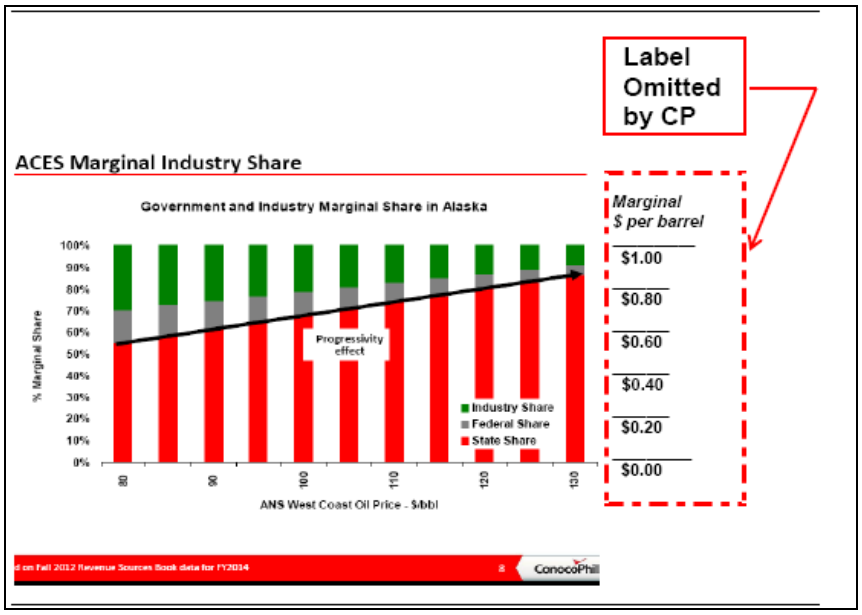
October 20, 2014 *





** This update to the August 11, 2014 draft report, re-posted October 24, 2014, includes worksheet revisions that strengthen conclusions of the original report.*

A TALE OF TWO CHARTS: NORTH SLOPE PROFITABILITY, SB 21 AND ACES *(Revised)*

-- Abstract --

By Richard A. Fineberg, October 20, 2014

(This report updates the August 11, 2014 draft report [copy available at web site archives].)

ConocoPhillips filings to the federal Securities and Exchange Commission … demonstrate that the company's strong and steady North Slope profits stand in marked contrast to its global ups and downs. During the 2013 legislative consideration of SB 21 and ACES, that chart was seldom seen. But during that legislative session a faulty and misleading ConocoPhillips chart on the petroleum revenue split between industry and government was shown six times. Despite … manifest defects, it was never seriously questioned by legislators. This revision to the original posting of *A Tale of Two Charts* includes an updated table and three new exhibits ... These data, derived from the revised worksheets in this appendix … add strength to the concerns expressed in the initial draft and lead to the following conclusions:

1. The panel exhibits based on the revised worksheets in the appendix to this updated report contradict the flawed and misleading ConocoPhillips chart … which created and exaggerated the false impression that industry revenue under ACES would decrease when oil prices rose from $80 to $130 per barrel…. (In fact, the opposite is the case….)

2. The Legislature's failure to challenge the flawed ACES chart is … evidence of a systemic failure to provide meaningful data in charting a policy that would serve public interest…. (….the state is currently trying to navigate through murky policy waters without administrative mechanisms that would give public officials -- and the public – solid grasp of basic facts...)

3. The consolidation of North Slope production control gives the three major North Slope producers extraordinary political and economic power.

4. To take advantage of their unusual economic situation, the major North Slope producers may inflate or report inflated costs to reduce taxes and inhibit the market entry of potential competitors.

5. Comparison of the effects of constant or escalating cost on industry profits indicates that the progressive ACES regime enabled both the state and the industry to profit from increasing prices while protecting the industry from the effects of a possible shrinking gap between oil prices and the cost of producing that oil….

6. … the following steps should be taken to ensure that our state legislators and other political leaders will devote the time, energy and political capital necessary to produce accurate and objective information on petroleum revenue and development issues:

- **… we should start by fixing the broken audit system and putting a strong penalty on overcharges and fraudulent filings.**
- **Instead of pinning hopes on a new and unfamiliar tax regime … we should restore the ACES tax and credits system, with a simple administrative fix: Based on careful consideration of the audited returns on a company's total net revenues from petroleum revenue, we should put a cap on progressivity at higher future oil prices not yet seen (perhaps by establishing a production tax ceiling at 50% of the PTV).**

(…. the North Slope does not operate in a normal free market when three major North Slope operating companies wield exceptional power through control of more than 90 percent of North Slope production and ownership of transportation links to market, as well as the recent lavishly funded advertising campaign opposing the repeal of ACES, despite the policy benefits of that tax regime.)

A TALE OF TWO CHARTS: NORTH SLOPE PROFITABILITY, SB 21 AND ACES (Revised)

By Richard A. Fineberg, October 20, 2014 ***(This update and revision to the August 11, 2014 draft report include worksheet revisions that strengthen conclusions of the original report.)***

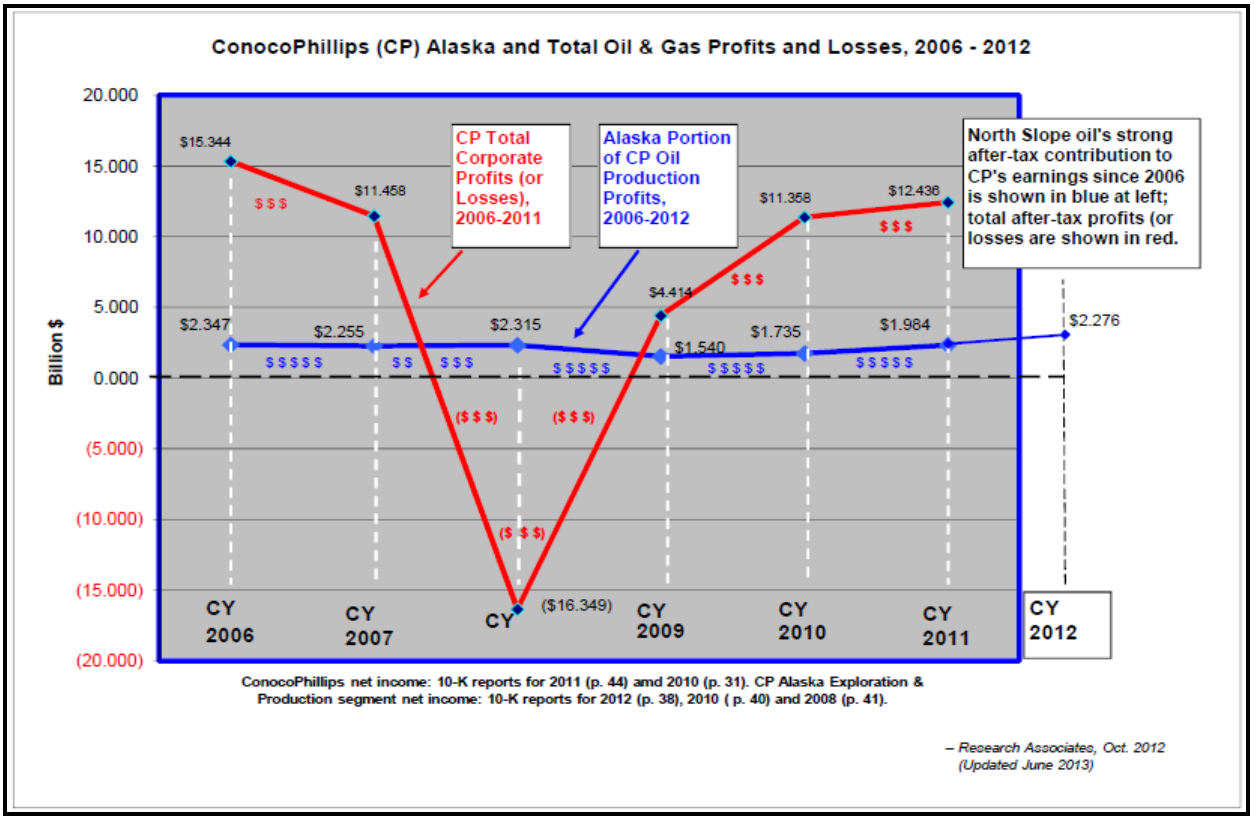
With fact and fiction swirling around SB 21 and ACES like a merry-go-round spinning off kilter at dizzying speed, review of two charts on North Slope profitability brings clarity to this confusing debate. Both charts deal with the extraordinary profits earned by ConocoPhillips, the North Slope's largest producer during most of this century, under the cost-based and progressive ACES petroleum tax system. Together with British Petroleum and ExxonMobil, ConocoPhillips is one of three transnational oil companies that collectively control more than 90 percent of North Slope oil production.

In 2013 the state Legislature voted to reduce oil taxes by ditching ACES, under which both the state and industry achieved remarkable economic success. With an administration headed by a former ConocoPhillips lobbyist and ConocoPhillips employees in two key Senate positions, the Legislature ignored important lessons derived from analysis of both charts.

The First Chart (The Remarkable and Documented Profitability of ConocoPhillips)

The first chart (below) shows the extraordinary annual profits from the production and transportation of North Slope oil, as reported by ConocoPhillips. This chart also shows that the company's erratic global returns in recent years stand in marked contrast to its strong and steady North Slope oil profits under ACES.

ConocoPhillips Alaska Profitability v. **Company Global Returns**



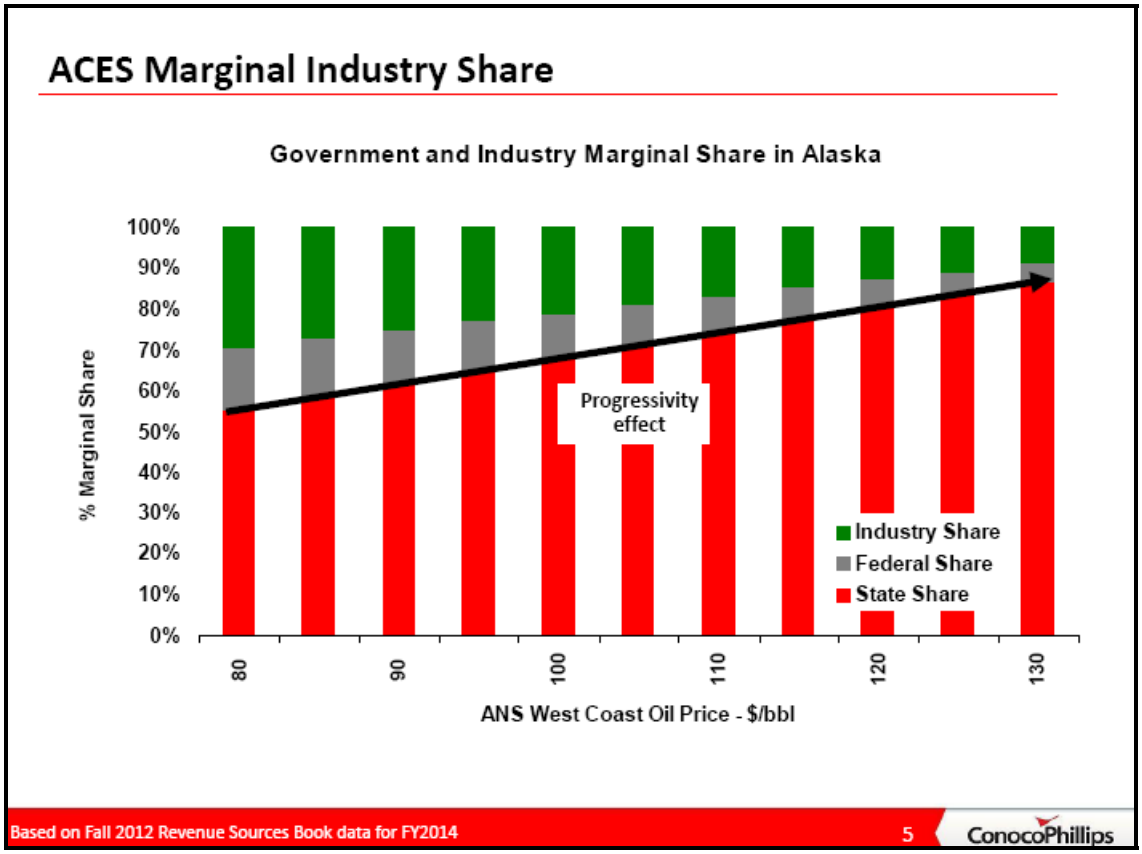
Between 2006 and 2012 ConocoPhillips North Slope net profits ranged from $1.5 billion to $2.3 billion annually under ACES, elevating that company to prominence on the *Fortune 500* and refuting the claim that Alaska production was too heavily taxed. That company's steady profits under ACES soared over its erratic global earnings, which plummeted to a reported net loss of more than $16 billion in 2008. Between 2007 and 2009, when ConocoPhillips would have lost approximately $6 billion without Alaska, the North Slope kept that company financially afloat. Today ConocoPhillips North Slope profits still exceed $2 billion annually.

Based on data ConocoPhillips filed annually with the federal Securities Exchange Commission (SEC), I put the first chart together in 2011, submitted it to legislators and updated it in subsequent years. But when SB 21 was passed in 2013, this chart did not receive legislative attention. In contrast, the second chart -- a flawed and misleading chart presented by ConocoPhillips on the oil production profit split between industry and government (shown below) -- was displayed six times in appearances before committees in both houses.

The Second Chart (Distortion by Omission and Lack of Supporting Data)

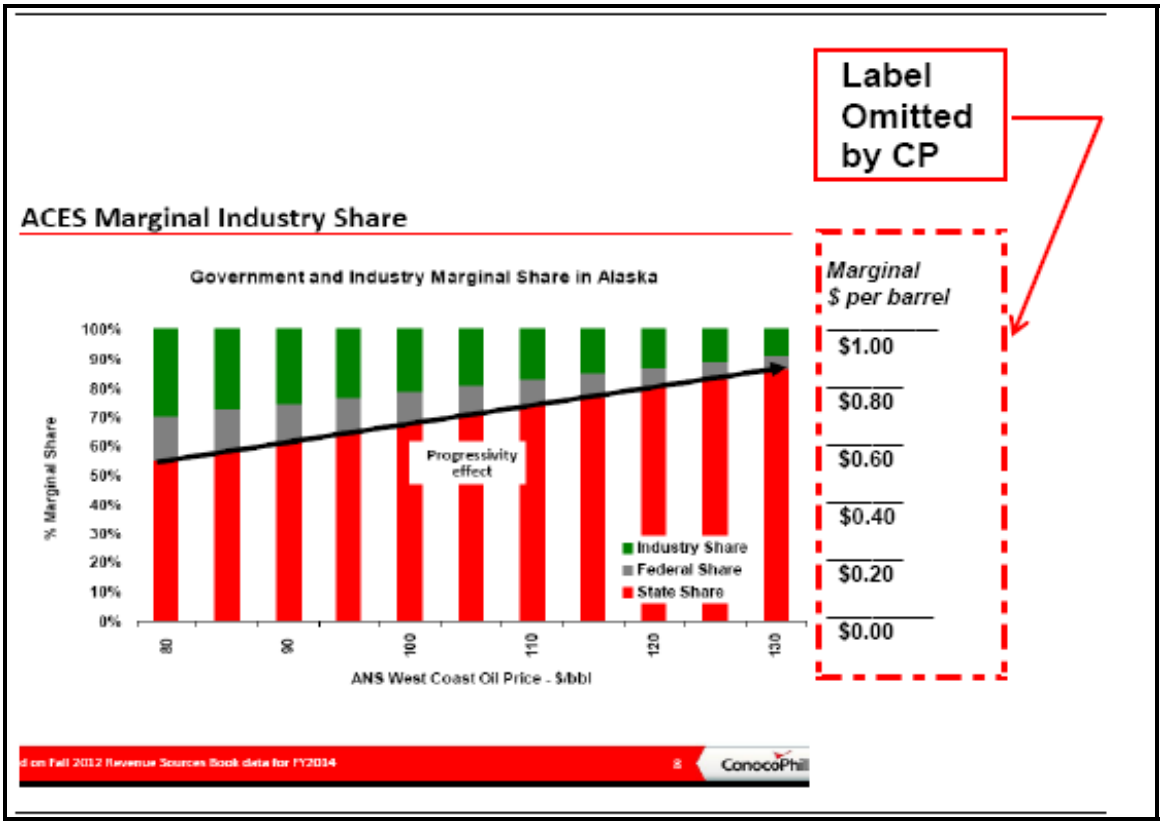
Lacking supporting data, this chart created an exaggerated and false impression that industry profits would decline dramatically as oil prices increased between $80 and $130 per barrel. The revised and updated data in the appendix to this report that strengthen the arguments against this flawed chart will be discussed in the following pages.

ConocoPhillips, House Finance Committee, April 8, 2013 (Slide 5)



When the newly-installed Senate Republican majority led adoption of SB 21 in 2013, the majorities of both houses quietly accepted this misleading ConocoPhillips chart without asking for a clear definition of the ambiguous term "marginal" share. The term "marginal" generally refers to small amounts, outside a main body of data or near the break-even point, but in the oil patch this term may refer to the much larger cash spread between costs and market prices. ConocoPhillips testified that the bars in this chart represented the division between industry and government of an additional $1 per barrel increase to the prices shown in each bar.

Total industry profits per barrel and marginal returns on a $1 per barrel price increase are different financial entities. Calling attention to this important distinction, earlier this year I added the clarifying label at the right side of the chart, as shown below.



This labeling correction was only the first step in clarifying the chart's several defects. To accurately represent the economic effects of a price increase from $80 to $130 per barrel, the right-hand bar would need to be 62.5% taller than the bar at left ($130 / $80 = 1.625). But in this ConocoPhillips chart display, the unquantified total net revenues appeared equal in height at all prices. For this reason, the chart understated the effects of revenue increases at high prices.

But perhaps the chart's most important defect was this: By presenting oil prices on the horizontal axis without revenue amounts on the vertical (only percentages of the revenue split were shown), the diminishing green swath in this misleading chart first created and then exaggerated the false impression that industry's total net profits decreased when oil prices increased at the prices shown.

When large sums of money are at issue, it is important to examine the supporting data. Although ConocoPhillips claimed that the Alaska Department of Revenue (ADOR) *Fall 2012 Revenue Sources Book* was the source for its chart, in its six legislative presentations the company did not provide data to support the diminishing green swath (industry profits that were supposedly shrinking as oil prices increased), the rising red portion in each bar (supposedly representing the state share of increasing prices), or the details of the relationships between these two major chart elements.

The figures below, which are coded by color for quick comparison to the ConocoPhillips chart and roughly parallel those of the original draft report, have been drawn from the revised worksheets in the appendix to this updated report that show a similar but even greater contrast between per-barrel totals and the marginal net revenue percentages displayed in the misleading and seriously flawed ConocoPhillips chart. For example, in contrast to the originally reported **70% *decrease*** in industry net revenue when oil price increase from $80 to $130 per barrel (estimated from the ConocoPhillips chart), the revised data indicate that the industry actually receives a **98% *increase*** (a virtual doubling of industry after-tax profits), while state total net revenues show a less pronounced increase (see lines 3 and 4, below).

TABLE 1	***(A)***	***(B)***	***(C)***
Marginal and Total Net Revenue Shares (under ACES at Constant Costs)	**$80 per barrel**	**$130 per barrel**	**% Change between $80 and $130 per barrel**
	/ - - (% or $ per barrel) - - /		*/ - - - (B / A) - - - /*
1. ANS West Coast Price	$80	$130	$50 per barrel (62.5% price increase)
2. Total Net Revenue *[See revised worksheets, line 18]*	$36.62	$86.62	136.5% increase
3. Industry Share of Marginal Net Revenue *[Shown on ConocoPhillips chart]*	**~ 30%**	**~ 9%**	**~ 70% decrease**
3A. Industry % Share of Total Net Revenue *[See revised worksheets, line 19]*	*35.56%*	*29.78%*	*16.2% decrease*
3B. ***Industry $ Share of Total Net Revenue*** *[See revised worksheets, line 18,]*	***$13.02***	***$25.80***	***98.2% increase***
4. State Share of Marginal Net Revenue *[Shown on ConocoPhillips chart]*	~ 55%	~ 83%	~ 51% increase
4A. State % Share of Total Net Revenue *[See revised worksheets, line 19]*	*45.30%*	*54.18%*	*19.6% increase*
4B. State $ Share of Total Net Revenue *[See revised worksheets, line 18]*	*$16.59*	*$46.93*	*182.9% increase*

Significant Background Policy Issues

Before assessing the significance of the striking discrepancy between the ConocoPhillips depiction of the net revenue split in the chart labelled "ACES Marginal Industry Share" and total net revenue distribution figures calculated in the revised worksheets, a review of background policy considerations will provide useful perspective on the following significant state policy issues associated with the data highlighted by this inquiry.

State and Industry Risk. Under the progressive ACES tax policy, the state absorbed a significant share of the industry risk of revenue loss due to increasing costs and declining oil prices, cushioning the potential industry loss and offsetting the state gains due to progressivity. In this regard the large payments to the state under ACES (shown at lines 4A and 4B of Table 1) represent state compensation from a policy trade-off between state and industry. Under this ACES trade-off, the state shares industry risk by deferring receipt of revenue from oil production in two ways: (1) by allowing cost deductions that enable the industry to delay receipt of production tax payments until oil sales have enabled the industry to recover investment costs; and (2) by deferring the progressive surcharge on these payments until the industry's production tax value (PTV) exceeds costs by $30 per barrel. For this reason, in facing an uncertain economic future the ACES framework appears to constitute an important investment incentive for potential investors.

Audit Problems. The ACES policy benefits described in the preceding paragraph are somewhat blurred by the difficulties obtaining accurate data necessary for policy formulation and evaluation in a timely manner. Note in this regard that although reported capital expenditures have increased significantly in the last five years aggregate state data do not make clear (1) which capital expenditures are oriented to exploration and new discoveries, (2) which capital expenditures might qualify for new tax breaks, versus the development of previously discovered oil, which might not qualify and (3) which companies stand to benefit from these breaks. The details of implementing these issues have yet to be worked out and the lack of clarity regarding the details of production tax breaks reflects the need to devote administrative attention to both state tax issues and auditing deficiencies.

Legislative Oversight (They Blew It!). Although ConocoPhillips presented this chart to legislative committees six times before SB 21 was passed at the close of the 2013 legislative session, legislators did not explore or clarify the glaring discrepancy between industry's increasing profitability under ACES and the false impression created by that chart's faulty display.

Transportation Issues. With the dramatic rise in oil prices since 1998, transportation profits constitute a relatively small element of industry profits. Nevertheless, the manner in which the three major oil companies that control more than 90% of North Slope production and also own TAPS but important element that the state and the industry frequently gloss over. Decisions against the industry earlier this year on litigation over TAPS economics – at the Federal Energy Regulatory Commission (FERC) on TAPS tariffs and the state Supreme Court on TAPS property tax valuation – confirm the importance of examining these issues carefully. Note that the three major companies that control more than 90 percent of North Slope production also own 98.6 percent of the Trans-Alaska Pipeline System (TAPS) and are acquiring the final 1.4 percent.

Two important findings from TAPS transportation history provide clear examples of the manner in which major oil companies use TAPS to increase their profits and inhibit competition:

- Control of this key transportation link by the three major producing companies threatens the state's uncertain economic future by inhibiting participation of new companies in future North Slope development. In 1993 Conoco (then the only independent North Slope field operator) traded its property to BP and left Alaska. Three years later Conoco Chairman and CEO Archie Dunham told an interviewer: "It broke my heart to trade Milne Point, but we had to do it. All the value of that property was taken away from us in the pipeline tariffs." Conoco later returned to Alaska, merging with Phillips after that company acquired a major interest in TAPS to create the firm now known as ConocoPhillips.
- In 2002, the Regulatory Commission of Alaska (RCA) determined that the 1985 TAPS tariff settlement with obliging state attorneys enabled pipeline owners to overcharge tariffs between 1977 and 1996 by $9.9 billion more than required to meet costs plus allowable profit. While the major TAPS owners simply transferred much of that overcharge back to their producing units, the non-owner shippers paid the excess tariff out-of-pocket, placing them at a competitive disadvantage to the pipeline owners. The state missed out on approximately $3.3 billion of that unrecovered amount. But by then it was too late to collect refunds.

Revised and Updated Worksheet Data

With the preceding background policy considerations in mind, this section reviews the data presented in the revised and updated appendix worksheets of this report, as well as the significant differences between these data and the diminishing green swath in the misleading ConocoPhillips chart (noted in Table 1, above).

The ConocoPhillips depiction of data distribution in terms of percentages of marginal shares did not provide reliable indication of industry profits from oil production for the following principal reasons, both of which call attention to importance of understanding calculations that affect total net revenues:

- By dealing with the revenue impacts of a $1 per barrel marginal price change instead of the total revenue picture, the ConocoPhillips chart display did not necessarily represent hard-dollar effects on total petroleum income. (For example, in addition to the contrast between the ConocoPhillips percentage and the worksheet figures summarized at line 3 and 3B of Table 1, see the differences between the total net revenue and marginal revenue hard dollar and percentage totals, which are highlighted in revised appendix Worksheets 1 and 2.)
- The total net revenue figures on which the ConocoPhillips percentages were apparently based depend on variable factors that include oil prices, production volumes and costs. Because total net revenue figures therefore vary, the percentage net revenue figures were not readily comparable to each other, or to the results in hard-dollar cash.

In addition to demonstrating these problems associated with converting percentage figures to hard-dollar results, the revised worksheet data in the appendix to this report incorporate two

changes that further increase the differences between the distorted and misleading ConocoPhillips chart presentation on ACES marginal revenue shares and the actual distribution of total net revenues produced from the cited state ADOR data source:

- The first change corrects a calculating error I made in the draft worksheets on ACES production tax value (PTV). In making these corrections, the revised worksheet data increase the differences between the actual cash results calculated in the worksheets of the original draft report and the ConocoPhillips percentage-based version of ACES marginal industry shares that was presented in the misleading chart.
- The second change (which resulted in a relatively smaller increase in total net revenues) adds estimated profits from the Alaska transportation facilities that carry North Slope oil to downstream destinations for refining and marketing. As noted in the preceding section, the three major oil companies that produce more than 90 percent of North Slope crude are the primary beneficiaries of this revision because they also own the Trans-Alaska Pipeline System (TAPS) and marine transportation links to market and therefore receive most of the profits from the operation of these facilities.

Consequently, this revised report and its worksheets lend even stronger support to the questions about the marginal revenue chart data than those raised in the original draft report. *(For details regarding these changes, see the appendix to this updated report.)*

On the next three pages, graphic exhibits clarify and help explain the important differences between the misleading diminishing green swath in the ConocoPhillips bar chart that was supposed to depict declining marginal industry shares under ACES, and the revised and updated worksheet data in the appendix to this report and. exhibit contains two graphic panels based on the revised appendix worksheets. (As noted above, the revised worksheet data are re-calculated from the ADOR *Fall 2012 Revenue Sources Book* forecast for production in fiscal 2014, which ConocoPhillips cited as the basis for its chart.)

Each graphic panel in these exhibits shows the distribution of oil revenue on a per-barrel basis, with the total net revenue at the stated market price of oil displayed in an isolated bar at the left side. At the right side of each panel, the total net revenue is divided into a cluster of three bars that represent the industry, federal and state shares of that revenue. (The state shares include the amounts that go to local governments and other sub-state entities.)

For purposes of this analysis, the total net revenue is determined by subtracting ADOR estimates for total transportation costs ($8.81 per barrel) and field operating and capital costs ($35.93 per barrel) from the market price, then adding back in the estimated transportation profit ($0.88 per barrel [10% of the total transportation costs]), most of which goes to the three major oil companies that produce more than 90% of North Slope production and also own TAPS and marine transportation links.

Total v. State, Federal and Industry Net Revenue Shares From North Slope Oil Operations

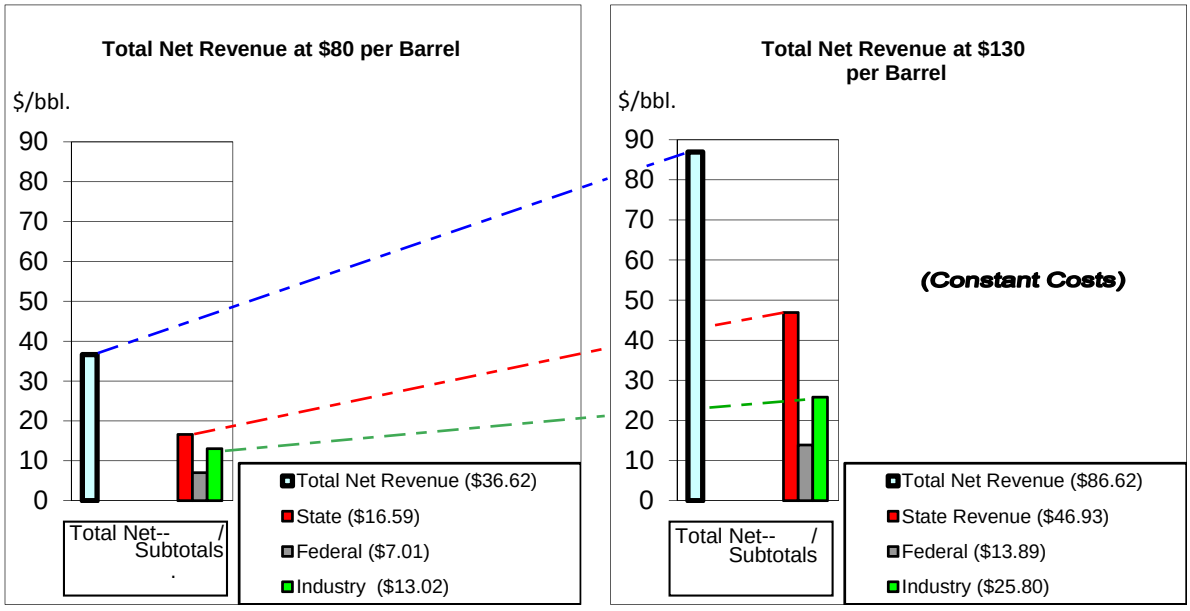
Exhibit 1 – Effects of Rising Prices on Total Net Revenue Distribution At $80 and $130 per Barrel (Constant Costs)

Total net revenues from oil production anticipated for 2014 under ACES are shown below at market prices of $80 per barrel and $130 per barrel under Alaska Department of Revenue (ADOR) cost assumption of $35.93 per barrel. In each panel below, the isolated bar representing total net revenue (at the far left) equals the sum of total revenue in the three-bar cluster (at the right) that show the split of total net revenues into state, federal and industry shares. While the state share (shown in red) represents a larger share of net revenue at higher prices due to ACES progressivity, industry net revenue (shown in the green bar at the right side of each panel) also increases significantly as oil prices rise.

REVENUE FROM NORTH SLOPE at $80 per BARREL
Total Net Revenue (left) and Subtotals (right)
(Estimated using ADOR forecast costs for FY 2014)

REVENUE FROM NORTH SLOPE at $130 per BARREL
Total Net Revenue (left) and Subtotals (right)
(Estimated using escalating costs)

(See worksheets 1 and 2 of this report)



In the absence of reference to the striking difference in total net revenues received at different oil prices (shown above in the total net revenue bar on the left side of each panel), the unsupported percentage figures in the bar chart that ConocoPhillips presented to legislators six times in 2013 do not appear to have provided accurate or meaningful indications of the bottom-line cash value that industry receives from its oil production (shown in the green bar at the right side of each panel).

The panels above provide graphic demonstration of the important economic effects of oil price volatility and production cost factors. The next two exhibits will examine the effects of increasing field costs on the total net revenues available for distribution after constant and escalated production costs are subtracted from the market price of oil.

Total v. State, Federal and Industry Net Revenue Shares From North Slope Oil Operations

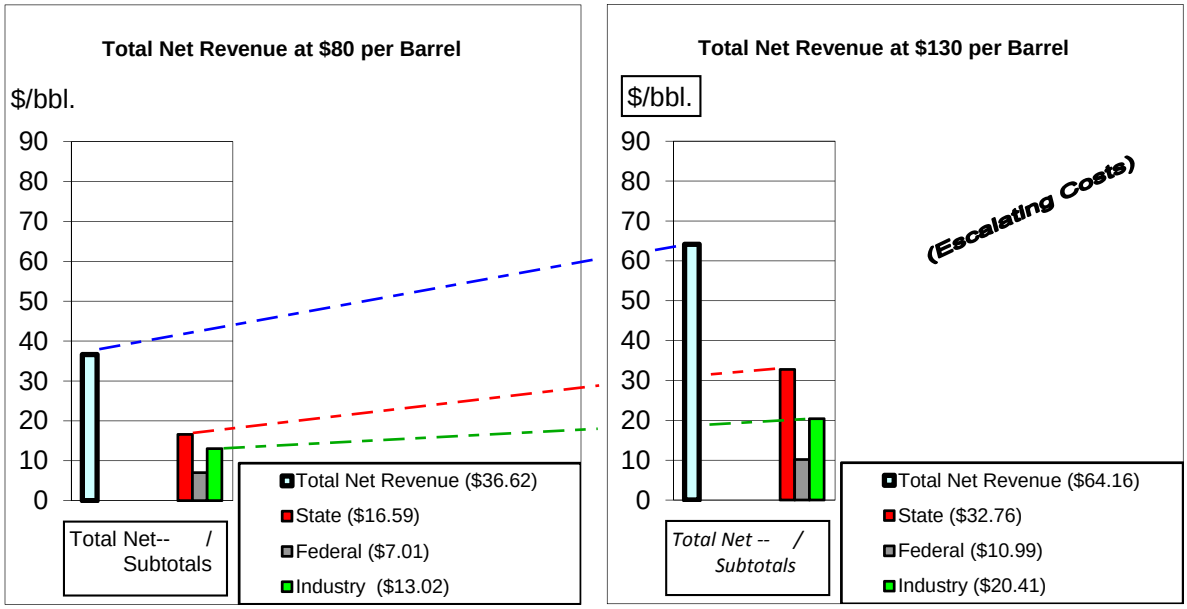
Exhibit 2 – Effects of Escalating Costs on Total Net Revenue Distribution at $80 and $130 per Barrel

This scenario shows total net revenues from oil production under ACES at market prices of $80 and $130 per barrel, with the forecast cost of $35.93 per barrel in the left panel at a market price of $80 per barrel, compared to an increased estimated cost outlay at the market price of $130 per barrel in the right-hand panel (where the 62.5% increase in field costs to $58.39 per barrel matches the market price increase; see Worksheet 3 and discussion in text). In this scenario the state again takes the largest share of the price increase (shown in red), but with escalating costs the state only doubles instead of nearly tripling its share. Meanwhile, the industry's net revenue (shown in the green bar at the right) represents a 57% increase over the $80 per barrel scenario, flatly contradicting the misleading revenue decline of nearly 70%, shown in the ConocoPhillips chart that was presented to legislators without supporting data.

REVENUE FROM NORTH SLOPE at $80 per BARREL
Total Net Revenue (left) and Subtotals (right)
(Estimated using ADOR forecast costs for FY 2014)

REVENUE FROM NORTH SLOPE at $130 per BARREL
Total Net Revenue (left) and Subtotals (right)
(Estimated using escalating costs)

(See worksheets 1 and 3 of this report)



In the two panels above, the isolated total net revenue bars on the left again show the importance of total net revenues. This information was missing from the bar chart that ConocoPhillips presented to legislators in 2013, which contained no reference to the cash value of total net revenues and therefore provided no indication of the bottom-line returns that industry receives from its oil production (where the green bars at the right side of the two panels above show a 57% increase in total industry net revenue).

In addition to this important data omission from the mislabeled ConocoPhillips chart, it should be noted that the revised worksheets in the appendix to this report show that in this scenario there is a significant disparity between the percentage shares of the marginal slice of oil revenue shown in the ConocoPhillips bar chart and the actual cash returns on total net revenue from Alaska operations.

Total v. State, Federal and Industry Net Revenue Shares From North Slope Oil Operations

Exhibit 3 – Effects of Escalating Costs on Total Net Revenue Distribution at $130 per Barrel (Constant Prices)

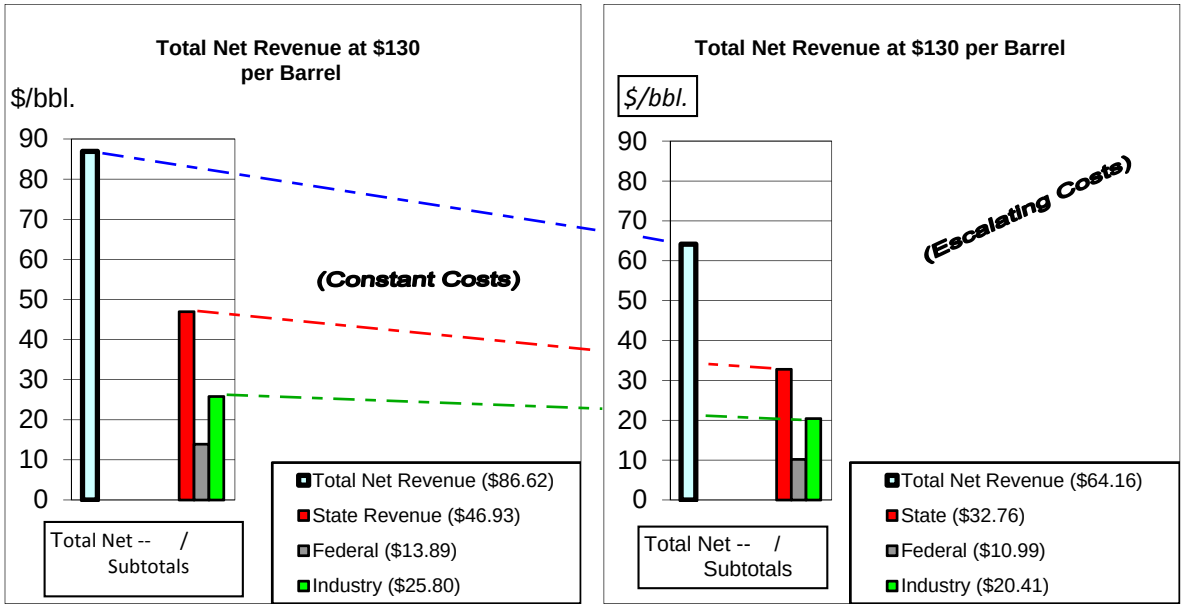
To examine the importance of the cost increase impact on industry net revenues, in this exhibit market prices are held constant at $130 per barrel in the two panels below, which are copied from the right-hand panels of Exhibits 1 and 2 for comparison with each other.

In the escalating cost scenario in the right-hand panel below, ACES progressivity cushions the reduction to industry's profits, reducing the industry net revenue in this scenario by $5.39 per barrel (from $25.80 to $20.41 per barrel), compared to a much larger state revenue reduction of $14.17 per barrel (from $46.93 to $32.76). Put otherwise: As ACES progressivity backs off with higher costs the state absorbs a significantly larger net revenue hit (shown in red) than industry (shown in green).

REVENUE FROM NORTH SLOPE at $130 per BARREL
Total Net Revenue (left) and Subtotals (right)
(Estimated using ADOR forecast costs for FY 2014)

REVENUE FROM NORTH SLOPE at $130 per BARREL
Total Net Revenue (left) and Subtotals (right)
(Estimated using escalating costs)

(See worksheets 2 and 3 of this report)



Review of the panels in these exhibits also demonstrates the importance of looking carefully at the background information from which totals are gathered and presented. For example:

➔ Even with escalating costs at $130 per barrel, increased oil prices raise total net returns compared to returns at $80 per barrel, from $36.62 to $64.16. The resulting reduced industry total net revenue ($20.41) would still represent a significant increase to the industry returns at $80 per barrel ($13.02).

➔ Review of TAPS history indicates that when three oil companies that produce more than 90% of total production also own and control transportation and other facilities it is particularly important to consider the breakdown of revenue distribution by company to make sure that the producer-owner companies do not use their power to overcharge competitors and reduce revenue payments to the state.

The first two exhibits, which are based on the data in the revised worksheets shown in the appendix to this report, summarize the basic economic realities as oil prices increase from $80 to $130 per barrel. These charts clearly indicate increasing industry profitability at higher prices (shown in each graphic panel in green bar at the right end of the net revenue clusters), as well as the importance of the total net revenue figure (show in the isolated and taller blue bars at the left side of each panel). These two exhibits, which are based on the data in the revised worksheets shown in the appendix to this report, clearly indicate the industry's lucrative returns from oil prices between $80 and $130 per barrel and show an upward trend between these prices in the green bars at the right side of each graphic panel. But if the data showed that industry returns were declining with rising prices, as claimed by ConocoPhillips in its unsupported chart purporting to show marginal industry shares under ACES in a diminishing green swath, the green bars in the right-hand graphic panels would represent a downward trend from the left-hand panel.

The third exhibit, unlike the first two, is a constant-price scenario that investigate the impacts of escalating costs by imposing artificially low costs on the left-hand panel. With hypothetical inputs that have a foregone downward net revenue trend, this theoretical exercise may not be directly comparable to Exhibits 1 and 2, or to the ConocoPhillips version of North Slope economics. Moreover, the sudden rise in capital costs reported by industry suggests that auditing may be necessary to ensure that the reported costs are valid -- and that the industry is not claiming tax benefits for new oil when that oil had been discovered previously in the major fields and classified as reserves.

In any event, Exhibit 3 calls attention to the ACES benefits to industry, as well as the importance of examining the variable cost impacts that are subtracted from gross revenue to determine the total net revenue component. Background information not visible in that exhibit indicates that even with net revenues reduced by escalating costs, due to increased total net revenue at rising prices the industry would still bring in significantly larger industry profits than the same barrel would provide at a price of $80 per barrel.

In sum, the insights provided by the results displayed in these exhibits call attention to the importance of details while providing graphic demonstration of the important failure by ConocoPhillips to provide data to explain its mislabeled, misleading and apparently inaccurate chart. Because North Slope total net revenue varies with the price of oil and the costs to produce it (as well as production volume), the percentage figures for total returns given by ConocoPhillips without background information do not appear to provide an accurate or meaningful measure of the actual value to producers of North Slope oil production.

Conclusions

The first chart in this report, based on ConocoPhillips filings to the federal Securities and Exchange Commission, demonstrates that the company's strong and steady North Slope profits stand in marked contrast to its global ups and downs. During the 2013 legislative consideration of SB 21 and ACES, that chart was seldom seen. But during that legislative session a faulty and misleading ConocoPhillips chart on the petroleum revenue split between industry and government was shown six times. Despite the latter chart's manifest defects, it was never seriously questioned by legislators.

This revision to the original posting of *A Tale of Two Charts* includes an updated table and three new exhibits that show the total net revenue results when oil prices rise from $80 to $130 per barrel. These data, derived from the revised worksheets in this appendix to this updated report, add strength to the concerns expressed in the initial draft and lead to the following conclusions:

1. The panel exhibits based on the revised worksheets in the appendix to this updated report contradict the flawed and misleading ConocoPhillips chart called "ACES Marginal Industry shares, which created and exaggerated the false impression that industry revenue under ACES would decrease when oil prices rose from $80 to $130 per barrel.

- In fact, the opposite is the case. The worksheets in the appendix to this report show that when oil prices rise to $130 per barrel (a level very near the highest oil prices seen to date), under a constant cost scenario industry profits could increase significantly from this $50 per barrel price increase. Moreover, even if field costs escalated at the rate of the increase in the oil price the industry would still see its profits increase by more than 50% over the profits received at a market price of $80 per barrel. (See Exhibits 1 and 2, above, and revised worksheets in the appendix to this updated report.)

2. The Legislature's failure to challenge the flawed ACES chart is more than symbolic; it is evidence of a systemic failure to provide meaningful data in charting a policy that would serve public interest.

- The fact that the ConocoPhillips chart error went unchallenged and uncorrected suggests that the state is currently trying to navigate through murky policy waters without administrative mechanisms that would give public officials -- and the public – solid grasp of basic facts necessary to policy formulation and execution.

3. The consolidation of North Slope production control gives the three major North Slope producers extraordinary political and economic power.

- This fact is demonstrated by the industry inundation of media airwaves with slanted and sometimes inaccurate advertisements urging a "no" vote on the referendum to repeal SB 21. That measure was defeated by a narrow margin when supporters of SB 21 outspent the supporters of ACES by approximately 15 to 1; the three major spenders were the three major North Slope producing companies. Additionally, it should be noted that when

the proponents of SB 21 finally broke the deadlock and passed the bill by one vote, two of the senators who voted for SB 21 were ConocoPhillips employees.

- On the economic front, the three major North Slope producers profit significantly from their control more than 90% of North Slope production, as well as major transportation interests. (Note in this regard the chart on ConocoPhillips profitability, shown at the outset of this report from its filings to the federal Securities and Exchange Commission.)

4. To take advantage of their unusual economic situation, the major North Slope producers may inflate or report inflated costs to reduce taxes and inhibit the market entry of potential competitors.

- The dual benefits the major owners receive from overcharging competitors combine with the recent increase in reported capital costs and the history of overcharges on TAPS to suggest that careful auditing of North Slope field costs is necessary to the formulation and implementation of state petroleum policy.

5. Comparison of the effects of constant or escalating cost on industry profits indicates that the progressive ACES regime enabled both the state and the industry to profit from increasing prices while protecting the industry from the effects of possible shrinking gap between oil prices and the cost of producing that oil. (See Exhibit 3 and revised worksheets 2 and 3.)

- To clarify the misinformation, confusion and unfounded speculation fostered by the industry and its supporters in the campaign to ditch ACES, it is important to look carefully at financial data, which raise this policy question: If the cost-based and progressive ACES system rewarded the industry when prices increased while providing industry with a buffer against the risks of price crashes and increasing costs, why was the industry so intent on repealing ACES? There are two possible answers:

  (1) Oil prices are notoriously volatile and the producers seeks to increase their share of returns from high oil prices through the repeal of ACES progressivity.

  (2) Another possible explanation for this paradox is that the interests of the major producers are not aligned with smaller producers, whose exploration ACES sought to encourage through investment credits. When SB 21 replaced ACES, exploration credits were switched to production credits – a policy change that favored the three companies that control more than 90% of North Slope production.

  These explanations call the wisdom of repealing ACES into question. But when the Legislature adopted SB 21 the economic outcomes of this important policy switch were not clearly presented for public debate.

6. In light of these findings and observations the following steps should be taken to ensure that our state legislators and its political leaders will devote the time, energy and political capital necessary to produce accurate and objective information on petroleum revenue and development issues:

- To deal with the host of petroleum accounting problems described in this report, we should start by fixing the broken audit system and putting a strong penalty on overcharges and fraudulent filings**.**
- Instead of pinning hopes on a new and unfamiliar tax regime that will allow industry to keep excessive profits while we wait for the clouds of uncertainty to settle, I believe we should restore the ACES tax and credits system, with a simple administrative fix: Based on careful consideration of the audited returns on a company's total net revenues from petroleum revenue, we should put a cap on progressivity at higher future oil prices not yet seen (perhaps by establishing a production tax ceiling at 50% of the PTV).
- *(In implementing these systemic fixes, practitioners should recognize the well-documented indications that the North Slope does not operate in a normal free market when three major North Slope operating companies wield exceptional power through control of more than 90 percent of North Slope production and ownership of transportation links to market, as well as the recent lavishly funded advertising campaign opposing the repeal of ACES, despite the policy benefits of that tax regime.)*

APPENDIX

Readers Guide to the Revised Worksheets

Revised Worksheets

Worksheet 1 *($80 - $81 per barrel – constant costs)*

Worksheet 2 *($130 - $131 per bbl. – constant costs)*

Worksheet 3 *($130 - $131 per bbl. – escalating costs)*

Readers Guide to the Revised Worksheets

The three revised worksheets in the appendix to this report are organized in a manner generally similar to the original report worksheets. As indicated by the explanatory entries in the right-hand column of each worksheet, this analysis uses data from the Alaska Department of Revenue (ADOR) *Fall 2012 Revenue Sources Book* (cited in the ConocoPhillips chart), to calculate the net revenue split between industry, the state and the federal government at various increasing prices and costs.

The original purpose was to determine the accuracy of the ConocoPhillips chart, "ACES Marginal Industry Share." To this end, each worksheet features two main tables. At the top of the first worksheet the opening table shows the calculations for the net revenue split between industry and government at a market price of $80 per barrel, using ADOR's $35.93 per barrel estimated field cost for FY 2014 at worksheet table line 6. Immediately below that table, a similar table calculates the revenue split at $81 per barrel. At the bottom of this worksheet the totals from the $80 table are subtracted from the results of the $81 analysis to produce the marginal net revenue returns for the $1 per barrel price increase.

The second and third worksheets in this appendix use the same methodology to focus on market prices of $130 and $131 per barrel, with the same ADOR field cost in the second worksheet at line 6, while the third worksheet uses an increased or escalated cost at line, which tracks the market price with a 62.5% cost increase to $58.39 per barrel at line 6 to assess the effects of cost increases at the higher market prices.

On each worksheet, the two-line table summaries and the marginal summary at the bottom are each highlighted. At table lines 18 and 19 (at the end of both tables), the net revenue (cash) figures appear immediately above the net revenue percentage figures; the marginal figures at the bottom of each worksheet, which are produced by subtracting those lines in the bottom table from their counterparts in the top table, are identified as lines M1 (cash share of the marginal [$1] net revenue total]) and M2 (percentage share).

Although this overall analysis plan is unchanged in the revised worksheets, the update reflects two calculating changes:

- While reviewing the original worksheets I discovered that I had failed to subtract the royalty payment from the industry Production Tax Value (PTV) at line 6, resulting in an overstatement of the industry PTV. This error is corrected in the revised worksheets at line 7.
- ADOR usually includes the transportation profit element with transportation costs. For this reason, to determine whether ConocoPhillips was basing its chart portrayal of marginal net revenue on ADOR data I omitted the transportation profit element from the original worksheets. However, most of these profits accrue three major North Slope producers, who own the major transportation links to market and profit from them. Because this replication effort was no longer necessary, to reflect total profits in the revised worksheets I have inserted estimated transportation profits at worksheet line 3.

The principal changes to the original worksheets made in the current revised worksheets at lines 3 and 7 resulted in state production tax changes under ACES at lines 7 through 13 and income tax changes at lines 14 through 17. These revisions to the original draft worksheets increase the accuracy of the distribution of total net cash flows from North Slope operations, as well as the discrepancies between highly profitable financial realities of Alaska North Slope oil production and the data displayed in the misleading ConocoPhillips chart, "ACES Marginal Industry Share." Moreover, these worksheet revisions no longer replicate the marginal revenue percentages that were presented by the ConocoPhillips chart without supporting data.

These worksheet results, which appear in Exhibits 1 through 3 of this updated report to show and explain the distribution of total net revenues, add strength to concerns about the ConocoPhillips chart data and its source, which were never seriously questioned when presented at six hearings in 2013, when SB 21 was passed. (The original report and its accompanying worksheets are provided in the archives to this web site.)

Appendix Worksheet 1 *-- $80 - $81 per barrel, constant costs (rev. October 20, 2014)*

FY 2014 % of Net Revenue at $80 per barrel (constant costs)

(Based on data from ADOR *Fall 2012 Revenue Sources Book*)

	(a)	(b)	(c)	(d)	(e)	(f)
			Revenue			
		Industry	State	Federal	Total Net	How Calculated [column (b)]
1	ANS WC (West Coast) Price	$80.00				[Input]
2	Transportation	($8.81)				*Fall 2012 Revenue Sources Book*, pp. 99, 100, 108
3	Transportation Owner Net Profits (tax-paid subtotal)	$0.88				= b2 * 0.1 (estimated from ConocoPhillips TAPS tariff workpapers)
4	Wellhead	$71.19				= b1 + b2
5	Royalty	($9.51)	$9.51			= b4 * .1336 (from *Fall 2012 Revenue Sources Book*, p. 108)
6	Field Costs	($35.93)				*Fall 2012 Revenue Sources Book*, p. 108
7	PTV	$25.75				= b1 + b2 + b5 + b6
8	Surcharge (only if PTV > $30.00 / bbl.)	*n.a.*				= b7 - $30.00
9	Surcharge Rate	0.00%				If b8 > $0.00, then b9 = (b8 * .004); otherwise b8 = 0.00%
10	Production Tax Rate	25.00%				= b9 + 25%
11	Production Tax (before credits)	($6.44)				= b7 * b10
12	Estimated Credits	$3.61				Calculated from *Fall 2012 Revenue Sources Book*, p. 108
13	Production Tax (ACES)	($2.83)	$2.83			= b11 + b12
14	Estimated Property Tax	($2.22)	$2.22			Estimated from *Fall 2012 Revenue Sources Book*, p. 47
15	State Income Tax	($2.03)	$2.03			= (b3 + b7 + b13 + b14)*.094
16	Total (before Federal Income Tax)	$20.03	$16.59			= b1 + b2 + (b3/[1-0.35]) + b5 + b6 + b13 + b14 + b15
17	Federal Income Tax (estimated)	($7.01)		$7.01		= b16 * 0.35
18	**Total Net Revenue ($80 per bbl. [constant costs])**	**$13.02**	**$16.59**	**$7.01**	**$36.62**	Industry, State, Federal and Total Net Revenue Take at $80 per bbl.
19	**Percentage of Total Net Revenue**	**35.56%**	**45.30%**	**19.15%**	*100.00%*	Percentage of Total Net Revenue Take at $80 per bbl.

FY 2014 % of Net Revenue at $81 per barrel (constant costs)

	(a)	(b)	(c)	(d)	(e)	(f)
			Revenue			
		Industry	State	Federal	Total Net	How Calculated [column (b)]
1	ANS WC (West Coast) Price	$81.00				[Input]
2	Transportation	($8.81)				*Fall 2012 Revenue Sources Book*, pp. 99, 100, 108
3	Transportation Owner Net Profits (tax-paid subtotal)	$0.88				= b2 * 0.1 (estimated from ConocoPhillips TAPS tariff workpapers)
4	Wellhead	$72.19				= b1 + b2
5	Royalty	($9.64)	$9.64			= b4 * .1336 (from *Fall 2012 Revenue Sources Book*, p. 108)
6	Field Costs	($35.93)				*Fall 2012 Revenue Sources Book*, p. 108
7	PTV	$26.62				= b1 + b2 + b5 + b6
8	Surcharge (only if PTV > $30.00 / bbl.)	*n.a.*				= b7 - $30.00
9	Surcharge Rate	0.00%				If b8 > $0.00, then b9 = (b8 * .004); otherwise b8 = 0.00%
10	Production Tax Rate	25.00%				= b9 + 25%
11	Production Tax (before credits)	($6.65)				= b7 * b10
12	Estimated Credits	$3.61				Calculated from *Fall 2012 Revenue Sources Book*, p. 108
13	Production Tax (ACES)	($3.04)	$3.04			= b11 + b12
14	Estimated Property Tax	($2.22)	$2.22			Estimated from *Fall 2012 Revenue Sources Book*, p. 47
15	State Income Tax	($2.09)	$2.09			= (b3 + b7 + b13 + b14)*.094
16	Total (before Federal Income Tax)	$20.62	$17.00			= b1 + b2 + (b3/[1-0.35]) + b5 + b6 + b13 + b14 + b15
17	Federal Income Tax (estimated)	($7.22)		$7.22		= b16 * 0.35
18	**Total Net Revemue ($81 per bbl. [constant costs])**	**$13.40**	**$17.00**	**$7.22**	**$37.62**	Industry, State, Federal and Total Net Revenue Take at $81 per bbl.
19	**Percentage of Total Net Revenue**	**35.63%**	**45.18%**	**19.19%**	*100.00%*	Percentage of Total Net Revenue Take at $81 per bbl.

FY 2014 Amount and % of Marginal $1.00 of Net Revenue at $81 per barrel (constant costs)

		Industry	State	Federal	Total Net	
M1	**Marginal Net Revenue ($81 per bbl. [constant costs])**	**$0.38**	**$0.41**	**$0.21**	**$1.00**	= (Line 18 at $81 per bbl.) - (Line 18 at $80 per bbl.)
M2	**Percentage of Marginal Net Revenue**	**38.27%**	**41.13%**	**20.61%**	*100.00%*	Percentage of Marginal $1.00 Net Revenue Take at $81 per bbl.

Appendix Worksheet 2 *-- $130 - $131 per barrel, constant costs (rev. October 20, 2014)*

FY 2014 % of Net Revenue at $130 per barrel (constant costs)

(Based on data from ADOR *Fall 2012 Revenue Sources Book*)

	(a)	(b)	(c)	(d)	(e)	(f)
		/ - - - - - - - - - -	Revenue	- - - - - - - - - - - - - - - -	-/	
		Industry	State	Federal	Total Net	How Calculated [column (b)]
1	ANS WC (West Coast) Price	$130.00				[Input]
2	Transportation	($8.81)				*Fall 2012 Revenue Sources Book*, pp. 99, 100, 108
3	Transportation Owner Net Profits (tax-paid subtotal)	$0.88				= b2 * 0.1 (estimated from ConocoPhillips TAPS tariff workpapers)
4	Wellhead	$121.19				= b1 + b2
5	Royalty	($16.19)	$16.19			= b4 * .1336 (from *Fall 2012 Revenue Sources Book*, p. 108)
6	Field Costs	($35.93)				*Fall 2012 Revenue Sources Book*, p. 108
7	PTV	$69.07				= b1 + b2 + b5 + b6
8	Surcharge (only if PTV > $30.00 / bbl.)	*$39.07*				= b7 - $30.00
9	Surcharge Rate	15.63%				If b8 > $0.00, then b9 = (b8 * .004); otherwise b8 = 0.00%
10	Production Tax Rate	40.63%				= b9 + 25%
11	Production Tax (before credits)	($28.06)				= b7 * b10
12	Estimated Credits	$3.61				Calculated from *Fall 2012 Revenue Sources Book*, p. 108
13	Production Tax (ACES)	($24.45)	$24.45			= b11 + b12
14	Estimated Property Tax	($2.22)	$2.22			Estimated from *Fall 2012 Revenue Sources Book*, p. 47
15	State Income Tax	($4.07)	$4.07			= (b3 + b7 + b13 + b14)*.094
16	Total (before Federal Income Tax)	$39.69	$46.93			= b1 + b2 + (b3/[1-0.35]) + b5 + b6 + b13 + b14 + b15
17	Federal Income Tax (estimated)	($13.89)		$13.89		= b17 * 0.35
18	**Total Net Revenue ($130 per bbl. [constant costs])**	**$25.80**	**$46.93**	**$13.89**	**$86.62**	Industry, State, Federal and Total Net Revenue Take at $130 per bbl.
19	**Percentage of Total Net Revenue**	**29.78%**	**54.18%**	**16.04%**	*100.00%*	Percentagesof Total Net Revenue Take at $130 per bbl.

FY 2014 % of Net Revenue at $131 per barrel (constant costs)

	(a)	(b)	(c)	(d)	(e)	(f)
		/ - - - - - - - - - -	Revenue	- - - - - - - - - - - - - - - -	-/	
		Industry	State	Federal	Total Net	How Calculated [column (b)]
1	ANS WC (West Coast) Price	$131.00				[Input]
2	Transportation	($8.81)				*Fall 2012 Revenue Sources Book*, pp. 99, 100, 108
3	Transportation Owner Net Profits (tax-paid subtotal)	$0.88				= b2 * 0.1 (estimated from ConocoPhillips TAPS tariff workpapers)
4	Wellhead	$122.19				= b1 + b2
5	Royalty	($16.32)	$16.32			= b4 * .1336 (from *Fall 2012 Revenue Sources Book*, p. 108)
6	Field Costs	($35.93)				*Fall 2012 Revenue Sources Book, p. 108*
7	PTV	$69.94				= b1 + b2 + b5 + b6
8	Surcharge (only if PTV > $30.00 / bbl.)	*$39.94*				= b7 - $30.00
9	Surcharge Rate	15.97%				If b8 > $0.00, then b9 = (b8 * .004); otherwise b8 = 0.00%
10	Production Tax Rate	40.97%				= b9 + 25%
11	Production Tax (before credits)	($28.66)				= b7 * b10
12	Estimated Credits	$3.61				Calculated from *Fall 2012 Revenue Sources Book*, p. 108
13	Production Tax (ACES)	($25.04)	$25.04			= b11 + b12
14	Estimated Property Tax	($2.22)	$2.22			Estimated from *Fall 2012 Revenue Sources Book*, p. 47
15	State Income Tax	($4.09)	$4.09			= (b3 + b7 + b13 + b14)*.094
16	Total (before Federal Income Tax)	$39.93	$47.68			= b1 + b2 + (b3/[1-0.35]) + b5 + b6 + b13 + b14 + b15
17	Federal Income Tax (estimated)	($13.98)		$13.98		= b16 * 0.35
18	**Total Net Revenue ($131 per bbl. [constant costs])**	**$25.96**	**$47.68**	**$13.98**	**$87.62**	Industry, State, Federal and Total Net Revenue Take at $131 per bbl.
19	**Percentage of Total Net Revenue**	**29.63%**	**54.42%**	**15.95%**	*100.00%*	Percentage of Total Net Revenue Take at $131 per bbl.

FY 2014 Amount and % of Marginal $1.00 of Net Revenue at $131 per barrel (constant costs)

		Industry	State	Federal	Total Net	
M1	**Marginal Net Revenue ($131 per bbl. [constant costs])**	**$0.16**	**$0.75**	**$0.09**	**$1.00**	= (Line 18 at $131 per bbl.) - (Line 18 at $130 per bbl.)
M2	**Percentage of Marginal Net Revenue**	**16.02%**	**75.35%**	**8.63%**	*100.00%*	Percentage of Marginal $1.00 Net Revenue Take at $131 per bbl.

Appendix Worksheet 3 *-- $130 - $131 per barrel, escalating costs (rev. October 20, 2014)*

FY 2014 % of Net Revenue at $130 per barrel (escalating costs)

(Based on data from ADOR *Fall 2012 Revenue Sources Book*)

	(a)	(b)	(c)	(d)	(e)	(f)
		/ ---------- Revenue ---------- /				
		Industry	State	Federal	Total Net	How Calculated [column (b)]
1	ANS WC (West Coast) Price	$130.00				[Input]
2	Transportation	($8.81)				*Fall 2012 Revenue Sources Book*, pp. 99, 100, 108
3	Transportation Owner Net Profits (tax-paid subtotal)	$0.88				= b2 * 0.1 (estimated from ConocoPhillips TAPS tariff workpapers)
4	Wellhead	$121.19				= b1 + b2
5	Royalty	($16.19)	$16.19			= b4 * .1336 (from *Fall 2012 Revenue Sources Book*, p. 108)
6	Field Costs (escalating)	($58.39)				= (*Fall 2012 Revenue Sources Book*, p. 108) * (130 / 80)
7	PTV	$46.61				= b1 + b2 + b5 + b6
8	Surcharge (only if PTV > $30.00 / bbl.)	$16.61				= b7 - $30.00
9	Surcharge Rate	6.65%				If b8 > $0.00, then b9 = (b8 * .004); otherwise b8 = 0.00%
10	Production Tax Rate	31.65%				= b9 + 25%
11	Production Tax (before credits)	($14.75)				= b7 * b10
12	Estimated Credits	$3.61				Calculated from *Fall 2012 Revenue Sources Book*, p. 108
13	Production Tax (ACES)	($11.14)	$11.14			= b11 + b12
14	Estimated Property Tax	($2.22)	$2.22			Estimated from *Fall 2012 Revenue Sources Book*, p. 47
15	State Income Tax	($3.21)	$3.21			= (b3 + b7 + b13 + b14)*.094
16	Total (before Federal Income Tax)	$31.40	$32.76			= b1 + b2 + (b3/[1-0.35]) + b5 + b6 + b13 + b14 + b15
17	Federal Income Tax (estimated)	($10.99)		$10.99		= b17 * 0.35
18	**Total Net Revenue** (130 per bbl. [escalating costs])	**$20.41**	**$32.76**	**$10.99**	**$64.16**	Industry, State, Federal and Total Net Revenue Take at $130 per bbl.
19	**Percentage of Net Revenue**	**31.81%**	**51.06%**	**17.13%**	*100.00%*	Percentage of Total Net Revenue Take at $130 per bbl.

FY 2014 % of Net Revenue at $131 per barrel (escalating costs)

	(a)	(b)	(c)	(d)	(e)	(f)
		/ ---------- Revenue ---------- /				
		Industry	State	Federal	Total Net	How Calculated [column (b)]
1	ANS WC (West Coast) Price	$131.00				[Input]
2	Transportation	($8.81)				*Fall 2012 Revenue Sources Book*, pp. 99, 100, 108
3	Transportation Owner Net Profits (tax-paid subtotal)	$0.88				= b2 * 0.1 (estimated from ConocoPhillips TAPS tariff workpapers)
4	Wellhead	$122.19				= b1 + b2
5	Royalty	($16.32)	$16.32			= b4 * .1336 (from *Fall 2012 Revenue Sources Book*, p. 108)
6	Field Costs (escalating)	($58.84)				= (*Fall 2012 Revenue Sources Book*, p. 108) * (131 / 80)
7	PTV	$47.03				= b1 + b2 + b5 + b6
8	Surcharge (only if PTV > $30.00 / bbl.)	$17.03				= b7 - $30.00
9	Surcharge Rate	6.81%				If b8 > $0.00, then b9 = (b8 * .004); otherwise b8 = 0.00%
10	Production Tax Rate	31.81%				= b9 + 25%
11	Production Tax (before credits)	($14.96)				= b7 * b10
12	Estimated Credits	$3.61				Calculated from *Fall 2012 Revenue Sources Book*, p. 108
13	Production Tax (ACES)	($11.35)	$11.35			= b11 + b12
14	Estimated Property Tax	($2.22)	$2.22			Estimated from *Fall 2012 Revenue Sources Book*, p. 47
15	State Income Tax	($3.23)	$3.23			= (b3 + b7 + b13 + b14)*.094
16	Total (before Federal Income Tax)	$31.59	$33.12			= b1 + b2 + (b3/[1-0.35]) + b5 + b6 + b13 + b14 + b15
17	Federal Income Tax (estimated)	($11.06)		$11.06		= b16 * 0.35
18	**Total Net Revenue** (131 per bbl. [escalating costs])	**$20.53**	**$33.12**	**$11.06**	**$64.71**	Industry, State, Federal and Total Net Revenue Take at $131 per bbl.
19	**Percentage of Net Revenue**	**31.73%**	**51.19%**	**17.09%**	*100.00%*	Percentags of Total Net Revenue Take at $131 per bbl.

FY 2014 Amount and % of Marginal $1.00 of Net Revenue at $131 per barrel (escalating costs)

		Industry	State	Federal	Total Net	
M1	**Marginal Net Revenue** ($131 per bbl. [escalating costs])	**$0.12**	**$0.36**	**$0.07**	**$0.55**	= (Line 18 at $131 per bbl.) - (Line 18 at $130 per bbl.)
M2	**Percentage of Marginal Net Revenue**	**22.10%**	**66.00%**	**11.90%**	*100.00%*	Percentage of Marginal $1.00 Net Revenue Take at $131 per bbl.

Richard A. Fineberg of Ester, Alaska is an independent analyst who covered North Slope development as a reporter during the 1970s, served as senior advisor to the governor on oil and gas policy from 1987 to 1989 and testified as an expert witness in the Regulatory Commission of Alaska TAPS tariff case in 2001.

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