

# Discussion Slides: Alaska Senate Resources Committee

April 24, 2012

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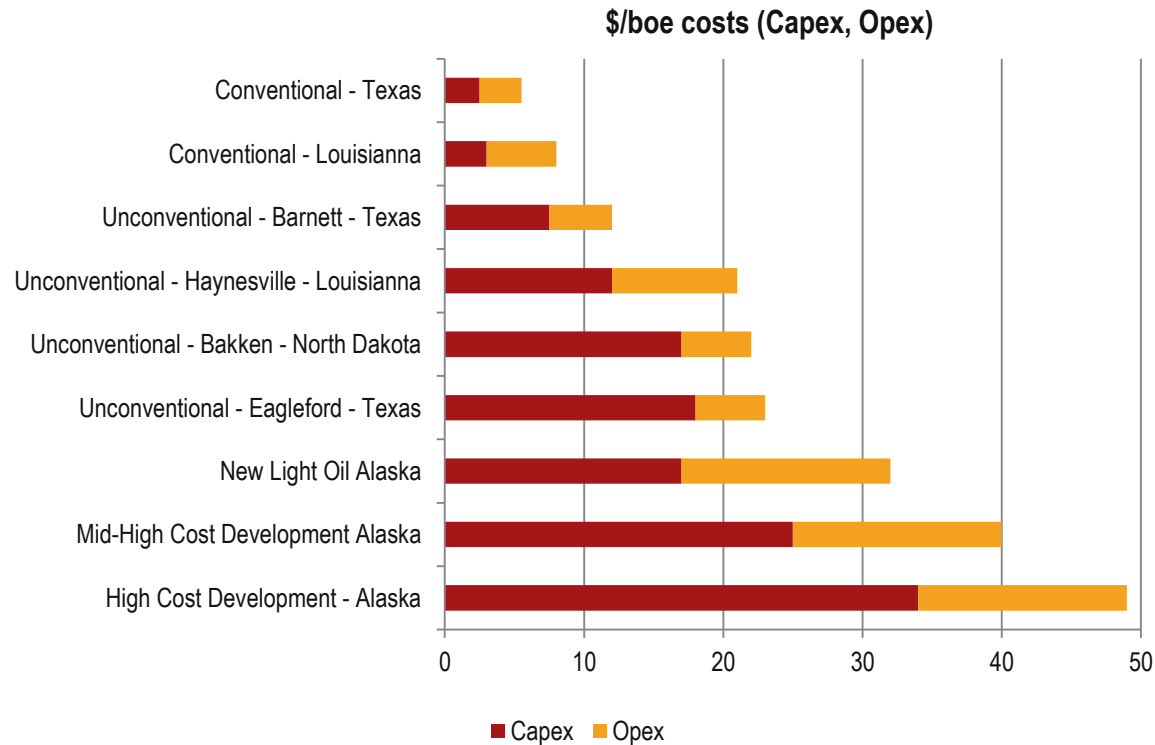
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# **Analysis of SB 3001**

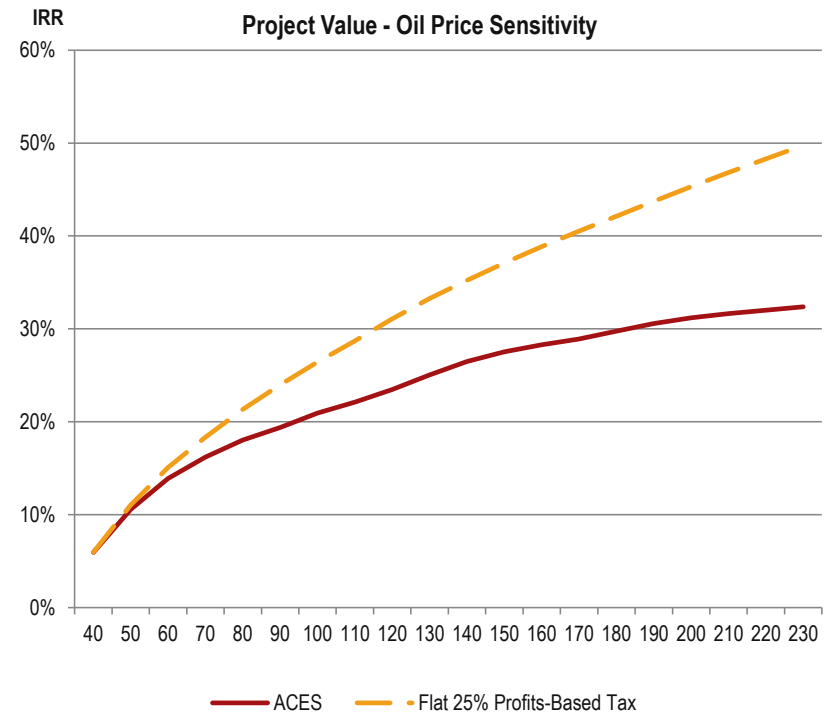
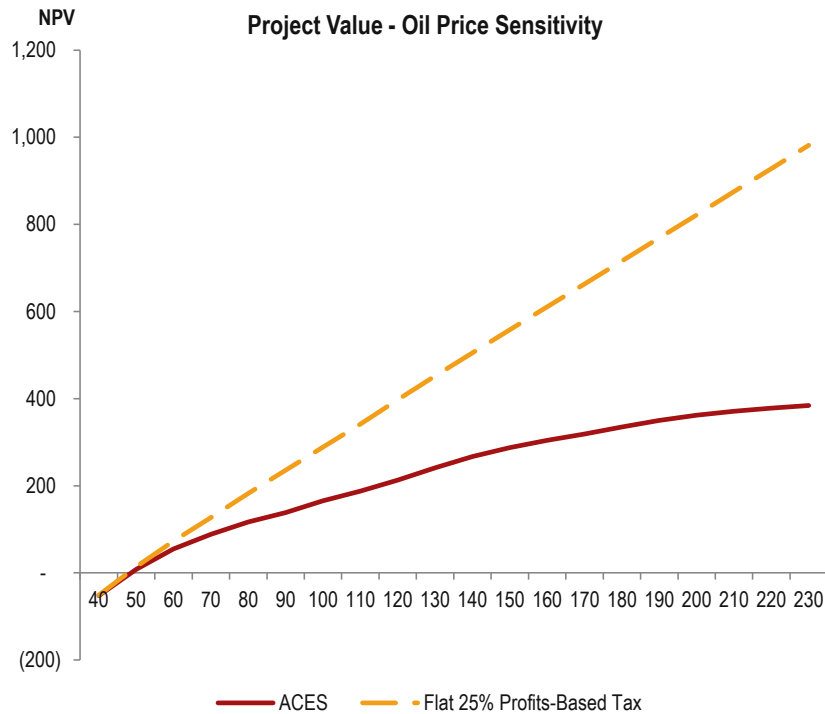
# Alaska's Days of "Easy Oil" Are Gone: High Costs and High Government Take Present Challenges

\$/boe Costs (Capex, Opex)

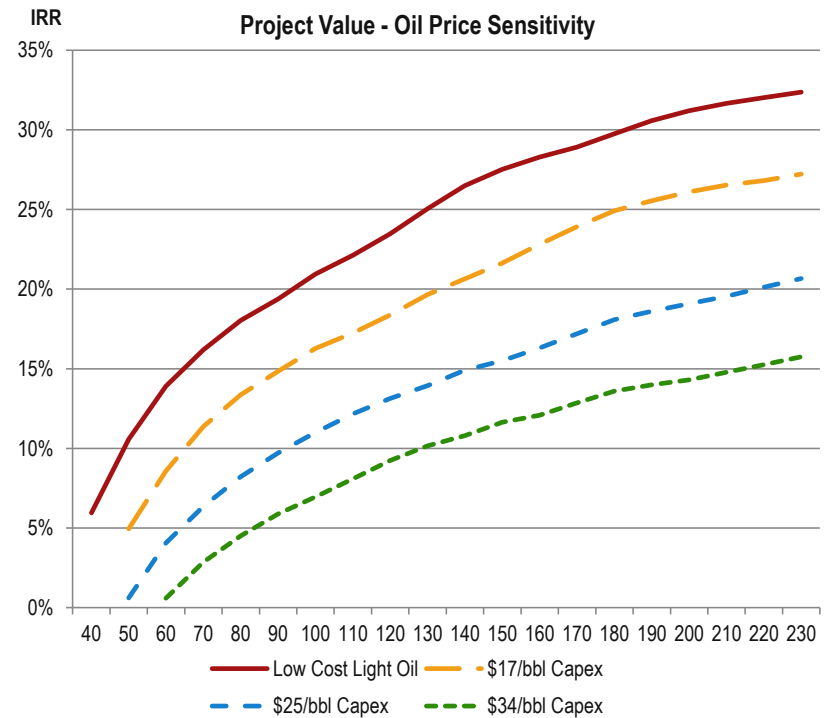
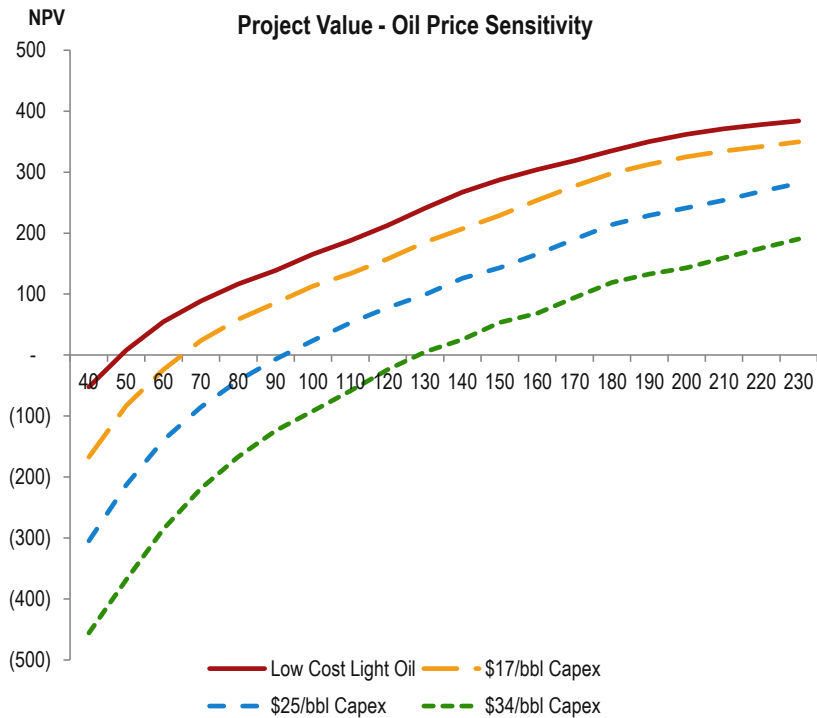


Costs are significantly higher in Alaska than the Lower 48 – even compared to unconvensionals. Meanwhile, Alaska's Government Take has risen significantly over recent years, meaning new project economics can be very challenging

# Effect of Progressivity on Price Upside



# Project Value Under ACES: Cost and Price Sensitivity



# ACES – Effective as a Harvest Area Fiscal Regime

- ACES appears to work well as a “harvest” regime
  - Existing **mature fields remain profitable**, including capital work required to achieve ~6% decline (renewal capex)
  - **Maximum ‘rent’** extracted from a declining production base is captured for the state
- ACES inhibits the development of new projects and resources that might help stem or even reverse the decline
  - ACES is **not progressive with regard to costs**, so high government take applies even to very high cost projects
  - Existing system of capital credits etc appears to do more to encourage ‘renewal capex’ than it does new production spending
  - Progressivity can have a major **detrimental impact on breakeven prices** for high-cost projects at current oil prices

# Options to Spur New Developments

| Approach                                       | Implementation Options  | Advantages  | Disadvantages  |
|--|---|---|--|
| Uniform lowering of Government Take            | <ul style="list-style-type: none"> <li>• Bracketing</li> <li>• Reduced Base Rate</li> <li>• Increased Progressivity Thresholds</li> <li>• Reduced Progressivity Rates</li> <li>• Progressivity Caps</li> </ul>  | <ul style="list-style-type: none"> <li>• Does not require increased complexity</li> <li>• May present opportunities for simplification</li> </ul>   | <ul style="list-style-type: none"> <li>• Incentivizing new high cost resources through this method alone requires giving substantial 'rent' back to producers on the mature producing assets</li> </ul>  |
| Differentiation between old and new production | <ul style="list-style-type: none"> <li>• Allowance for New Oil</li> <li>• Switching in part away from Net Profits taxation to Gross Revenue Taxation, to enable different tax rates for different production streams without separate cost accounting and tax returns</li> <li>• Use of some combination of definitions for incremental production, ie base decline rate, regulator-agreed new programs, new areas</li> </ul> | <ul style="list-style-type: none"> <li>• Allows significant reductions in Govt Take on new and costlier developments (including heavy oil etc) without requiring significant reductions on the mature producing assets</li> </ul> | <ul style="list-style-type: none"> <li>• Administrative difficulties around definitions of 'new production'</li> </ul>   |
| Enhancements to cost progressivity of ACES     | <ul style="list-style-type: none"> <li>• Changes to allowable cost deduction or credits mechanism etc to provide greater 'uplift' for high capital and operating costs, while restricting negative Production Tax in marginal cases</li> <li>• Enhancements to royalty relief</li> </ul>  | <ul style="list-style-type: none"> <li>• Does not require structural change away from ACES</li> </ul>   | <ul style="list-style-type: none"> <li>• Increases already high complexity and opacity</li> <li>• May exacerbate problem of poor cost control incentives</li> <li>• Increases likelihood of unintended consequences</li> <li>• Likely less significant impact than new production differentiation</li> </ul> |

# SB 3001 – Main Aspects

- For production from new North Slope fields, 30% gross revenue exclusion
  - Applies to calculation of both base and progressive tax amounts
  - Does not apply to progressivity rate calculation
  - Applies for 10 years
- For all other North Slope production, 40% gross revenue exclusion
  - Applies to calculation of progressive tax amount only
  - Does not apply to base tax amount or to progressivity rate calculation
  - Applies indefinitely
- Maximum progressive tax rate capped at 60% (reduced from 75%)
- 40% Well Lease Expenditure Credit applied to North Slope
- Capital credits redeemed in single year (rather than spread over two)



# Understanding the Gross Revenue Exclusions

|  | Price /Barrel   | Barrels            | ACES (\$mm)      | SB 3001 Existing | SB 3001 New Fields |
|--|-----------------|--------------------|------------------|------------------|--------------------|
| ANS Oil Price                                    | \$ 109.47       | 555,227.00         |                  |                  |                    |
| <b>Total Annual Production</b>                   |                 | <b>202,657,895</b> | <b>\$ 22,185</b> | <b>\$ 22,185</b> | <b>\$ 22,185</b>   |
| Royalty Barrels                                  |                 | (30,158,081)       | \$ (3,301)       | \$ (3,301)       | \$ (3,301)         |
| Taxable Barel                                    |                 | 172,499,814        | \$ 18,884        | \$ 18,884        | \$ 18,884          |
| Total Transportation Costs                       | \$ (8.56)       |                    | \$ (1,477)       | \$ (1,477)       | \$ (1,477)         |
| <b>Gross Value at Point of Production (GVPP)</b> |                 | <b>172,499,814</b> | <b>\$ 17,407</b> | <b>\$ 17,407</b> | <b>\$ 17,407</b>   |
| Total Lease Expenditures                         | \$ (29.11)      |                    | \$ (5,021)       | \$ (5,021)       | \$ (5,021)         |
| <b>Production Tax Value (PTV)</b>                | <b>\$ 71.80</b> |                    | <b>\$ 12,385</b> | <b>\$ 12,385</b> | <b>\$ 12,385</b>   |
| 30% GVPP Allowance                               |                 |                    |                  |                  | \$ 5,222           |
| 40% GVPP Allowance                               |                 |                    |                  | \$ 6,963         |                    |
| Adjusted PTV for Base Tax                        |                 |                    | \$ 12,385        | \$ 12,385        | \$ 7,163           |
| Adjusted PTV for Progressive Tax                 |                 |                    | \$ 12,385        | \$ 5,423         | \$ 7,163           |
| Base Production Tax - 25%                        |                 |                    | \$ 3,096         | \$ 3,096         | \$ 1,791           |
| Progressive Production Tax - 16.72%              |                 |                    | \$ 2,071         | \$ 907           | \$ 1,198           |
| Production Tax before Credits                    |                 |                    | \$ 5,167         | \$ 4,003         | \$ 2,989           |
| Credits  |                 |                    | \$ 450           | \$ 750           | \$ 750             |
| Estimated Total Tax After Credits                |                 |                    | \$ 4,717         | \$ 3,253         | \$ 2,239           |

# Purpose of Gross Revenue Exclusion Concept

- ACES Production Tax is a profit-based tax – ie it taxes wellhead revenue net of costs
- Under the ACES structure, varying either the base or the progressive rates for some forms of production and not others introduces significant complexity – requires ‘ring-fencing’ to allocate costs between different streams of production
- Gross Revenue Exclusion is a concept that makes it possible to reduce government take on some streams of production but not others, without requiring ring-fencing
- In SB 3001, however, it is also used to reduce government take across all North Slope fields
  - This could also be accomplished through simply lowering progressivity
  - Approximately equivalent to reducing progressivity from .4% to .15%

# FY 2013 Revenue Comparison

ANS West Coast Oil Price

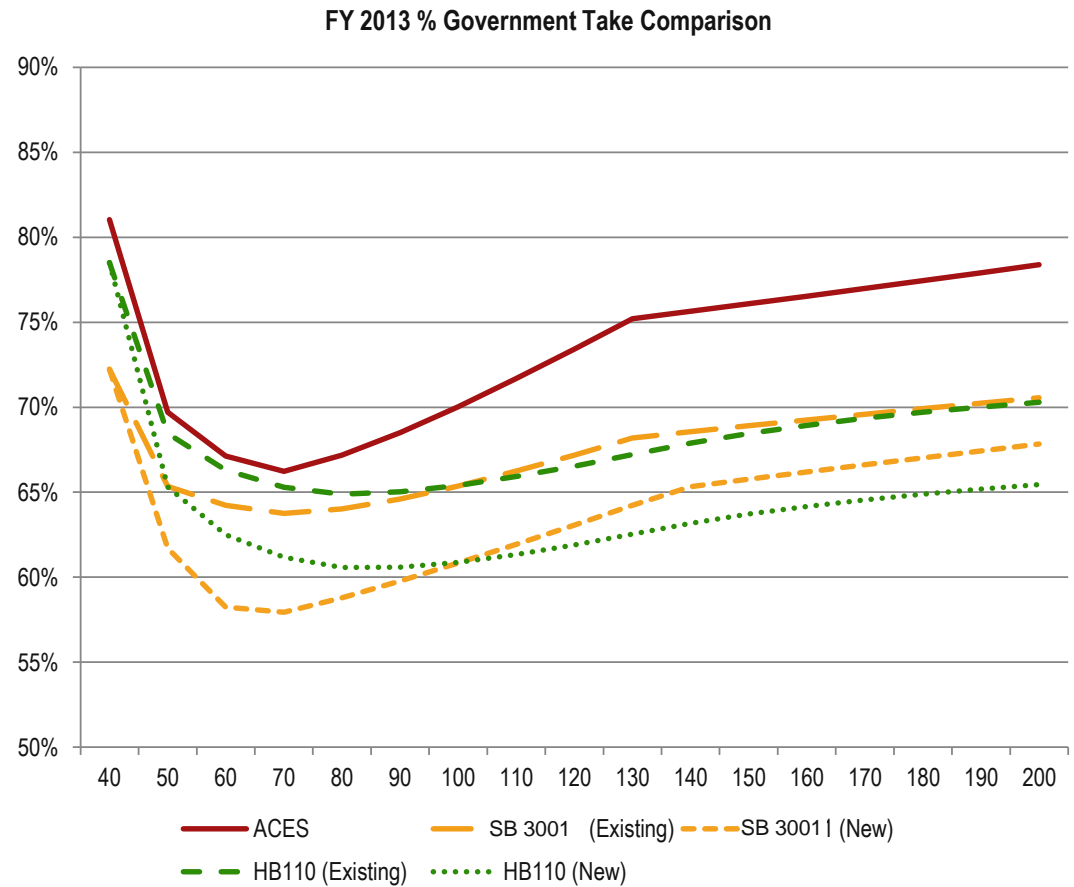
|     | Production Tax |                              |                                |        | Total State Take |                              |                                |        | Total Government Take |                              |                                |        | Cash to Companies |                              |                                |        | FY 2013 % Government Take |                              |                                |       |
|-----|----------------|------------------------------|--------------------------------|--------|------------------|------------------------------|--------------------------------|--------|-----------------------|------------------------------|--------------------------------|--------|-------------------|------------------------------|--------------------------------|--------|---------------------------|------------------------------|--------------------------------|-------|
|     | ACES           | SB 3001 (ex 40% Well Credit) | SB 3001 (With 40% Well Credit) | HB110  | ACES             | SB 3001 (ex 40% Well Credit) | SB 3001 (With 40% Well Credit) | HB110  | ACES                  | SB 3001 (ex 40% Well Credit) | SB 3001 (With 40% Well Credit) | HB110  | ACES              | SB 3001 (ex 40% Well Credit) | SB 3001 (With 40% Well Credit) | HB110  | ACES                      | SB 3001 (ex 40% Well Credit) | SB 3001 (With 40% Well Credit) | HB110 |
| 40  | (233)          | (233)                        | (528)                          | (323)  | 1,413            | 1,413                        | 1,142                          | 1,330  | 1,616                 | 1,616                        | 1,441                          | 1,563  | 378               | 378                          | 554                            | 432    | 81%                       | 81%                          | 72%                            | 78%   |
| 50  | 82             | 82                           | (213)                          | (8)    | 2,148            | 2,148                        | 1,877                          | 2,065  | 2,803                 | 2,803                        | 2,628                          | 2,750  | 1,218             | 1,218                        | 1,393                          | 1,271  | 70%                       | 70%                          | 65%                            | 68%   |
| 60  | 513            | 513                          | 218                            | 423    | 2,989            | 2,989                        | 2,719                          | 2,907  | 4,060                 | 4,060                        | 3,884                          | 4,006  | 1,988             | 1,988                        | 2,164                          | 2,042  | 67%                       | 67%                          | 64%                            | 66%   |
| 70  | 996            | 957                          | 662                            | 864    | 3,878            | 3,842                        | 3,572                          | 3,757  | 5,347                 | 5,323                        | 5,148                          | 5,268  | 2,727             | 2,751                        | 2,927                          | 2,806  | 66%                       | 66%                          | 64%                            | 65%   |
| 80  | 1,736          | 1,493                        | 1,198                          | 1,339  | 5,002            | 4,779                        | 4,509                          | 4,638  | 6,787                 | 6,642                        | 6,466                          | 6,550  | 3,314             | 3,459                        | 3,635                          | 3,551  | 67%                       | 66%                          | 64%                            | 65%   |
| 90  | 2,613          | 2,111                        | 1,816                          | 1,898  | 6,252            | 5,792                        | 5,522                          | 5,597  | 8,308                 | 8,010                        | 7,834                          | 7,883  | 3,819             | 4,118                        | 4,293                          | 4,245  | 69%                       | 66%                          | 65%                            | 65%   |
| 100 | 3,628          | 2,813                        | 2,518                          | 2,522  | 7,629            | 6,881                        | 6,611                          | 6,615  | 9,913                 | 9,427                        | 9,251                          | 9,254  | 4,241             | 4,727                        | 4,903                          | 4,900  | 70%                       | 67%                          | 65%                            | 65%   |
| 110 | 4,782          | 3,597                        | 3,302                          | 3,210  | 9,132            | 8,046                        | 7,776                          | 7,692  | 11,599                | 10,893                       | 10,718                         | 10,663 | 4,582             | 5,287                        | 5,463                          | 5,517  | 72%                       | 67%                          | 66%                            | 66%   |
| 120 | 6,073          | 4,464                        | 4,169                          | 3,963  | 10,761           | 9,287                        | 9,017                          | 8,829  | 13,367                | 12,409                       | 12,233                         | 12,111 | 4,840             | 5,798                        | 5,974                          | 6,096  | 73%                       | 68%                          | 67%                            | 67%   |
| 130 | 7,503          | 5,414                        | 5,119                          | 4,783  | 12,517           | 10,603                       | 10,333                         | 10,026 | 15,218                | 13,974                       | 13,798                         | 13,598 | 5,016             | 6,260                        | 6,435                          | 6,635  | 75%                       | 69%                          | 68%                            | 67%   |
| 140 | 8,550          | 6,193                        | 5,898                          | 5,645  | 13,922           | 11,764                       | 11,494                         | 11,261 | 16,841                | 15,438                       | 15,262                         | 15,111 | 5,420             | 6,823                        | 6,998                          | 7,149  | 76%                       | 69%                          | 69%                            | 68%   |
| 150 | 9,623          | 6,989                        | 6,694                          | 6,507  | 15,352           | 12,940                       | 12,670                         | 12,498 | 18,479                | 16,911                       | 16,736                         | 16,624 | 5,808             | 7,376                        | 7,551                          | 7,663  | 76%                       | 70%                          | 69%                            | 68%   |
| 160 | 10,730         | 7,806                        | 7,511                          | 7,370  | 16,813           | 14,135                       | 13,864                         | 13,735 | 20,138                | 18,397                       | 18,222                         | 18,137 | 6,175             | 7,916                        | 8,092                          | 8,176  | 77%                       | 70%                          | 69%                            | 69%   |
| 170 | 11,873         | 8,644                        | 8,349                          | 8,232  | 18,306           | 15,349                       | 15,078                         | 14,971 | 21,818                | 19,896                       | 19,720                         | 19,650 | 6,522             | 8,444                        | 8,620                          | 8,690  | 77%                       | 70%                          | 70%                            | 69%   |
| 180 | 13,049         | 9,503                        | 9,208                          | 9,095  | 19,830           | 16,581                       | 16,311                         | 16,208 | 23,518                | 21,406                       | 21,231                         | 21,163 | 6,849             | 8,960                        | 9,136                          | 9,203  | 77%                       | 70%                          | 70%                            | 70%   |
| 190 | 14,261         | 10,382                       | 10,087                         | 9,957  | 21,386           | 17,833                       | 17,563                         | 17,444 | 25,239                | 22,929                       | 22,753                         | 22,676 | 7,155             | 9,464                        | 9,640                          | 9,717  | 78%                       | 71%                          | 70%                            | 70%   |
| 200 | 15,506         | 11,282                       | 10,987                         | 10,820 | 22,974           | 19,104                       | 18,834                         | 18,681 | 26,980                | 24,464                       | 24,289                         | 24,189 | 7,440             | 9,955                        | 10,131                         | 10,230 | 78%                       | 71%                          | 71%                            | 70%   |

Note: Consistent with DOR methodology, these revenue numbers do not include payments for tax credits which are not claimed against current production, as these are accounted for separately in the budget. In 2013, DOR forecasts a potential liability of \$400mm for these credits.

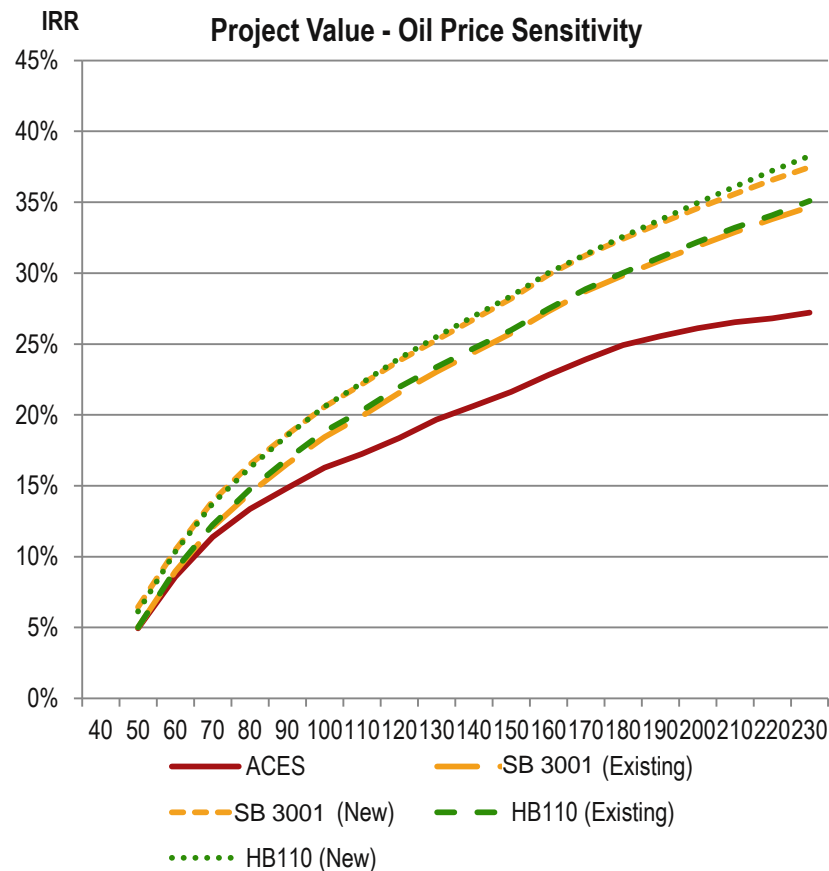
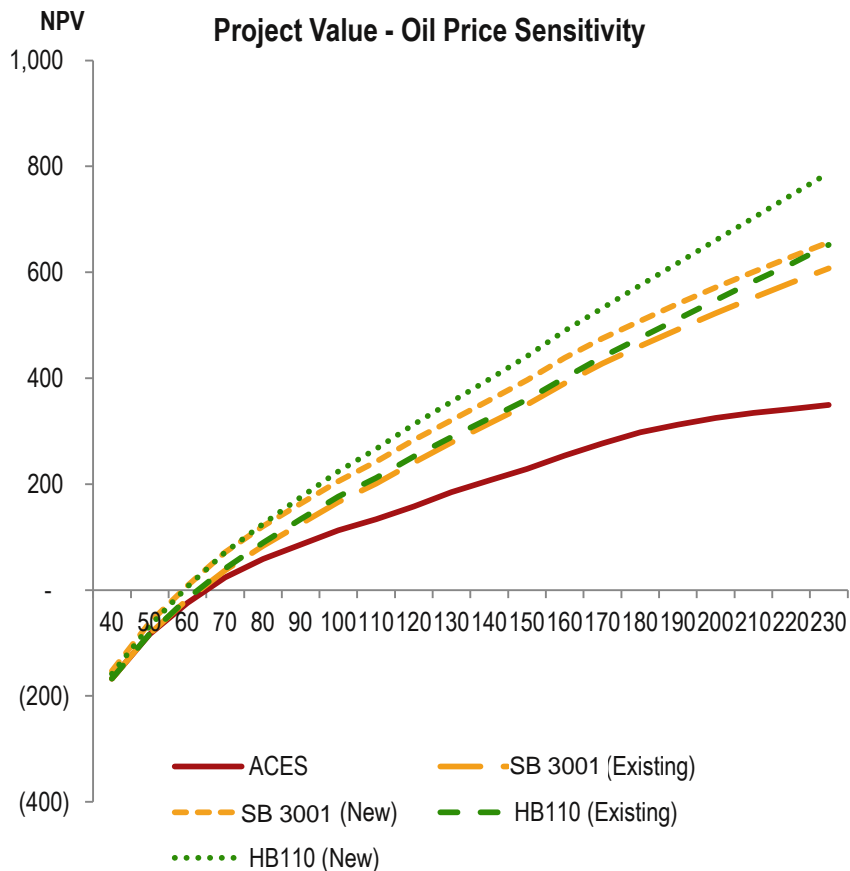
Well Credit impact has been estimated assuming 40% of Capex dollars are Well Expenditures, qualifying for the 40% Well Credit. Actual impact will vary depending on proportion of Capex qualifying for the Well Credit.

# FY 2013 Government Take Comparison

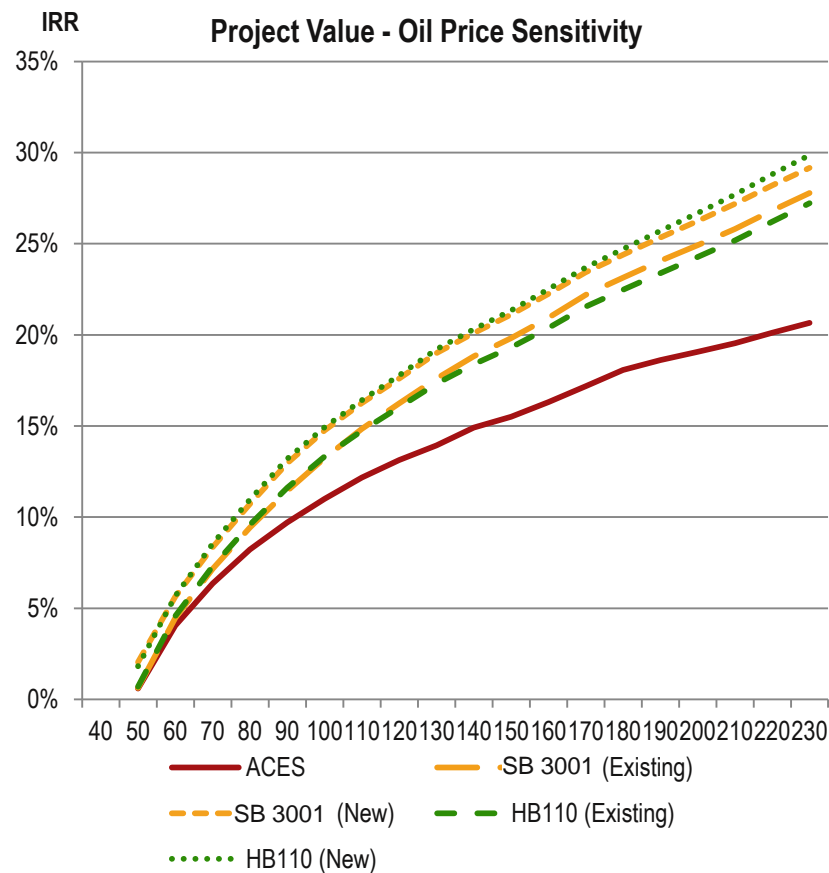
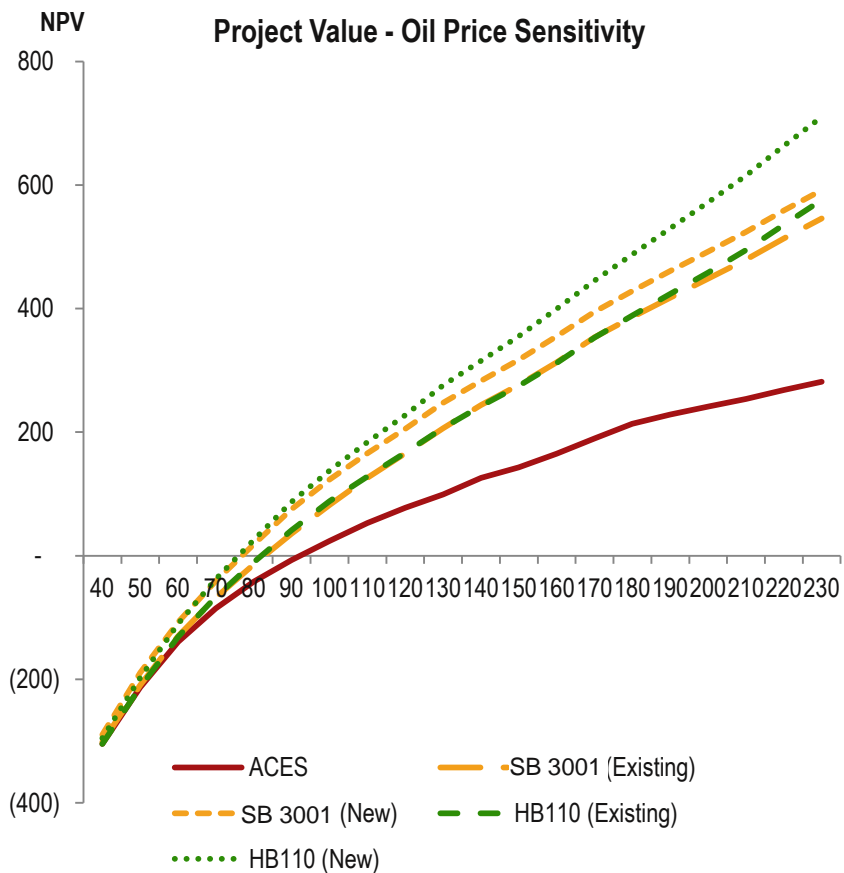
| FY 2013 % Government Take |      |                    |               |                  |             |
|---------------------------|------|--------------------|---------------|------------------|-------------|
| Price                     | ACES | HB 3001 (Existing) | HB 3001 (New) | HB110 (Existing) | HB110 (New) |
| 40                        | 81%  | 72%                | 72%           | 79%              | 79%         |
| 50                        | 70%  | 65%                | 62%           | 68%              | 65%         |
| 60                        | 67%  | 64%                | 58%           | 66%              | 62%         |
| 70                        | 66%  | 64%                | 58%           | 65%              | 61%         |
| 80                        | 67%  | 64%                | 59%           | 65%              | 61%         |
| 90                        | 69%  | 65%                | 60%           | 65%              | 61%         |
| 100                       | 70%  | 65%                | 61%           | 65%              | 61%         |
| 110                       | 72%  | 66%                | 62%           | 66%              | 61%         |
| 120                       | 73%  | 67%                | 63%           | 67%              | 62%         |
| 130                       | 75%  | 68%                | 64%           | 67%              | 63%         |
| 140                       | 76%  | 69%                | 65%           | 68%              | 63%         |
| 150                       | 76%  | 69%                | 66%           | 68%              | 64%         |
| 160                       | 77%  | 69%                | 66%           | 69%              | 64%         |
| 170                       | 77%  | 70%                | 67%           | 69%              | 65%         |
| 180                       | 77%  | 70%                | 67%           | 70%              | 65%         |
| 190                       | 78%  | 70%                | 67%           | 70%              | 65%         |
| 200                       | 78%  | 71%                | 68%           | 70%              | 65%         |



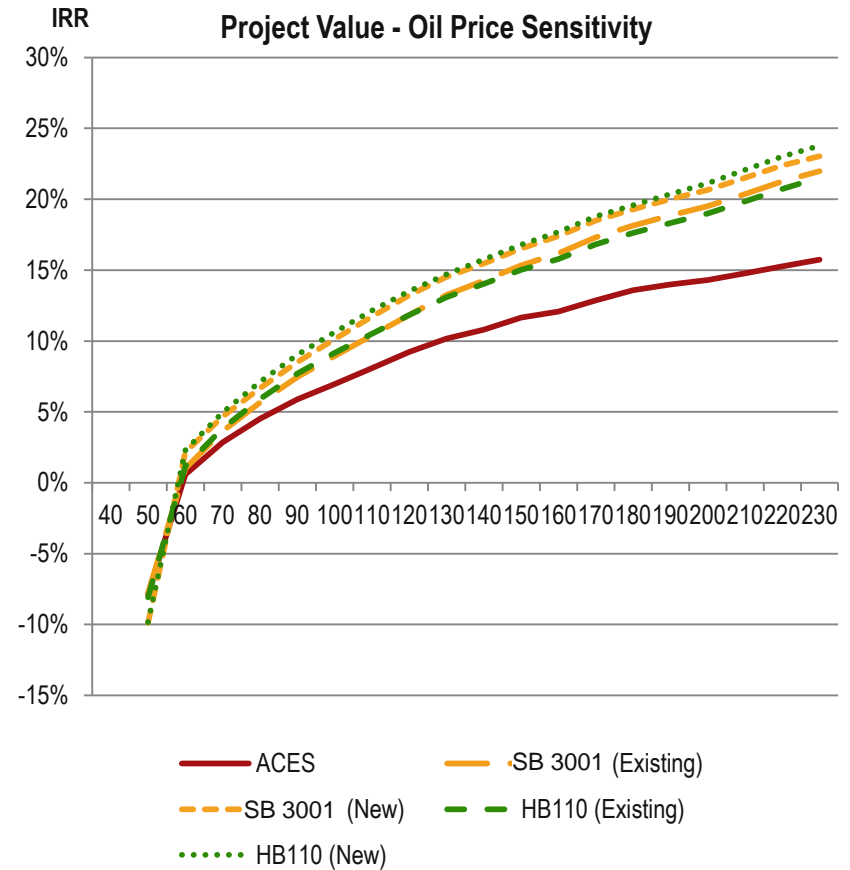
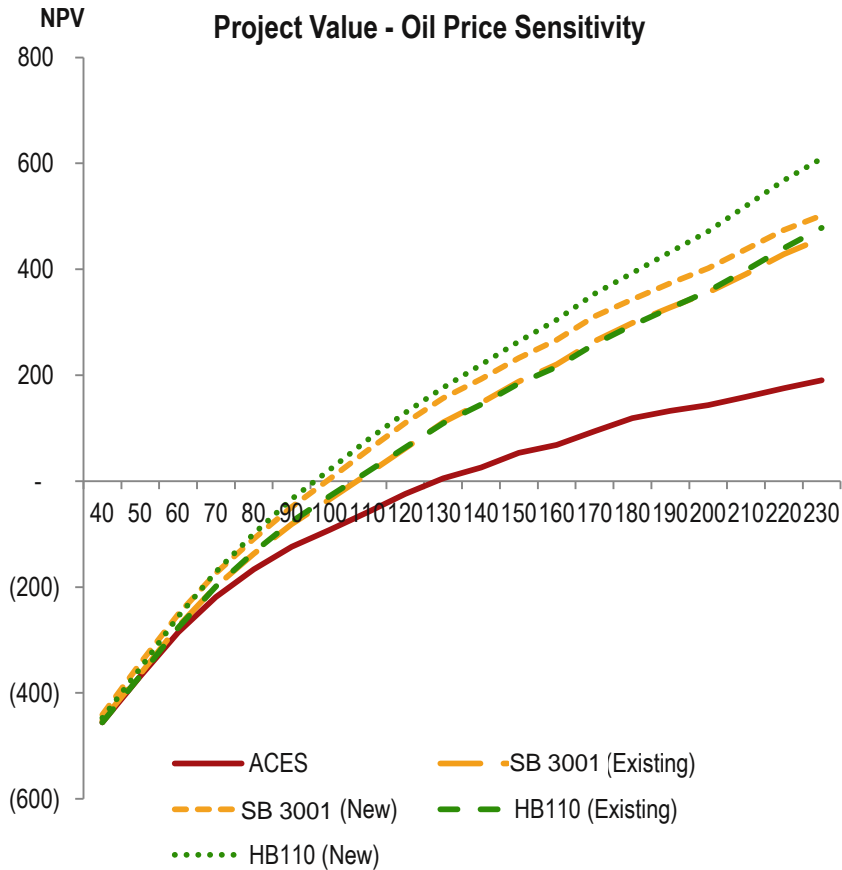
# \$17/bbl Field: Project Value Under Different Fiscal Options



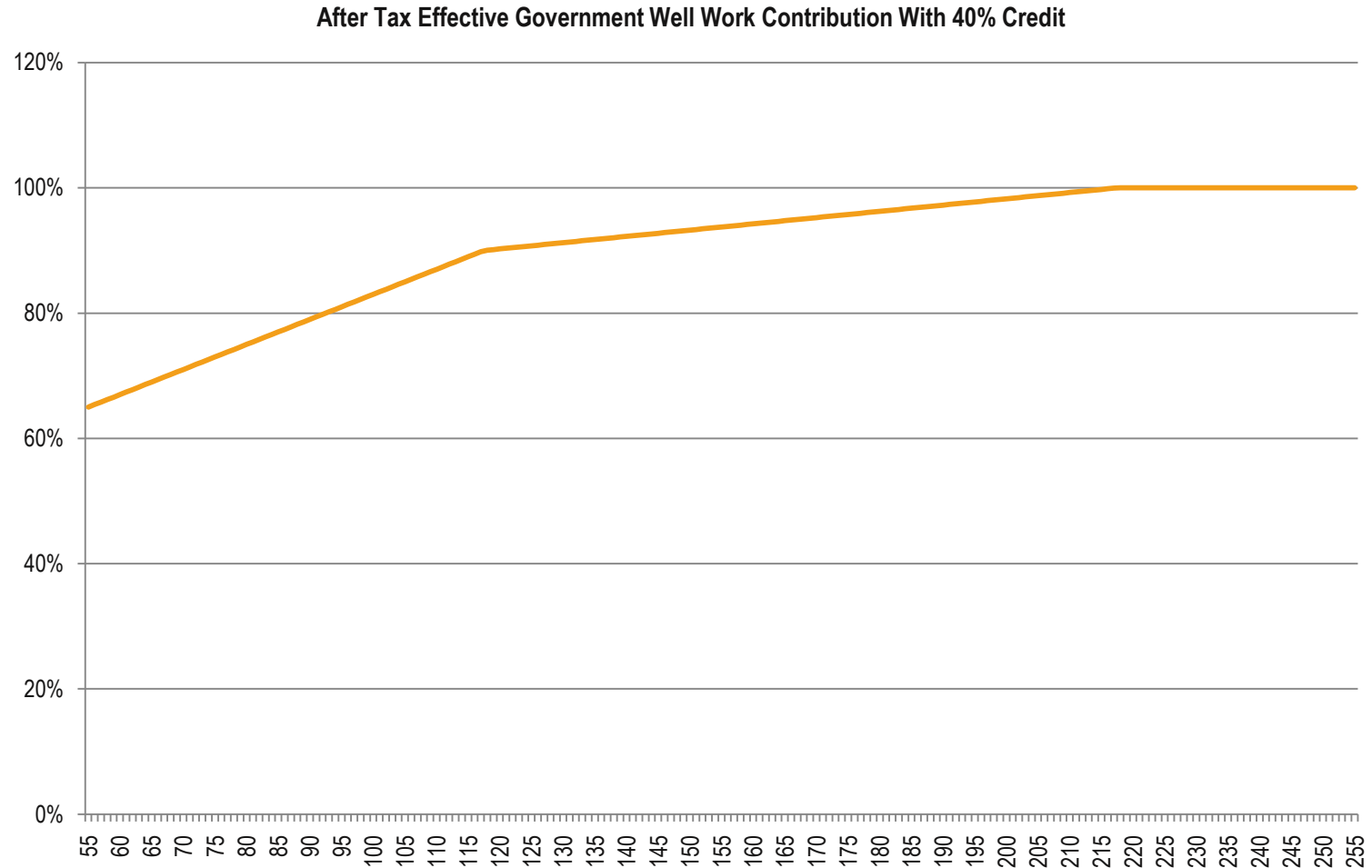
# \$25/bbl Field: Project Value Under Different Fiscal Options



# \$34/bbl Field: Project Value Under Different Fiscal Options



# 40% Well Credits Create High Levels of Government Support





# Key Issues

- Across-the-board reduction in government take is simplest approach, but requires forgoing significant revenue on activities that are currently economic
- If, hypothetically, decline on legacy fields could be reduced to 2% from 6%, revenue from 2020 onward could be higher than under current scenario; revenue until that point would be significantly reduced
- Alternative approach is to endeavor to differentiate between existing v incremental production from legacy fields
  - Significant complexities to doing this effectively
- SB3001 does not address other key issues with ACES including
  - Oil / Gas decoupling
  - High levels of spending support through high credits & progressivity

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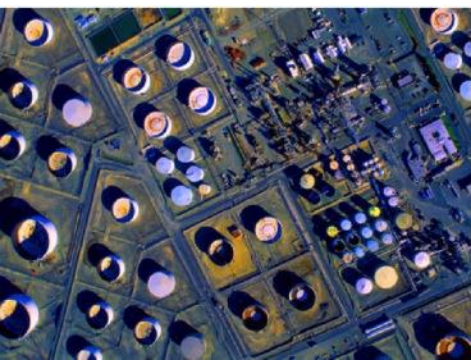
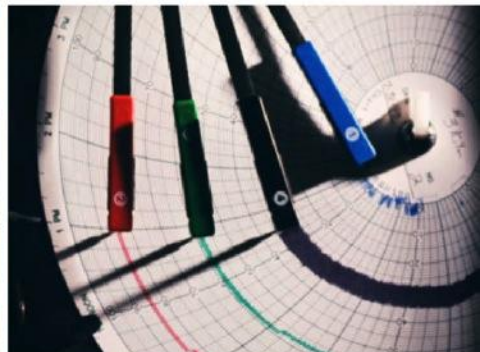
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