

## **Athabasca Oil Sands**



## **Taking a Bitumen Break**

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**\*\*IMPORTANT DISCLOSURES BEGIN ON PAGE 28 OF THIS REPORT\*\***

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## Why We Did this Report and How We Think About the Oil Sands

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### Oil sands, eh? TPH goes to Calgary

The Athabasca oil sands – it's a BIG resource (~170 Bbbls) and will continue to play a major role in US oil supply – CAPP estimates Western Canada supplied 1.9mmbpd of oil to the US in 2009 (22% total US oil imports) and will grow to 2.7mmbpd by 2015...all on oil sands growth. We put our boots on and high-tailed it up to Calgary to meet with our Canadian counterparts, including 9 public oil sands producers (ATH-T, CLL-T, CVE-T, DVN, MEG-T, NXY-T, OPC-T, STP-T, SU-T) to get a better idea of what has been going on up yonder.

### What are we looking for in oil sands companies?

Our longer term bias towards oil exposure led us down the path to oil sands. We expect to expand our oil sands coverage over time so our first three initiations are just an initial foray. We have a strong bias for “real” production, cash flow, reserves, project execution experience and ability to fund projects via cash flow/debt, not equity. CVE and MEG have the qualities we are looking for, with MEG providing a bit more upside (+26% to our \$42/sh NAV vs. CVE +10%) for a bit more risk. STP is the riskiest but too much upside to ignore (a 3-bagger to our \$3/sh NAV) and near-term financing should provide a catalyst for the stock.

### Initiating coverage on CVE-T, MEG-T and STP-T

We are initiating coverage of STP-T at a Buy and MEG-T and CVE-T at Accumulate. We went to Canada looking to better understand the role of oil sands in global markets and the valuation of oil sands versus other investment opportunities. We already cover Devon Energy and their very successful Jackfish development, so adding coverage only makes us smarter. We decided to cover either Cenovus or Suncor to understand the best in the business, but during our review we turned up a little gem in Southern Pacific. We expect to expand our coverage over time, but we will have a strong bias toward “real” production, cash flow, reserves, and project execution experience. For all oil sands companies, key events to watch include regulatory approval, project timing or schedule to first steam, first production, peak production, steam oil ratio, facility reliability, number of accidents/shutdowns, and maintenance capital. The right way to think about valuation is NAV, with the caveat that financing is key and have to believe in the companies ability to fund.

### Where do oil sands companies rank versus US peers?

Our goal is to effectively compare investment opportunities globally (current US offering, European coverage coming late 2010/2011 and now Canadian oil sands). For oil exposure, we'd rank OAS and WLL ahead of STP. But STP's small market cap and impending project financing places the stock ahead of BRY (another Buy rated oily company). MEG reminds us a little of CLR as both are well-run companies with solid assets, but less running room between their stock price and our asset valuation.

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## Overall Takeaways from Trip to Calgary

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### Overall takeaways

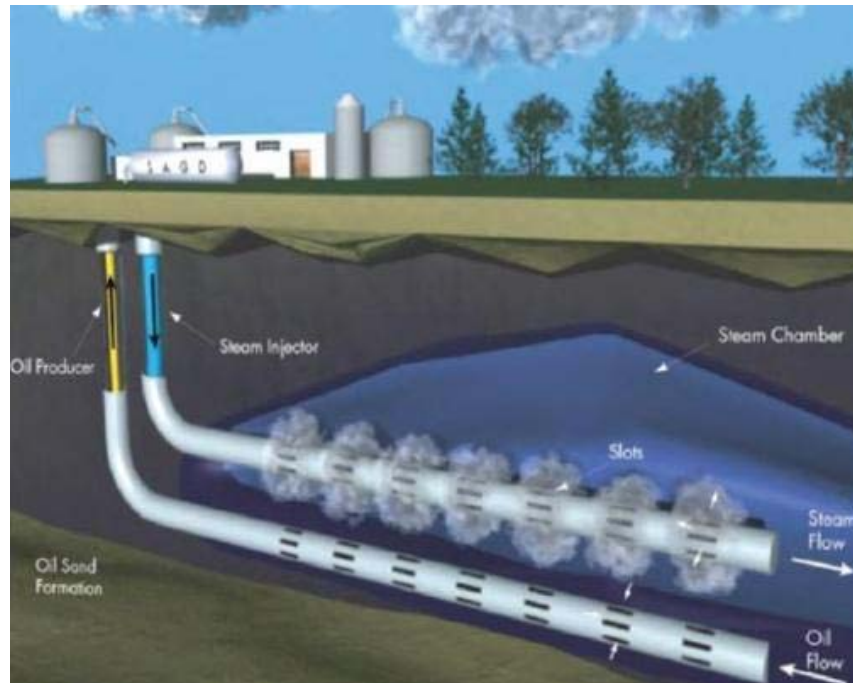
- **This is a slow-paced industry.** Like bitumen itself, the oil sands industry is a slow mover, with long lead times to production (5+ years) and high upfront capital intensity.
- **We prefer “real” reserves, cash flow and experience.**
- **Large contingent resources are just that...“contingent”** upon things like regulatory approval, capital access, and even new technologies.
- **Project experience rests with a few key people/companies** and production establishes both credibility and cash flow to fund future projects.
- **We prefer in-situ** (primarily SAGD, or steam-assisted gravity drainage) development over mining given low natural gas prices.
- **Reservoir and expertise matter.** No two projects are alike and cookie cutter analogies and discussions worry us. Reservoirs accessed by SAGD within the Athabasca oil sands vary considerably and location matters...and because stocks move with operational performance and each reservoir/project has a different set of issues to be worked through, expertise, experience and testing are hugely important.
- **We value projects that can be financed with cash flow/debt.** In an industry with high capital intensity and little cash flow, financing is obviously a big focus, so we include checks for our companies under coverage to make sure future projects can be funded via cash flow and debt without violating certain thresholds (we use debt ratio at 4x TTM EBITDA as cutoff).
- **Other topics of interest: near and long-term bitumen differentials, diluent costs, regulatory approval, M&A, steam-oil ratio and royalties.** For heavy oil differentials, we believe they will be tight in the near-term (3 years) as bitumen production catches up with the current build-out of new heavy oil refinery capacity, and wider long-term. We don't see diluent supply (“conde”) as a worry, believe regulatory approval is a potential bottleneck (meaning time to approval will take longer as backlog grows and the government looks to assuage potential inflationary pressures) and expect a healthy M&A market with deals currently on the table, JVs being a source of funding and consolidation being the end game for the industry. We believe that steam-oil ratio (SOR) is the most important metric when evaluating a project. For royalties, we expect companies that have projects that haven't yet reached payout (payout when cumulative after-tax cash flow = capital invested) will try to ring-fence the phases of their projects in order to defer higher royalties under the current sliding-scale regime.

### In-situ or drilling over mining

There are two primary ways to recover bitumen from the Athabasca oil sands currently – mining and drilling (or in-situ). ~20% of total estimated recoverable resource can be developed via mining sand, separating bitumen, upgrading or blending, and shipping to refinery via truck/pipeline. The other 80% can be recovered via in-situ processes including cyclic steam stimulation (CSS) and steam assisted gravity drainage (SAGD) with SAGD being the most popular method. SAGD projects use horizontal well pairs drilled into the reservoir, injecting steam through injector wells to generate a steam chamber (an area heated up to 130°C where the bitumen viscosity drops...bitumen is kind of like Nickelodeon Gak at room temp) and via gravity the bitumen flows to the deeper producer wells. On the surface, the bitumen/water emulsion is separated, bitumen is mixed with diluent (usually condensate or synthetic crude) and then shipped to a refinery. Mining has the advantage of super high recovery (95+% of bitumen in place) and certainty of recovery, but in a low gas price environment (gas <= \$6/mcf), returns of mining are lower than SAGD. In addition, SAGD projects are less capital intensive as can be built in phases (10-35 mbpd vs. ~100 mbpd for mining), require less labor, have lower fixed costs (1/3 vs. 80+% for mining, primarily as don't require upgrading) and have fewer regulatory/environmental issues (no tailing ponds, less land usage, lower CO2 emissions, recycle 85+% of

water and can use non-potable water vs. fresh water needed for mining). Finally, mining is a little like the old dog that can't be taught new tricks, while SAGD is the young whippersnapper (industry <15 years old) with plenty of potential and room for improvement and new technologies. SAGD economics have improved dramatically in the last 5 years via technological advancement and we think they will only get better in the next 5 with experiments in the works (infill well drilling, SAGD+ solvent, carbonates). Since we expect natural gas prices to stay at or below \$6, we are concentrating our research efforts on SAGD recovery, and our initial foray into oil sands coverage will be with all-SAGD operators (CVE, MEG, STP).

### Visual of SAGD Process:



Source: Southern Pacific Resources

### Reservoir matters

It's not just one big sandbox...quality and characteristics that affect operational performance vary across the play. Some regions are generally accepted as the best (CVE and MEG at Christina Lake, DVN's Jackfish) while others are guilty of inadequacy until proven innocent (NXY/OPC's Long Lake).

What we look for in a good reservoir:

- Clean cores
- Thickness (generally  $\geq 15$  m as thinner reservoirs will deplete quicker and require more capital to sustain production)
- Continuity (no shale breaks that divide the reservoir in two)
- Permeability  $> 3$  Darcy
- Strong caprock (witness TOT's blowout at Joslyn)
- No top gas or top/bottom water (potential thief zones where heat can escape)
- Nearby, preferably non-potable source water

In our opinion, best ways to tell a gem from a dud before operations is to understand the net pay isopach and examine well cores as a primary source of information over well logs. There are chances the well logs will not

clearly identify resistivity and good zones will be missed and thin laminations may be overlooked. This evaluation will determine if there are thief zones (like top gas or top/bottom water), lean zones, and/or breccia. Lean zones may lose steam due to requiring too high steam pressures. Breccia can be beneficial if the reservoir is well understood as the steam may be distributed more widely. After operations begin, pay attention to SOR (steam oil ratio)...the less steam required per barrel, the lower operating costs and emissions. Typically, the best reservoirs will require less steam per barrel. Know-how of employees is invaluable in ramping up and maintaining production at projects, but operational issues are more prevalent at bad reservoirs than good ones and good reservoirs can be proven over time even after initial operational upsets (prime example is SU's MacKay River)...so the reservoir is the determining factor in whether or not a project will be successful. That said, stocks move with operational performance so expertise/credibility matters a lot (CVE viewed as first-class operator and so stock trades at a premium and is pricing in value for future projects, vs. ytd underperformance of NXY and OPC on Long Lake underperformance). On both reservoir quality and management, we were most impressed with MEG, DVN and CVE. We also liked STP's assets and management, but realize the company has more to prove on the operations front.

### Current Utilization and SOR of Major In-Situ Projects:

SAGD Projects		Capacity (bpd)	Jun-10		Start-Up Date
			Utilization	SOR	
Cenovus	Christina Lake	18,800	77%	1.8	2002
Cenovus	Foster Creek	120,000	84%	2.3	2001
Connacher	Great Divide	10,000	65%	3.9	2007
ConocoPhillips	Surmont	28,000	72%	2.6	1997
Devon	Jackfish	35,000	92%	2.5	2007
Husky Energy	Tucker Lake	30,000	12%	6.7	2006
JACOS	Hangingstone	10,000	73%	4.0	1999
MEG Energy	Christina Lake	25,000	105%	2.4	2009
Opti/Nexen	Long Lake	72,000	38%	5.3	2007
Shell	Orion	10,000	33%	5.5	2008
Suncor	Firebag	93,000	61%	3.3	2004
Suncor	MacKay River	33,000	98%	2.5	2002
<b>Average</b>		<b>46,600</b>	<b>67%</b>	<b>3.8</b>	

CSS Projects		Capacity (bpd)	Jun-10		Start-Up Date
			Utilization	SOR	
CNRL	Primrose+Wolf	120,000	83%	4.4	1985-2009
Imperial Oil	Cold Lake	140,000	100%	3.8	1985, 2003
Shell	Carmone	12,501	54%	3.7	1986
<b>Average</b>		<b>51,167</b>	<b>77%</b>	<b>3.7</b>	

Source: Energy Resources Conservation Board

### Financing is THE contingency

Financing is THE contingency that matters above all others. Versus US oil plays like the Bakken, oil sands projects are more like manufacturing plants – they require a lot of upfront capital (\$25k-45k/bpd of design capacity...so ~\$1.2B for a 35 mbpd facility) but down the road, require less dollars to maintain production and so can be viewed more like annuities with potential to throw off a lot of cash flow (albeit after a few years). In a young industry where many projects are just getting to payout and companies have hefty plans for expansion, the need for external financing is a focus. The financing game in the oil sands is one of Goliaths and Davids. The bigger boys with integrated operations can fund oil sands growth via non-oil sands production or asset sales (COP, Shell, NXY, SU, CVE). Many of the smaller guys will need debt and/or equity for future planned expansions, but it's important to note that as these smaller companies grow, the need for external funding will be reduced (MEG and STP are good examples of this). Our first three oil sands companies under coverage (CVE, MEG, STP) can fund their projects without additional equity via cash flow, cash on hand, and additional debt. We calculated free cash flow from the blowdown of proved reserves plus cash flow from each project. Development and maintenance capital was subtracted from cash flow. If a company's debt exceeded 4x trailing 12-month cash flow, future projects would be funded with a maximum 50% debt and 50% equity (assumed to be issued at today's stock price).

**Example of TPH Checks for Financing Needs, MEG Energy:**

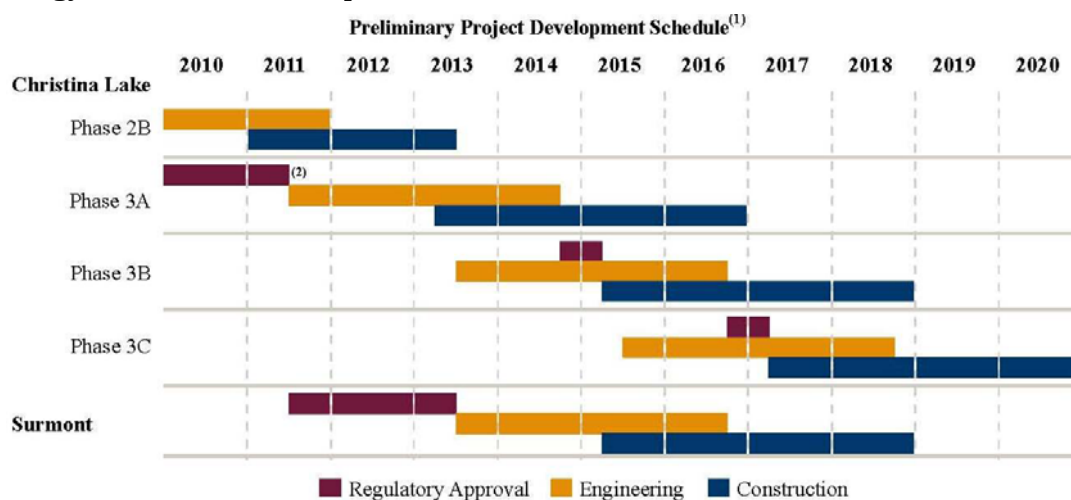
Financing Checks - MEG	2010	2011	2012	2013	2014	2015	2016	2017
Cash flow from operations	305	411	411	411	986	986	1,558	1,557
Capital expenditures	-538	-638	-738	-1,238	-1,338	-2,238	-2,340	-2,341
Net debt	-294	-67	260	1,087	1,439	2,691	3,472	4,256
<b>Net Debt/TTM Cash Flow &lt; 4.0x</b>	<b>-37.6x</b>	<b>-0.2x</b>	<b>0.6x</b>	<b>2.6x</b>	<b>3.5x</b>	<b>2.7x</b>	<b>3.5x</b>	<b>2.7x</b>
Net income	224	301	301	301	724	724	1,135	1,134
Shareholders' equity	3,964	4,266	4,567	4,868	5,592	6,316	7,451	8,585
<b>Net debt-to-cap</b>	<b>-7%</b>	<b>-2%</b>	<b>6%</b>	<b>22%</b>	<b>26%</b>	<b>43%</b>	<b>47%</b>	<b>50%</b>

We examined each company’s ability to project finance, stage projects to allow new projects to generate free cash flow to fund the next phase or next project, and determined if equity “would make sense?” or be minimally dilutive. For example, assuming 20% dilbit (dilbit = diluted bitumen) differentials and \$90/bbl WTI, MEG Energy can fund all future development via cash flow and debt. At \$60/bbl, MEG can fund development through 2017 via cash flow/debt, but would then need to issue equity in 2018 or defer/downsize development of its Surmont project.

**Not exactly the Indy 500**

The oil sands industry is a long-term one. Investors should understand that catalysts are few and far between (operational performance, capital raises, technological discoveries/improvements five years in the making and non-company specific events like regulatory changes, inflation and oil price), and so owners must be patient ones. Lead time is long from concept to production – for SAGD projects, 1-2 years for regulatory approval for most with bigger projects taking longer, ~2 years to build and 1-2 years to ramp up production, and for mining projects, longer lead-time with more regulatory hoops to jump through.

**MEG Energy Timeline of Development:**



**Notes:**

(1) Plans to develop the Growth Properties are currently being evaluated.

(2) Represents regulatory approvals for Christina Lake Phase 3, which is currently anticipated to be developed in three phases.

Source: MEG Energy

Technological advancements can be big wins for stocks, but they take awhile – the next two we think will work are SAGD+ solvent (DVN, CVE currently testing...but 3+ years before any numbers to back up improved recoveries and rates) and carbonates (expect datapoints from first pilot for Laracina in 2013 and ATH in 2015). Infill well drilling is also a semi-new concept that has been gaining traction, but regulatory approval slows the process of proving increased recovery (new wells must be approved on well-by-well basis).

### Barbell of risk profiles

As it's a new industry, there's a lot of risk inherent in the oil sands. The way to play the oil sands without taking on much risk is to buy the biggest and most established (SU, CVE, DVN...for oil sands exposure we prefer CVE). With the smaller guys comes a lot of different risks, including reservoir, operational, financial and technological. In our opinion, stocks with the most risk (and therefore the most reward) are: ATH, OPC and STP. Of the three, we'd buy STP today (good assets, think financing for MacKay imminent) and stay away from OPC (under strategic review, need operations to improve significantly at Long Lake to entice a buyer but non-op position means it's largely out of their hands). MEG and CLL are less risky as both have established credibility through operations. Below shows a summary of oil sands projects under our coverage, outlining our assumptions for SOR, start-up date, recovered resource and view of associated reservoir.

### Covered Company Projects, TPH Assumptions and Valuation:

Project	Operator	Value (\$mm)	Value (\$/sh)	Pre-Royalty Resource (mmboe)	Total Facility Net Capacity (bpd)	SOR	Start-Up	TPH Reservoir Grade
Foster Creek (Probables)	Cenovus Energy	\$845	\$1.1	291	117,500	2.3	2014-2019	A
Foster Creek (Contingent)	Cenovus Energy	\$675	\$0.9	800	117,500	2.3	2014-2019	A
Christina Lake (Probables)	Cenovus Energy	\$2,158	\$2.9	291	129,000	2.3	2011-2019	A
Christina Lake (Contingent)	Cenovus Energy	\$1,293	\$1.7	700	129,000	2.3	2011-2019	A
Narrows Lake (Contingent)	Cenovus Energy	\$476	\$0.6	270	20,000	2.5	2016	B+
Grand Rapids (Contingent)	Cenovus Energy	\$443	\$0.6	406	40,000	3.3	2017	B-
Telephone Lake (Contingent)	Cenovus Energy	\$579	\$0.8	440	35,000	2.5	2019	B-
Jackfish I (Probables)	Devon Energy	\$478	\$1.0	260	35,000	2.5	2007	A
Jackfish II (Contingent)	Devon Energy	\$1,288	\$2.8	260	35,000	2.5	2011	A
Jackfish III (Contingent)	Devon Energy	\$950	\$2.1	260	35,000	2.5	2014	A
Pike (Contingent)	Devon Energy	\$1,172	\$2.5	550	75,000	2.5	2014-2018	B
Christina Lake (Probables)	MEG Energy	\$1,072	\$5.4	1,143	110,000	2.5	2013, 2015	A+
Christina Lake (Contingent)	MEG Energy	\$1,698	\$8.6	1,355	210,000	2.5	2016, 2018	A+
Surmont (Contingent)	MEG Energy	\$1,241	\$6.3	647	100,000	2.5	2018	B+
McKay (Probables)	Southern Pacific	\$403	\$1.2	169	12,000	3.0	2011	A
McKay (Contingent)	Southern Pacific	\$278	\$0.8	200	24,000	3.0	2016	B

### M&A environment

The good stuff is largely leased up ('05-'06 was land rush) and we think consolidation is the end game for the industry. In the near-term, think AMIs/JVs continue...those we think are open to partners or outright sale – ATH, BQI, OPC, STP. Those we don't think are open to JVs – CLL, MEG. CVE, DVN and SU seem content to concentrate on currently owned acreage for now, but we see these companies as buyers of oil sands assets going forward. For perspective, we looked at historical transactions (using JS Herold's database), below.

### Largest 15 Oil Sands Transactions (2005-Present):

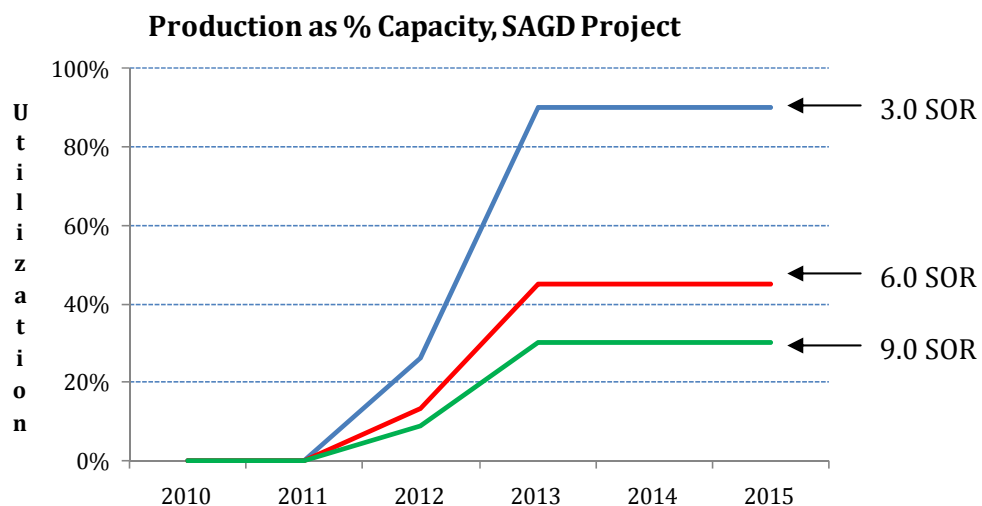
Date Announced	Buyer	Seller	Transaction Value (\$mm)	Key Asset(s)
Jan-2007	RDSHELL plc	Shell Canada Ltd	\$7,683	Remaining 22.2% of Shell Canada; 13.3% AOSP mining, 60% Orion SAGD
Jul-2007	Marathon Oil	Western Oil Sands	\$6,279	20% stake AOSP mining project
Apr-2010	China Petrochemical	ConocoPhillips	\$4,650	9.03% stake in Syncrude
May-2006	RDSHELL; Shell Canada	BlackRock Ventures	\$2,103	100% stake in Orion SAGD project
Apr-2007	Statoil ASA	NAM Oil Sands	\$1,964	Leismer & Kai Kos Dehseh SAGD projects
Aug-2009	PetroChina	Athabasca Oil Sands	\$1,730	60% interest in MacKay River & Dover oil sands SAGD projects
Aug-2005	Total SA	Deer Creek Energy	\$1,255	84% stake in Joslyn oil sands SAGD project in Athabasca region
Mar-2010	BP plc	Value Creation Inc	\$900	75% stake in Value Creation JV to develop Terre de Grace oil sands block
May-2010	China Investment	Penn West Energy	\$799	Alberta Peace River area oilsands assets: North Seal Project
Mar-2010	Devon Energy	BP plc	\$650	50% interest in undeveloped Kirby oil sands leases
Dec-2008	Nexen Inc	OPTI Canada Inc	\$611	15% stake in Long Lake SAGD Project
Jun-2008	Occidental Petroleum	Enerplus Resources	\$492	15% stake in Joslyn Oil Sands Mining/ SAGD project
Jun-2006	CanWest	Oilsands Quest	\$459	Remaining 40.5% in Oilsands Quest; oil sands permits on 508k net acres
Jul-2010	Total SA	UTS Energy Corp	\$416	20% non-operated stake in Fort Hills mining project
Nov-2006	Canadian Oil Sands	Talisman Energy	\$416	1.25% stake in the Syncrude JV

Source: JS Herold

Since 2005, there have been >\$30B of transactions involving bitumen resource, with the largest transactions being RD Shell’s purchase of Shell Canada in 2007 (\$7.7B), MRO’s purchase of Western Oil Sands in 2007 (\$6.3B) and Chinese company Sinopec’s purchase of COP’s 9.03% interest in Syncrude in April of this year (\$4.7B). The most recent transactions were TOT’s purchase of UTS Energy’s Fort Hills mining project for \$440mm (\$0.65/boe) and Athabasca’s purchase of Excelsior Energy (\$139mm). We expect continued consolidation in the space.

**Importance of Steam Oil Ratio (SOR)**

Investors need to continue to focus on SOR. Higher SOR means higher capital costs and higher operating costs. Each plant includes water treating, steam generation, and oil treating. A steam oil ratio of 4.0 requires double the amount of spending on steam generation and water handling when compared to projects with a 2.0 SOR. A 30mbopd plant with a 2.0 SOR may have 70mbpsd of steam capacity. The steam/water treating total capital requirement is \$650-700mm and the oil treating capital is \$100-150mm (depending on oversizing oil treating) for total capital costs of \$750-900mm or \$25-30,000/bopd capital. If SOR increases to 3.0 steam/water treating increases to 100mbpsd and capital required increases to \$1B, while oil treating capital remains \$100-150mm for 30mbopd capacity, so total capital increases to \$1.1-1.15B or \$36-38,000/bopd. At a 4.0 SOR capital costs likely increase to \$1.4B or \$44-46,000/mbopd. We model SOR’s affect on operations by assuming a higher SOR = lower utilization of the facility (utilization being production as a % of design capacity). The affect on production in shown below a generic SAGD project, where we assume a SOR of 3.0 means the facility produces at 90% of design capacity.



As we examine new projects/phases another key factor is expansion and use of existing steam generation. The current facility limit for efficient steam transportation is ~5miles, but through use of new insulations on steam pipelines and heat tracing, operators are attempting to expand the distance for efficient steam transport. When speaking with companies we tried to understand the steam/water/oil treating/pipeline capacity to identify the next bottleneck if SOR decreases. We also tried to verify we were comparing apples to apples as the lowest upfront capital intensity does not always lead to the “best” project, as projects include new infrastructure, pre-builds for next phases, etc.

**Understanding regulatory approval process**

To build a new project, companies must receive scheme approval from the Energy Resources Conservation Board, or ERCB (includes application, public consultation and environmental impact statement). After receiving ERCB approval, each company can apply to receive project approval from the Oil Sands division of Alberta Energy...it isn’t mandatory, but has royalty advantages (payments are made on share of profit basis vs. a production-based royalty for unapproved projects). In addition to receiving approval, each builder must post reclamation costs before beginning construction to the Environmental Protection Security Fund.

### Understanding royalty regime

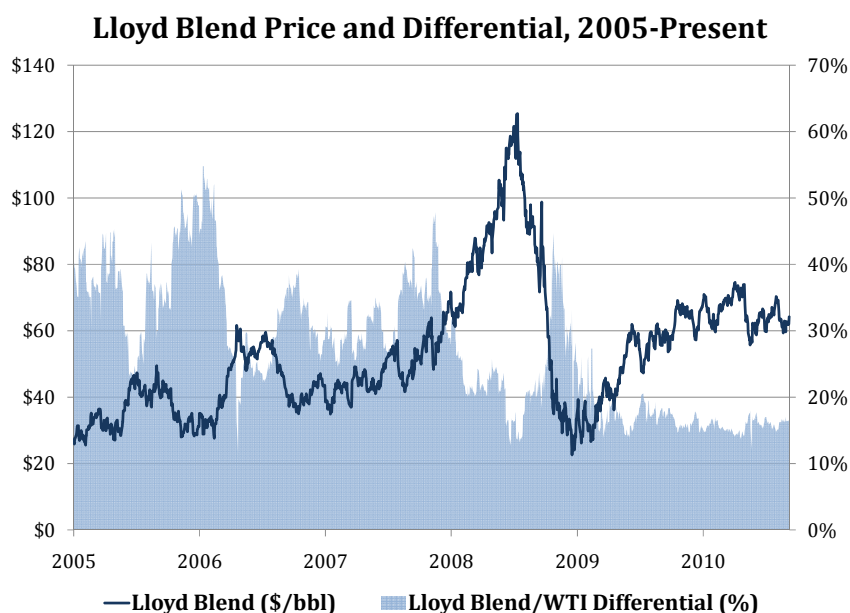
Alberta has a sliding scale royalty that changes post-payout. Pre-payout the royalty starts at 1% of gross bitumen revenues and increases with oil price for every dollar above \$55/bbl to a maximum of 9% when oil is \$120+/bbl. Post payout the royalty starts at 25% of net bitumen revenues and increases with oil price for every dollar above \$55/bbl to a maximum of 40% when oil is \$120+/bbl.

TPH Royalty Calc'r for STP's McKay, Phase I					
Year	Cumulative (\$mm)		Total ATCF	Reached Payout?	Royalty
	Cash Flow	Capex			
2010	\$0	\$92	(\$92)	no	3.6%
2011	\$0	\$368	(\$368)	no	4.1%
2012	\$51	\$441	(\$390)	no	5.4%
2013	\$223	\$479	(\$256)	no	5.4%
2014	\$394	\$517	(\$122)	no	5.4%
2015	\$498	\$554	(\$56)	no	5.4%
2016	\$602	\$592	\$9	YES	33.1%
2017	\$738	\$630	\$108	YES	33.1%

As operators add additional phases to existing projects they will likely try to consolidate the capital and defer payout if the projects share the same watershed, airshed, operations, and reservoir. Devon is likely consolidating Jackfish 1, 2, 3 when they submit Jackfish 3 for regulatory approval. Once a project or phase reaches payout the royalty regime will not shift back to pre-payout regardless of consolidation and additional capital invested. Saskatchewan has a 1% royalty on gross bitumen revenues with no sliding scale pre-payout and 20% on operating income with no sliding scale post-payout.

### Heavy oil differentials and earnings

We assume that bitumen/heavy oil differentials in 2H'2010 widen after the shut-in of the Line 6B portion of Enbridge's Lakehead system in Michigan following late July rupture. We are pricing in differentials at 25-30% of WTI for the July-September quarter, which affects earnings of the three companies we are covering. For CVE, we estimate Q3'10 EPS/CFPS of 25c/68c vs. consensus of 39c/85c. For MEG, we estimate EPS/CFPS of 0c/16c vs. consensus of 0c/23c. For STP, we estimate FYQ1'11 (fiscal year-end June 30) EPS/CFPS of 0c/3c. After Line 6B comes back online, we assume differentials will be tighter (15-20%) in the near-term (3 years) as bitumen production catches up with the current build-out of new heavy oil refinery capacity, and then widen to 30% long-term.



Source: Bloomberg

### Access Pipeline benefits

The Access Pipeline is co-owned by Devon and MEG Energy. Currently, the pipeline system consists of a 24" dilbit blend line (156 mbpd currently, expandable up to 394 mbpd) and a 16" diluent line (70 mbpd currently, expandable up to 206 mbpd). The diluent line brings condensate to the facility for blending with bitumen (for transport). Using condensate as diluent instead of syncrude significantly reduces the blending percentages (50% of total blend for syncrude is diluent vs. 30% of dilbit blend is condensate). Simply put DVN/MEG can produce more bitumen as a percentage of total throughput, as long as condensate is readily available. Looking forward, we think this system could pay even bigger dividends for each operator. We believe the long-term expansion plans are to install a new blend line (36"-42") that parallels the existing 24" line. The existing 24" blend line would be reversed to handle bringing diluent into the area and here's the cool part...the existing 16" diluent line was designed for low vapor pressure fluids...aka solvent. Devon/MEG had the foresight to build a pipeline system that could bring propane to the field for commercial solvent use, years before solvent pilots even began to show up in the minds of investors. We like forward thinking companies.

### NAV sensitivities for covered companies

Tables below. Every \$10/bbl WTI is 60c/sh (24%) for STP, \$9/sh (21%) for MEG and \$4/sh (13%) for CVE. Blend realizations move NAVs the most, followed by timing of projects and SOR.

TPH Assumptions				
	CVE-T	DVN	MEG-T	STP-T
<b>NAV (\$/sh)</b>	<b>\$32</b>	<b>\$92</b>	<b>\$42</b>	<b>\$3.0</b>
Blend price (% WTI)	80%	80%	80%	80%
SOR	2.30-3.30	2.50	2.50	3.00
Timing	+1 year	+1 year	+1 year	+1 year
Gas price (\$/mcf)	\$6	\$6	\$6	\$6
Facility capex (\$/bpd)	\$25-35k	\$40,000	\$40,000	\$40,000

NAV Sensitivities								
	CVE-T		DVN		MEG-T		STP-T	
	NAV \$/sh	% Chg	NAV \$/sh	% Chg	NAV \$/sh	% Chg	NAV \$/sh	% Chg
<b>Blend price (% WTI)</b>								
70%	\$24	-25%	\$86	-7%	\$21	-49%	\$0.7	-78%
90%	\$38	19%	\$99	7%	\$62	50%	\$4.7	60%
<b>SOR</b>								
-0.25	\$29	-9%	\$93	1%	\$49	17%	\$3.3	11%
+0.25	\$34	6%	\$92	-1%	\$35	-15%	\$2.7	-10%
<b>Timing</b>								
+0 yr	\$34	6%	\$94	2%	\$49	18%	\$4.9	64%
+2 yr	\$30	-7%	\$90	-3%	\$35	-15%	\$2.4	-19%
<b>Gas price (\$/mcf)</b>								
\$5	\$32	-1%	\$86	-7%	\$43	3%	\$3.0	1%
\$7	\$32	1%	\$98	6%	\$40	-3%	\$2.8	-4%
<b>Initial capital (\$/bpd)</b>								
-10%	\$33	2%	\$93	1%	\$44	5%	\$3.1	5%
+10%	\$31	-3%	\$92	-1%	\$39	-5%	\$2.8	-6%

Cenovus Energy		C\$28.40		
NAV (\$/sh)	Natural Gas (\$/MMBtu)			
	\$5	\$6	\$7	
Crude Oil (\$/bbl)	\$60	C\$22	C\$22	C\$22
	\$75	C\$26	C\$26	C\$26
	\$90	C\$32	C\$32	C\$32

MEG Energy		C\$33.25		
NAV (\$/sh)	Natural Gas (\$/MMBtu)			
	\$5	\$6	\$7	
Crude Oil (\$/bbl)	\$60	C\$21	C\$21	C\$21
	\$75	C\$27	C\$25	C\$24
	\$90	C\$43	C\$42	C\$40

Devon Energy		C\$61.73		
NAV (\$/sh)	Natural Gas (\$/MMBtu)			
	\$0	\$0	\$0	
Crude Oil (\$/bbl)	\$3	\$56	\$70	\$85
	\$0	\$65	\$81	\$95
	\$0	\$76	\$93	\$107

Southern Pacific Resource		C\$1.15		
NAV (\$/sh)	Natural Gas (\$/MMBtu)			
	\$5	\$6	\$7	
Crude Oil (\$/bbl)	\$60	C\$0.7	C\$0.6	C\$0.6
	\$75	C\$1.9	C\$1.8	C\$1.7
	\$90	C\$3.0	C\$3.0	C\$2.8

Source: Tudor, Pickering, Holt & Co.

**Ownership of covered companies**

Shown below are top ten holders of CVE, MEG and STP as well as any cross ownership.

Top 10 Holders of CVE, MEG and STP	Ownership as % Shares Out					
	CVE		MEG		STP	
	Mkt Cap (\$000)	% Shs Out	Mkt Cap (\$000)	% Shs Out	Mkt Cap (\$000)	% Shs Out
Bill McCaffrey (MEG CEO)	--	--	38,061	0.6	--	--
Blackrock	590,868	2.7	3,179	0.0	--	--
Bounty Developments	--	--	--	--	8,249	2.5
Capital World	559,880	2.6	99,750	1.5	--	--
CIBC	245,604	1.1	53,200	0.8	4,648	1.4
CNOOC Ltd	--	--	953,623	15.2	--	--
Colonial First State	--	--	28,263	0.4	--	--
David Antony (STP Chairman)	--	--	--	--	758	0.2
First Canadian Mutual	--	--	--	--	1,959	0.6
Harris	1,517,283	6.9	--	--	--	--
IG Investment Mngmt	530,148	2.4	--	--	26,518	8.1
Jarislowsky Fraser	771,677	3.5	--	--	--	--
Jennison Assoc Capital	--	--	33,250	0.5	--	--
Mackenzie Financial	227,417	1.0	--	--	12,240	3.7
Perennial Investors	--	--	--	--	1,777	0.5
PSP	--	--	58,188	0.9	--	--
Pyramis Global	484,835	2.2	--	--	--	--
RBC Asset Mngmnt	432,899	2.0	--	--	3,927	1.2
Sceptre Investment	5,784	0.0	--	--	4,037	1.2
Scotia Asset Mngmt	88,678	0.4	21,613	0.3	4,947	1.5
Solus Alternative Asset Mngmt	--	--	33,250	0.5	--	--
TD Asset Mngmt	433,575	2.0	6,650	0.1	--	--
Warburg Pincus & Co.	--	--	1,422,079	22.6	--	--
Wellington Mngmnt	474,873	2.2	77,117	1.2	--	--

Source: Factset, Bloomberg

## Company Takeaways from Trip to Calgary

### COVERED COMPANY THOUGHTS (CVE-T, DVN, MEG-T, STP-T)

We are initiating coverage of STP-T at a Buy and MEG-T and CVE-T at Accumulate. We went to Canada looking to better understand the role of oil sands in global markets and the valuation of oil sands versus other investment opportunities. We already cover Devon Energy and their very successful Jackfish development, so adding coverage only makes us smarter. We decided to cover either Cenovus or Suncor to understand the best in the business, but during our review we turned up a little gem in Southern Pacific. We expect to expand our coverage over time, but we will have a strong bias toward “real” production, cash flow, reserves, and project execution experience. For all oil sands companies, key events to watch include regulatory approval, project timing or schedule to first steam, first production, peak production, steam oil ratio, facility reliability, number of accidents/shutdowns, and maintenance capital. The right way to think about valuation is NAV, with the caveat that financing is key and have to believe in the companies ability to fund.

### Comparables, TPH Oil Sands and Oily U.S. Coverage:

TPH Coverage Comps - NAV, Production Growth and Multiples										
Ticker	9/13/10		Price/ 1P NAV	Price/ 3P NAV	Prod'n Growth		EV/EBITDA		P/CF	
	Price	EV (\$mm)			2010	2011	2010	2011	2010	2011
<b>Oil Sands Comps</b>			<b>181%</b>	<b>69%</b>	<b>2701%</b>	<b>24%</b>	<b>17.9x</b>	<b>10.4x</b>	<b>20.7x</b>	<b>11.6x</b>
CVE CN	C\$28.40	C\$24,779	129%	89%	-3%	-2%	9.7x	8.7x	10.0x	8.5x
MEG CN	C\$33.25	C\$6,116	158%	79%	477%	23%	35.4x	16.4x	46.6x	18.9x
STP CN	C\$1.15	C\$312	256%	38%	7628%	52%	8.6x	6.1x	5.4x	7.4x
<b>TPH Comps</b>			<b>200%</b>	<b>77%</b>	<b>22%</b>	<b>29%</b>	<b>9.2x</b>	<b>6.7x</b>	<b>9.2x</b>	<b>6.9x</b>
OXY	\$78.61	\$62,816	103%	73%	17%	8%	6.3x	5.7x	8.5x	8.1x
CLR	\$44.25	\$8,321	316%	79%	17%	25%	11.5x	8.8x	11.3x	8.6x
CXO	\$65.95	\$8,366	213%	92%	41%	56%	12.6x	7.6x	11.0x	7.2x
PXD	\$65.11	\$10,109	171%	88%	-1%	14%	8.4x	6.8x	7.3x	5.5x
PXP	\$25.48	\$5,120	111%	57%	6%	17%	5.9x	5.1x	4.2x	3.7x
WLL	\$91.69	\$6,264	122%	91%	19%	18%	6.2x	5.2x	6.1x	4.8x
BRY	\$30.78	\$2,677	134%	72%	8%	7%	7.7x	7.5x	6.6x	8.6x

Source: Tudor, Pickering, Holt & Co.

### Cenovus Energy (CVE-T - C\$28.40 - A)

*Stock thoughts* – The oil sands spin-off of Encana, Cenovus is well-known in the oil sands sector as a best-in-class operator and innovator (it is also one of the biggest players with a \$21B market cap). We are initiating coverage of CVE with an Accumulate rating. Cenovus’s knowledgeable management and significant asset experience lowers operational risk, and the company can internally fund future phases of development and generate free cash flow at our price deck (\$90 WTI and 20% differential). Free cash flow will enable dividend growth in 2012+ and/or share repurchases/paydown of debt. The stock offers less upside to NAV vs. oil sands peers (thus the Accumulate and not Buy rating), but we see it as a ‘safer’ way for investors to gain exposure to oil sands development (oil sands projects ~50% of our NAV, with refineries and non-sands production making up the remainder) while receiving an increasing dividend payment (2.9% current yield).

*Project thoughts* – It is important to note that Cenovus reports reserves and contingent resource using a more conservative approach than most other oil sands operators because of its listing in the U.S. CVE uses the SEC flat price deck vs. the escalated price decks (usually +2%/year) allowed by SEDAR and used in most reserve reports. We’ve attempted to grade CVE’s project areas as follows: Foster Creek – A (1.1 Bbbls of probable reserves/contingent resource, current operations, low SOR), Christina Lake – A (1 Bbbls probable/contingent, current operations, low SOR), Grand Rapids – B- (900 mmbbls contingent, only 1 well drilled per section, targeting new formation, pilot in 2011), Narrows Lake – B+ (500 mmbbls contingent, proximity/similarity to Christina Lake, better evaluated with 4-8 strat wells drilled per section, and

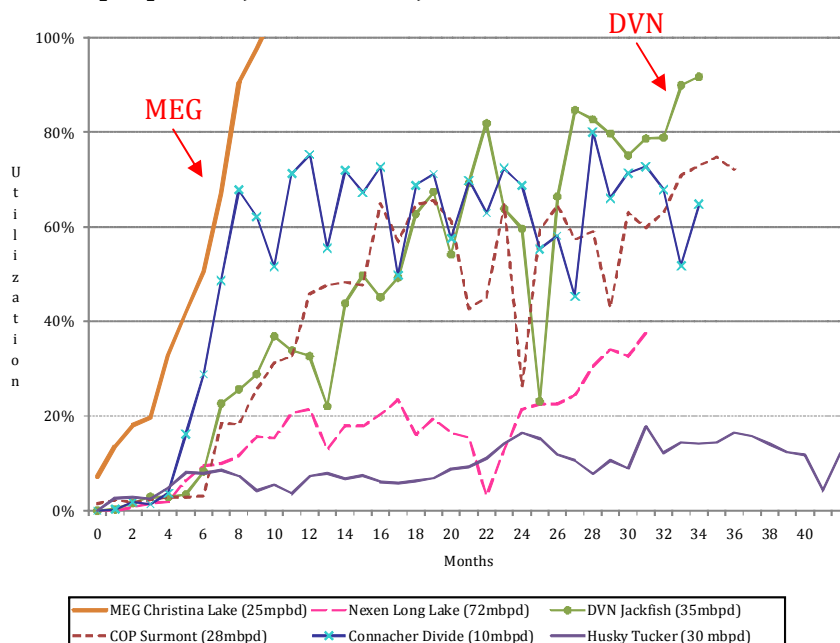
Telephone Lake – B- (700 mmbbls contingent, well-evaluated with 4-16 wells per section, impressive well logs but includes top water which is both a potential thief zone and fresh, so has been delaying regulatory approval). We estimate that future phases at Foster Creek will cost \$1.4B (excluding maintenance capital of \$2,500/bpd) to recover 1.1 Bboe of probable reserves/contingent resource and Christina Lake, \$3B to recover 1 Bboe of probables/contingent resource. For less well-known regions, we generally assume lower or longer timing of recovery for company-reported contingent resource...with Narrows lake at \$700mm for 270 mmboe, Grand Rapids at \$1.4B for 400 mmboe and Telephone Lake at \$1.2B for 440 mmboe.

**Valuation** – Currently pricing in \$81/bbl WTI (assuming 20% differentials) and \$32/sh NAV so less upside than other names under our coverage, but superior assets say this stock should trade at a premium and we see value in acquiring stock on dips for exposure to oil price (each \$10/bbl change in oil price moves our NAV by 13%) for less risk. Breakdown of our NAV is as follows: \$17/sh for proved reserves and balance sheet, \$5/sh for refineries (valued at 6x 2012 EBITDA), \$5/sh for probable reserves (Foster Creek, Christina Lake and Wabiska tertiary recovery), \$5/sh for contingent resource (Foster Creek, Christina Lake, Narrows Lake, Grand Rapids and Telephone Lake) and <\$0.50/sh for Bakken/Sh Shaunavon acreage (valued at \$2,500/acre).

**Devon Energy (DVN \$61.73 – B)**

Devon seems very content with their current oil sands portfolio and the recent Kirby/Pike acquisition was five years in the making. We assign \$6/share of value to Jackfish I, II, III and after our visit in Calgary, have added another \$3/share for Pike (DVN 3P NAV now \$92/sh). DVN's Jackfish project is one of the best performing oil sands projects when comparing capital, steam oil ratio (running 2.5 vs. design 2.65), 90% capacity utilization (35mbpd gross at 2.65 SOR), and production ramp (22 months to 80% of capacity) – we rate Jackfish an A.

**Production Ramp-Up of Major SAGD Projects:**



Source: Energy Resources Conservation Board

Each of three phases is expected to recover 300mmboe gross or 260mmboe net. Devon currently has four 7-well pads producing and will add a 5<sup>th</sup> well pad before year-end 2010. The facility production has been well

capacity limited up to this point, but will become steam limited at year-end. The average well pad is expected to recover 10-20mmboe. Jackfish I should payout by the end of 2011 or early 2012 at \$70-80/bbl oil (so royalties would increase to 30% without consolidation with Jackfish II and Jackfish III). Jackfish II shares the same design as Jackfish I (35mbopd), online late 2011 with an 18 month ramp-up to peak production. Devon expects to drill a new 7-well pad for Jackfish I/II every 2 years with about 1-year from spud to 1<sup>st</sup> steam. At Jackfish III, Devon plans to file for regulatory approval in 2010 and plans to file to consolidate the three phases given the common reservoir, watershed, and airshed. Devon plans to file for Pike regulatory approval in 2012. DVN's Pike project (50% w.i.) we rate as a B, as the area has been less delineated by strat wells than Jackfish. Pike includes 550mmboe of net risked resource, which we estimate will be developed in three 25 mbpd (net) phases with first production in 2015, 2018 and 2021 for total cost of \$3B (16% ATROR). Devon also plans to pilot SAGD+ (solvent) at Jackfish. The SAGD+ pilot will first be an attempt to increase rate on a 1-well pair followed by expanding to a full pad to see if solvent increases recovery. Interestingly, if solvent proves efficient in reducing SOR, Jackfish will use less steam and will be able to produce above 35 mbpd design capacity (next limit on capacity beyond steam is fluid handling, at 50 mbpd). One key component for injecting propane as a solvent is the recovery of propane. SAGD+ is economic if they can recover 70% of the solvent, but if the project only recovers 50% of the propane then it will be uneconomic at current prices. Devon's ownership in the Access Pipeline enables future SAGD+ testing. Devon is also testing steam injection in cold flow reservoirs (Iron River/Manatokan areas). The company is hoping to test the concept in 2011 with hopes of recovering 22-25mmbbls/section in thin reservoirs (<10m) and 5-10mbopd rates with facilities that cost ~\$200mm.

### **MEG Energy (MEG-T - C\$33.25 - A)**

*Stock thoughts* – Real production, real reserves, and really good operating results to date. MEG is a \$6.6B pure-play oil sands producer (100% of NAV), and we are picking up coverage with an Accumulate rating. We view MEG's Christina Lake asset as one of the best in the Athabasca oil sands, and performance thus far at MEG's Christina Lake facilities speaks for itself (ramp to design capacity in record 10 months, SOR of 2.4 in June, below guidance of 2.8). Versus CVE, MEG has a bit more upside but also carries a bit more risk as the company will need to access capital markets to finance projects beyond Phase 2B (vs. CVE's ability to fund with internally-generated cash flow). MEG can fund development of Phase 2B with current liquidity and we think can fund future development at Christina Lake and Surmont without tapping equity markets (assuming projects funded with 100% debt, MEG doesn't violate our TTM 4x debt/EBITDA threshold). However, we do think management will be opportunistic with equity raises down the road (2015+). MEG is not open to JVs as a source of funding, as joint ventures complicate and potentially slow decision making, dilute future cash flow and take talented people away from 100% w.i. projects. Therefore, MEG would rather go it alone than sell off acreage. Since IPO'ing at \$35/sh on 7/30/10, MEG initially underperformed as investors not under lock-up agreement sold out of the gate (stock hit low of \$30.30/sh in late August). When the 180-day lock-up period ends at the end of January, we expect additional selling...a perfect opportunity to add some stock.

*Project thoughts* – MEG has 100% w.i. in two major projects – Christina Lake (2.5 Bboe of probable reserves and contingent resource) and Surmont (~650mmboe contingent). We rank Christina Lake an A+ with MEG's Phase 2 having the fastest ramp-up time of any SAGD oil sands project...and we think Phases 2B and 3 will prove as successful. We estimate that future phases at Christina Lake will cost \$3.4B (our cost estimates exclude maintenance capital, which we estimate at \$2,500/bpd) to recover 1.1 Bboe of probable reserves, and another \$4B to recover an additional 1.4 Bboe of contingent resource. One thing to watch for in late 2010 – MEG will put out an official AFE for Phase 2B at Christina Lake (current estimate is \$1.4B)...we don't expect the new estimate to be materially higher given our meetings with companies (not yet seeing inflation) and MEG's already conservative estimate of \$40,000/bpd capital costs. Surmont we rate a B+...with similar reservoir characteristics to Christina Lake and proximity to COP's Surmont facility (currently producing at 72% of capacity, 2.6 SOR). We estimate that the planned 100mbpd facility (in-service 2019) at Surmont will cost \$4B to recover ~650mmboe of contingent resource...importantly, there is upside to this 650mmboe estimate as it doesn't include the 8.3k net acres acquired in Q2'10, which grew MEG's acreage position at Surmont by 70%.

*Valuation* – MEG isn't screaming cheap when looking at other oily mid-caps in the E&P space, with 26% upside to our \$42/share NAV, trading at 16.4x 2011 EV/EBITDA (earnings long-dated as first steam of next phase of Christina Lake in 2013) and currently pricing in \$82/bbl WTI (assuming 20% differentials). Breakdown of our NAV is as follows: \$21/sh for proved reserves, Access Pipeline and balance sheet (including \$800+mm of cash from recent IPO), \$5/sh for probable reserves and \$9/sh for contingent resource at Christina Lake and \$6/sh for Surmont contingent resource.

### **Southern Pacific Resources (STP-T - C\$1.15 - B)**

*Stock thoughts* – Sub-\$400mm micro-cap that can triple in value with near-term project financing likely. We are picking up coverage of STP with a Buy rating. We think approval and financing for McKay is virtually in hand (our view is STP will do ~\$300mm of high yield debt combined with upsizing current \$55mm undrawn revolver) and will be catalyst for the stock within the month. In addition, we're comfortable around STP's McKay asset and liked the Senlac acquisition (bought on the cheap at 2x cash flow, provides ~\$50mm/year of free cash flow). STP bit the equity bullet for potentially the last time raising \$109mm at \$1.20/share closing in June. Looking forward (assuming \$300mm financing closed this fall), we believe the company can self fund a 24mbpd project (two phases of 12 mbpd) at McKay with Senlac providing a steady stream of operating cash flow. Interestingly, even if STP were to fund its second phase at McKay with 100% equity, the stock would still be worth \$1.30/sh (+30% to current price). Two risks: 1) think another acquisition à la Senlac could be in the works, and expect that STP would fund an acquisition with a combo of equity and debt and 2) operational risk at McKay around ramp-up (STP's first).

*Project thoughts* – We rank STP's near-term project areas as follows: McKay gets an "A" grade with proximity Suncor's high-performing asset at MacKay River. We estimate that Phase I of McKay will cost \$430mm (this excludes maintenance capital, which we estimate at \$2,500/bpd) and will recover 170mmboe probable and another 170 mmboe of contingent resources with another \$480mm. STP's project is following Connacher's lead using the same engineering and construction firms for their 12mbopd Phase 1 with first steam late 2011. Southern Pacific has additional plans for development (STP has >200 sections of leases outside of McKay) that may either be completed in 12mbopd or 24mbopd phases.

*Valuation* – STP is cheap vs. both oil sands companies and E&P peers. The stock has 161% upside to our \$3/share NAV and is currently pricing in \$67/bbl WTI (assuming 20% differentials). Our NAV includes 7mmboe of proved reserves that plus cash from the recent equity offering are worth 45c/share. The looming McKay financing will unlock 170mmboe of probables worth another \$1.35/share, which then by our math STP is self financing for the next phase of McKay after maintenance capital for Senlac (+\$1.15/share). We think STP is a willing seller at the right price... the buyer gets existing production from Senlac and less lead time to first production with STP's McKay project first steam in late-2011/early-2012...but we expect the bid ask spread is too wide at this time and STP will look to the debt markets instead to finance McKay.

### **NON-COVERED COMPANY THOUGHTS (ATH-T, CLL-T, NXY-T, OPC-T, SU-T)**

Starting with the easier companies first. We will likely add some of these companies to coverage over time, but at this point the combination of need for capital and/or need to prove technology is keeping us on the sidelines.

#### **Athabasca Oil Sands (ATH-T C\$10.52 - NR)**

ATH has land and potential in spades, but realizing that potential will take time (first large-scale production 2014, though expect pilot production from Excelsior Hangingstone acquisition in late 2010). ATH seems to be aggressively pursuing options to either acquire near-term projects (i.e. the Excelsior Hangingstone acquisition) or accelerate pilots in their carbonate reservoirs. We rate ATH's near-term (regulatory approval before 2015) project areas as follows: MacKay – A (850 mmbbls of net probable reserves and contingent resource, proximity Suncor's high-performance asset at MacKay, very clean cores and average SAGD thickness of 18 m), Dover – B+ (1.7 Bbbls net contingent, 20 m average thickness but ~20% of bitumen associated with top gas), Dover West clastics – B (2 Bbbls net contingent, 13 m average thickness, ~45% of bitumen associated with top gas) and Dover West carbonates – C (2.7 Bbbls contingent, lots of bitumen in

place but currently no economic method of recovery). ATH is very comfortable financially (\$1.8B current liquidity and 23% debt to cap) via recent JV with PetroChina and IPO. Things to watch for: carbonate development and end of lock-up period. For carbonate exposure, this is your man...ATH owns 96% of the Leduc carbonate formation. Most likely path of development at this time is conductive heating using electricity...lab tests are very encouraging (heating a core at 135° for 24 hours = 70% recovery of bitumen in place), but eight guys in white lab coats are completely different than eighty guys in red coveralls, so scalability remains to be seen. We believe in people and technology and think the carbonates likely eventually work, but proof will be long time coming (pilot in 2014) and economics are far too uncertain to assign significant value at this time. Around mid-October, the 180-day lock-up agreement on 52% of shares outstanding post-IPO in April ends, which likely puts some selling pressure on the stock.

#### **Connacher Oil & Gas (CLL-T - C\$1.24 - NR)**

Connacher commercialized the small scale (10-12mbopd) development that enables project piloting and initial development with smaller upfront capital. The capital efficiency per barrel is lower, but we like that Connacher has “been there and done that” with the Great Divide Pod 1, before attempting the 35mbopd Algar development. Connacher expects Pod 1 to recover 85mmboe from 65 well pairs with oil treating utilization at 85-90% currently and steadily increasing. Algar is clearly in “show-me” mode as the company takes lessons learned from Pod 1 to this \$700-800mm project. CLL has a quasi-integrated business model as they own conventional oil and gas production, a niche refinery in Great Falls, MT, and is looking for unconventional and conventional growth areas. CLL also holds a 19% w.i. in Petrolifera Petroleum (PDP-TSX) an Argentine oil and gas producer.

#### **Nexen (NXY-T - C\$20.63 - NR)**

NXY owns 65% of the Long Lake SAGD project and upgrader and is the operator of both. Room for improvement at Long Lake exists (running at ~40% of design capacity in June), but NXY is making progress (with time and more capital). The stock has underperformed the S&P TSX index ytd by 2300bps as focus has been on Long Lake underperformance. Over time as NXY develops the steam chamber, current SOR's (5.3 in June) should decline toward the design of 3.0, and could provide some lift to NXY's battered stock price. The upgrader at Long Lake is a benefit as fuel gas requirements are lower (given consumption of steam is higher currently)...but amid low gas prices, the benefit of lower gas requirements is muted.

#### **Opti Canada (OPC-T - C\$0.98 - NR)**

This stock is a little like a hot potato. It could possibly make delicious, warm mashed potatoes given enough time to cool down, but we'd rather not be holding it in the interim. OPC owns a non-op 35% interest in Long Lake (operated by NXY), which has had operational issues since inception in 2007. The trick to making this stock work is making Long Lake work...but that requires time, which OPC has had to buy with debt (recently issued \$400mm of high-yield notes to pay its already hefty interest expense...now have \$220mm/year of interest expense and >85% debt to cap). We think they have until YE'2011 to prove that Long Lake can work...though will be largely out of OPC's hands (NXY is operator). Wild cards are 1) a sale (most likely buyer would be an NOC or IOC) and 2) oil price (the higher the more likely OPC will attract buyers).

#### **Suncor (SU-T - C\$34.15 - NR)**

Clearly a leader in mining and SAGD, but given current natural gas prices we elected to initially cover Cenovus over Suncor given our focus on SAGD initially. Suncor has dramatically underperformed CVE year-to-date (-1800bps) as the company sells \$3-3.5B in assets and re-focuses post merger. Suncor clearly sees itself as a consolidator of the oil sands over the next several years. We expect to get much more color around long-term development plans and dividend growth (we think current 1.2% yield goes closer to 4% over time) when Suncor holds its first analyst day this November.

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## Cenovus Energy

Target price \$32

### Company Overview:

Cenovus was spun out from Encana in late '09 as a separate, oil sands-levered entity. One of the largest Alberta oil sands players, with 241mbpd total production, 4.6 Bbbls of resource (TPH estimate, ~90% bitumen). Oil-sands projects are ~50% of our NAV, with refineries and non-sands production the rest. Through phased development, CVE plans to grow bitumen production capacity by at least 300mbpd (net) by 2020.

### Investment points:

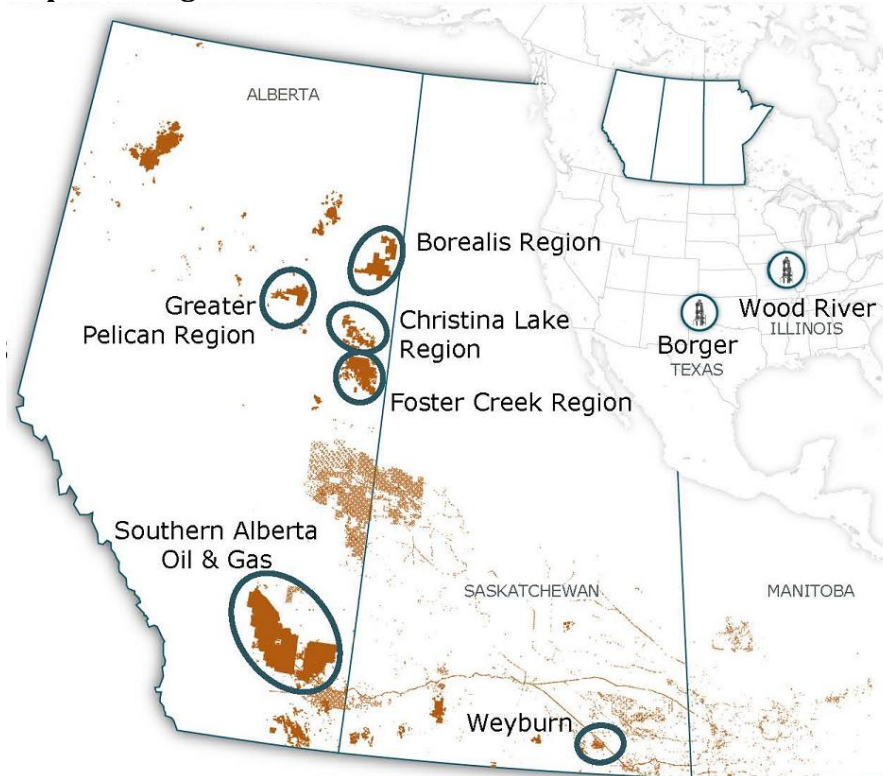
- We are rating CVE an Accumulate. Less upside than other names under coverage, but superior assets/experience say this stock should trade at a premium and we see value in acquiring on dips as a 'safer' way to gain exposure to oil price while receiving an increasing dividend (2.9% current yield).
- Ability to fund future phases of development with internally-generated cash flow – no need for debt or equity.
- We expect CVE to generate free cash flow in 2012+, which will enable dividend growth (target is 20-25% pay-out of after-tax cash flow), share repurchases or debt paydowns.
- Innovator, pioneering use of ESPs and infill wells and working on a number of on-the-cusp technologies, including SAGD+ solvent (applying for large-scale use at Narrows Lake) and commerciality of Grosmont carbonates (pilot in 2012).
- Currently, trading at 8.7x EV/EBITDA and 8.5x P/CF (2011), with 13% upside to our 3P NAV.

### Company Summary:

- Assets include two producing SAGD projects, three additional target areas for near-term SAGD development, two refineries and conventional and unconventional natural gas and oil production.
- **Foster Creek:** 50/50 JV with COP. First commercial SAGD project in the industry (2001) as well as the largest (120 mbpd gross) and one of best performing, with a SOR of 2.3. We estimate initial capital of C\$1.4B to add 57.5mbpd (net) and recover 290mmbbls probable reserves and 800mmbbls contingent resource.
- **Christina Lake:** 50/50 JV with COP. 9mbpd net to CVE, with plans to add 120mbpd by 2019. Impressive SOR of 1.8 (June '10) at current facility. We estimate C\$3B initial capital to recover 290mmbbls of probables and 700mmbbls contingent resource.
- **Narrows Lake:** 50/50 JV with COP, neighbors Christina Lake. Expect C\$700mm for 20mbpd (net) to recover 270mmbbls contingent.
- **Grand Rapids:** First planned SAGD project in the Pelican Lake region. Only 1 well drilled here per section, CVE is targeting a new formation with pilot evaluation during 2011. We expect C\$1.4B for a 40mbpd phase to recover 400mmbbls contingent resource.
- **Telephone Lake:** First planned SAGD project in the Borealis region. Well-evaluated with 4-16 wells per section and impressive well logs but includes top water which is both a potential thief zone and fresh, so has been delaying regulatory approval. We expect C\$1.2B for a 35mbpd phase to recover 440mmbbls contingent resource.
- **Refineries:** These assets act as a hedge on heavy oil differentials for CVE's heavy oil and bitumen production. Two refineries (50/50 JV with operator COP) in IL (Wood River) and TX (Borger). Post-expansion of Wood River (mid-2011), CVE will have net total/heavy oil refining capacity of 251 mbpd and 138 mbpd, respectively.
- **Other production:** Cenovus has conventional and unconventional natural gas (~750 mmcf/d) and oil production (~70 mbpd)...we view this as non-core, assuming primary use is to fund future development of CVE's oil sands properties.
- **Sensitivities (see pg. 14 for detail):**
  - Crude price - We assume WTI is \$90/bbl long-term. Each \$10/bbl higher adds C\$4/sh to NAV.
  - Blend differential - We assume blend realizations average 80% of WTI. If realizations at 90%, adds C\$6/sh to NAV.
  - Timing - We assume project approval on time and 1-year ramp. If projects delayed 1 year, our NAV -C\$2/sh.
  - SOR - A reduction of SOR by 0.25 across all projects adds C\$3/sh to NAV.
- CVE had \$409mm of cash, a C\$2.5B credit facility available and C\$3.8B of debt (28% debt-to-cap) at 6/30/10.
- We estimate cash flow/capex of C\$2.3B/C\$2.5B in FY'2010 and C\$2.6B/C\$2.5B in FY'2011.

TUDORPICKERING HOLT & CO   ENERGY INVESTMENT & MERCHANT BANKING		Cenovus (CVE) \$ = CAD
<b>Net Asset Valuation (\$ mm)</b>		<b>\$mm Per share</b>
Blowdown of conventional proved reserves	\$11,279	\$15.01
Blowdown of bitumen reserves	\$5,244	\$6.98
Working Capital	896	\$1.19
Refineries (6x 2012 EBITDA)	3,605	\$4.80
Long-term Debt	-4,296	-\$5.72
Less preferred stock	0	\$0.00
Less: conversion debt	0	\$0.00
Proceeds from Options/Warrants	0	\$0.00
<b>1P: Net Asset Value</b>	<b>\$16,728</b>	<b>\$22.26</b>
Foster Creek (probables)	845	\$1.12
Christina Lake (probables)	2,158	\$2.87
Wabiska (tertiary recovery)	660	\$0.88
<b>2P: Booked + Unbooked value</b>	<b>\$20,390</b>	<b>\$27.14</b>
Foster Creek (contingent)	675	\$0.90
Christina Lake (contingent)	1,293	\$1.72
Narrows Lake (contingent)	476	\$0.63
Grand Rapids (contingent)	443	\$0.59
Telephone Lake (contingent)	579	\$0.77
Saskatchewan Bakken (140+ sections)	224	\$0.30
Shaunavon (58 sections)	93	\$0.12
<b>3P: Booked + Unbooked value + Exploration</b>	<b>\$24,171</b>	<b>\$32.17</b>
Diluted Shares		751
<b>CVE Reserves (mmbbls)</b>		<b>Reported TPH Est</b>
Proved	1,398	1,398
Probable	708	581
Contingent resource	5,400	2,615
<b>Total resource</b>	<b>7,506</b>	<b>4,594</b>

**Map of Acreage Position:**



**Timeline of Development:**

Oilsands Project Schedule			
Project Phase	Expected Cumulative Gross Production Capacity (bbls/d)	Regulatory Application Submissions <sup>2</sup>	First Production Target <sup>1,2,3</sup>
<b>Foster Creek*</b>			
A-E	120,000	Q1 1999	Q1 2002
F	150,000	Q2 2009	2014
G	180,000	Q2 2009	2016
H	210,000	Q2 2009	2017
I	~235,000	2013	2019
<b>Christina Lake*</b>			
A-B	18,000	Q3 1998	Q4 2002
C	58,000	Q3 2007	Q3 2011
D	98,000	Q3 2007	Q2 2013
E	138,000	Q4 2009	2014
F	178,000	Q4 2009	2016
G	218,000	Q4 2009	2017
H	~258,000	2015	2019
<b>Narrows Lake*</b>			
A-C	130,000	Q3 2010	2016
<b>Grand Rapids</b>			
A	60,000	Q4 2011	2017
B	120,000	Q4 2011	TBD
C	180,000	Q4 2011	TBD
<b>Telephone Lake</b>			
A	35,000	Q4 2007	TBD
B	50,000	TBD	TBD

\*Properties 50% owned by ConocoPhillips

<sup>1</sup> Timelines are subject to regulatory approvals

<sup>2</sup> Future dates are company forecasts

<sup>3</sup> There is an anticipated ramp up period of approximately 1.5 years following first production.

Source: Cenovus Energy

## MEG Energy

Target Price \$42

### Company Overview:

MEG Energy is a pure play Alberta oil sands producer (100% of 3P NAV) with 3.7Bbbls bitumen resource (TPH estimate) and current ~25mbpd (SAGD) from Phases 1 and 2 of Christina Lake facility. The company plans to add another 185mbpd of production at Christina Lake by 2020 and 100mbpd at Surmont (we estimate by 2019).

### Investment points:

We are rating MEG an Accumulate – company has real production, real reserves, and really good operating results to date with average upside relative to peers.

- Solid assets: full capacity in record time (10 months) at Christina Lake reflects quality of execution/reservoir.
- Ability to fund future phases of development without equity: post-IPO, liquidity to fund Phase 2B, and does not violate our 4x debt/EBITDA threshold even assuming future projects funded with 100% debt.
- Average upside vs. oil sands/US peers (26% upside to our \$42/sh NAV). Trading at 16.4x 2011 EBITDA.
- Risk: End of 180-day lock-up in January (122 mm shs currently under lock-up)...we expect selling pressure, and view it as an opportunity to add stock.
- Risk: Low trading volume (30-day average ~400k shs), so relatively illiquid.

TUDORPICKERING HOLT & CO   ENERGY INVESTMENT & MERCHANT BANKING		MEG Energy (MEG) \$ = CAD
Net Asset Valuation (\$ mm)	\$mm	Per share
Blowdown of proved reserves	\$3,630	\$18.33
Access Pipeline	200	\$1.01
Working Capital	1,364	\$6.89
Long-term Debt	-1,039	-\$5.25
Less preferred stock	0	\$0.00
Less: conversion debt	0	\$0.00
Proceeds from Options/Warrants	57	\$0.29
<b>1P: Net Asset Value</b>	<b>\$4,211</b>	<b>\$21.26</b>
Christina Lake (probables)	1,072	\$5.41
<b>2P: Booked + Unbooked value</b>	<b>\$5,283</b>	<b>\$26.67</b>
Surmont (contingent)	1,241	\$6.26
Christina Lake (contingent)	1,698	\$8.57
<b>3P: Booked + Unbooked value + Exploration</b>	<b>\$8,221</b>	<b>\$41.51</b>
Growth Properties (contingent)	0	\$0.00
<b>4P: Booked + Unbooked + Exploration</b>	<b>\$8,221</b>	<b>\$41.51</b>
Diluted Shares (Includes July Offering)		198
MEG Reserves (mmbbls)	Reported	TPH Est
Proved	549	549
Christina Lake (2P)	1,143	1,143
Christina Lake (contingent - best estimate)	1,355	1,355
Surmont (contingent - best estimate)	647	647
Growth Properties (contingent - best estimate)	1,721	0
<b>Total resource</b>	<b>5,415</b>	<b>3,694</b>

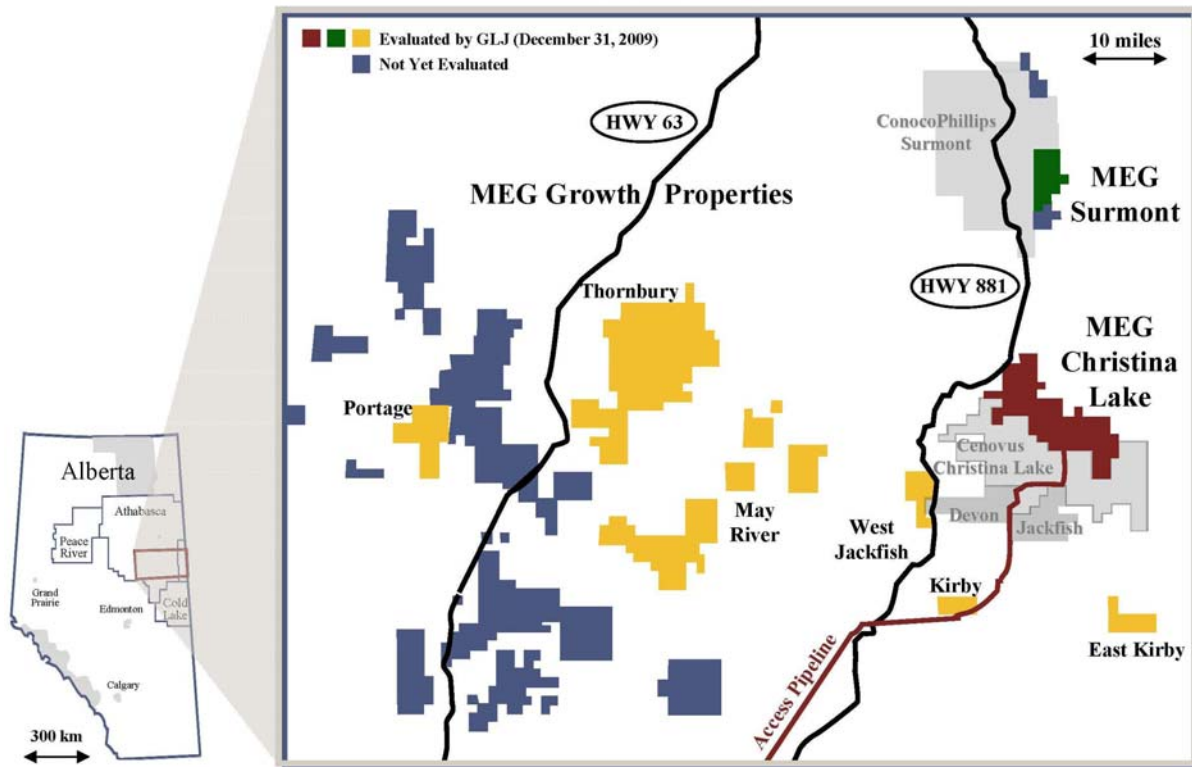
### Company History:

- MEG was founded by Bill McCaffrey (chairman & CEO) in 1999 in Calgary, Alberta. To date, MEG has spent ~C\$3.2B acquiring leases, defining acreage via core holes/seismic and developing Phases 1, 2 and 2B of Christina Lake.
- C\$2.3B of private equity funds raised to date – Warburg Pincus has 43mm shs (23% out) and CNOOC, 29mm (15%).

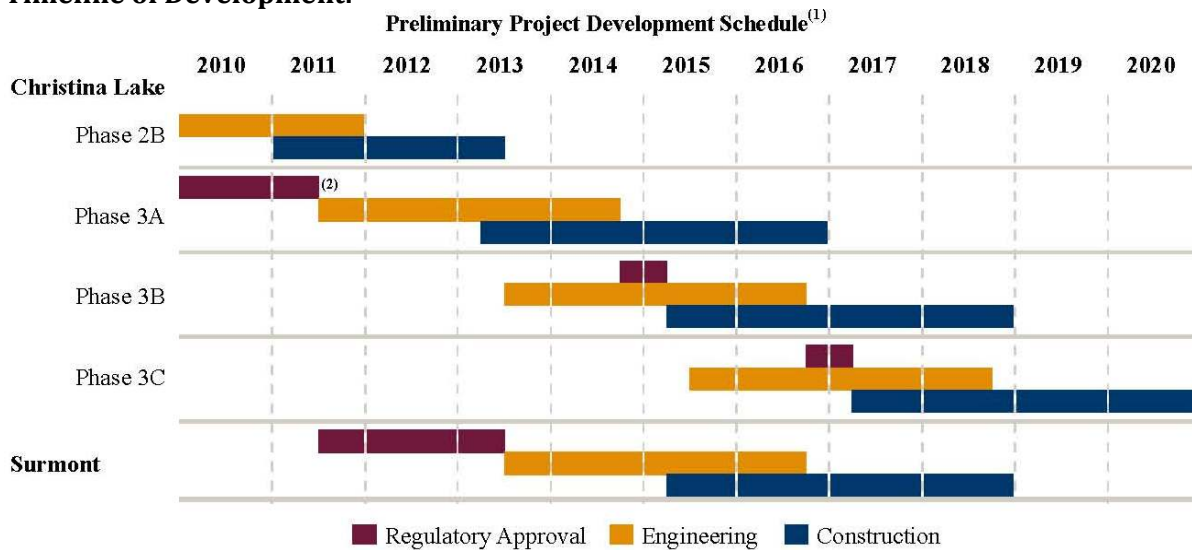
### Company Summary:

- MEG has 537.6k net acres (100% w.i.) of oil sands leases in Alberta (map pg. 2). Its Access Pipeline (50/50 jv with DVN, connects to Sturgeon hub) is expandable to 103mbpd diluent and 197mbpd dilbit...enough to support Phases 1, 2 and 2B expansions.
- Christina Lake: 51.2k net acres. Currently producing 25mbpd from Phase 1 (Q2'08) and Phase 2 (fall '09). Plans to add 35mbpd in 2013 (Phase 2B) and 150mbpd in 50mbpd, 2-year increments starting in 2016 (Phase 3)...total capacity of 210mbpd by 2020. MEG has full approval for Phase 2B and expects approval for Phase 3 in late 2010/early 2011. We estimate initial capital of C\$3.4B to recover 1.1 Bboe of probable reserves and C\$4B (initial capital) for another 1.4 B boe of contingent resource.
- Surmont: 20.5k net acres. We estimate initial capital of C\$4B for planned 100mbpd facility at Surmont (regulatory application in 2011, estimated in-service 2019) to recover ~650mmboe of contingent resource...there is upside to this 650mmboe estimate as it doesn't include the 8.3k net acres acquired in Q2'10, which grew MEG's acreage position at Surmont by 70%.
- Growth Properties: 465.9k net acres. MEG plans to file for approval for a TBD facility here in late 2011/early 2012.
- Sensitivities (see pg. 14 for detail):
  - Crude price - We assume WTI is \$90/bbl long-term. Each \$10/bbl higher adds C\$9/sh to NAV.
  - Dilbit differential – We assume dilbit realizations at 80% of WTI. If realizations at 90%, adds C\$20/sh to NAV.
  - Timing – We assume project approvals on time and 1 year ramp. If projects delayed 1 year, our NAV -C\$7/sh.
  - SOR – We assume a 2.5 SOR. A reduction of SOR by 0.25 adds C\$7/sh to NAV.
- C\$185mm credit facility available, with estimated C\$1.5B of cash and C\$1B of debt post-offering (Q3'10E).
- We estimate cash flow/capex of C\$152mm/C\$538mm in 2010 and C\$341mm/C\$638mm in 2011.
- Bill McCaffrey (chairman & CEO) owns 1.1 mm shares of MEG and other directors/officers own another 742k shares.

**Map of Acreage Position and Access Pipeline:**



**Timeline of Development:**



**Notes:**

- (1) Plans to develop the Growth Properties are currently being evaluated.
- (2) Represents regulatory approvals for Christina Lake Phase 3, which is currently anticipated to be developed in three phases.

Source: MEG Energy

## Southern Pacific Resources

Target price \$3

### Company Overview:

Southern Pacific is a 'start-up' SAGD producer with oil sands exposure (oil sands ~75% of 3P NAV) with ~370 mmbbls resource (TPH estimate) and current ~4mbpd SAGD heavy oil production at Senlac. The company is currently waiting on regulatory approval and financing of its first oil sands SAGD project at McKay.

### Investment points:

- We are rating STP a Buy on attractive valuation (stock a potential 3-bagger) and upcoming catalysts.
- Near-term catalyst: lack of financing for Phase I of McKay (12mbpd) has weighed on stock, but we expect regulatory approval/financing to be in place this month. Expect upside of facility and C\$300mm of debt.
- Assuming financing received for Phase I, STP can fund another 12mbpd phase with cash flow from operations or a 24mbpd phase via cash flow and debt.
- Risk: We think STP is actively looking for Senlac-like acquisition opportunities. Senlac was funded with ~55% equity...a future acquisition may also be funded via equity.
- Too dang cheap: 161% upside to our \$3.00/sh NAV. Trading at 6.1x EV/EBITDA and 7.4x P/CF (FY'2011, fiscal year ends in June).
- Risk: Investors should be aware of STP's 'start-up' nature...operational performance is not a guarantee and McKay will be STP's first construction/ramp-up.

TUDORPICKERING HOLT & CO   ENERGY INVESTMENT & MERCHANT BANKING		Southern Pacific (STP) \$ = CAD	
Net Asset Valuation (\$ mm)		\$mm	Per share
Blowdown of conventional proved reserves		\$7	\$0.02
Senlac (Proved)		95	\$0.28
Working Capital		51	\$0.15
Long-term Debt		0	\$0.00
Less preferred stock		0	\$0.00
Less: conversion debt		0	\$0.00
Proceeds from Options/Warrants		0	\$0.00
<b>1P: Net Asset Value</b>		<b>\$153</b>	<b>\$0.45</b>
Senlac (Probable)		59	\$0.17
McKay (Probable)		403	\$1.18
<b>2P: Booked + Unbooked value</b>		<b>\$615</b>	<b>\$1.80</b>
Senlac (Possible)		116	\$0.34
McKay (Possible + Contingent)		278	\$0.81
<b>3P: Booked + Unbooked value + Exploration</b>		<b>\$1,008</b>	<b>\$2.96</b>
Other properties		0	\$0.00
<b>4P: Booked + Unbooked + Exploration</b>		<b>\$1,008</b>	<b>\$2.96</b>
Diluted Shares			341
STP Reserves (mmbbls)		Reported	TPH Est
Proved		6.8	6.8
Probables		172	172
Possibles + contingent		518	210
<b>Total resource</b>		<b>696</b>	<b>369</b>

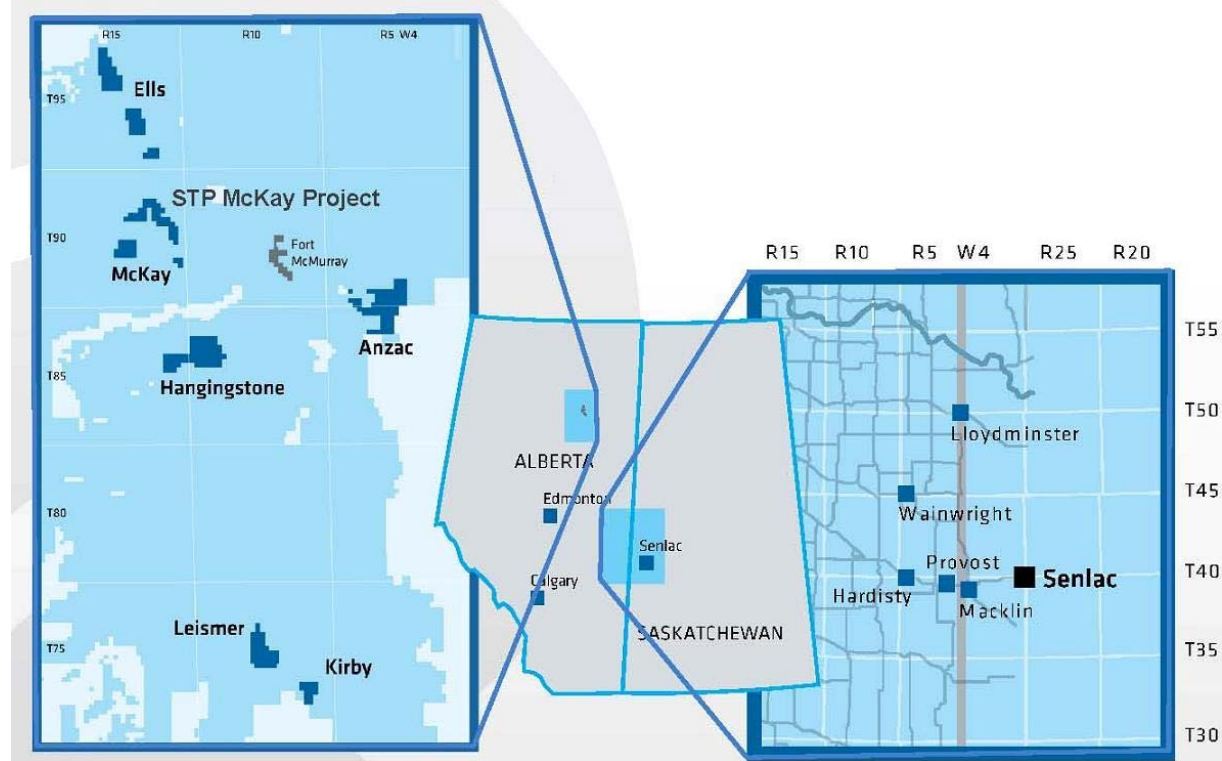
### Company History:

- In 2006, STP began to aggressively acquire oil sands leases, building up to current 156k net acres, and simultaneously acquired non-oil sands properties, the largest of which was the heavy oil SAGD Senlac property for C\$90mm (2x cash flow) from ECA in late 2009. We expect STP will continue to strategically pick up producing non-oil sands properties to fund future development.
- In October 2007, Howard Bollinger was named CFO and in January 2008, Byron Lutes was named CEO.
- In June, closed C\$101mm of bought-deal equity financing and graduated from the TSX Venture Exchange to the TSX.

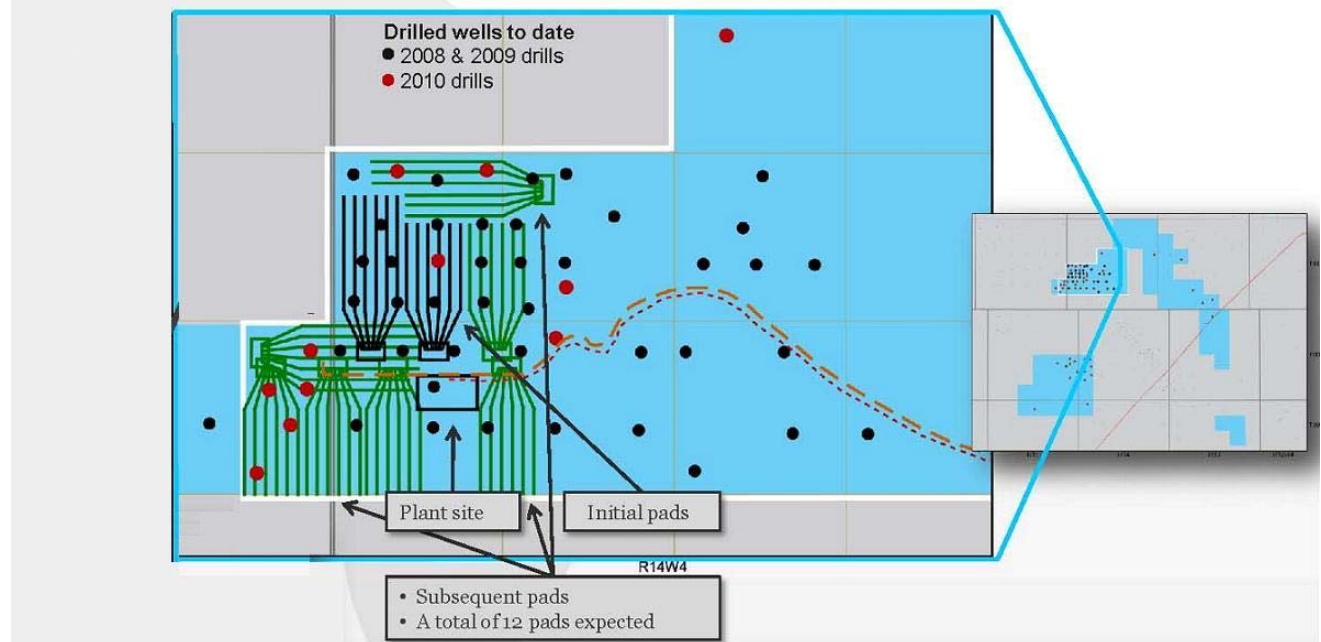
### Company Summary:

- STP has 301 sections (156k net acres, 81% average w.i.) of oil sands leases in Alberta and a heavy oil SAGD producing asset (Senlac) in Saskatchewan (map pg. 2).
- **McKay:** 10 sections, we estimate ~170mmbbls of probable reserves and 170mmbbls of contingent resource. Neighbor to Suncor's highly successful MacKay River project (June production at 98% of design capacity, 2.5 SOR). First phase is small-scale (12mbpd) and waiting on approval/financing, with estimated initial capital of C\$433mm and first steam expected in early 2012.
- **Senlac:** STP's heavy oil SAGD producing asset in Saskatchewan. ~20 mmbbls of reserves (proved, probable and possible). We expect Senlac to generate C\$40-50mm/year of free cash flow, which STP will use to fund development of its oil sands properties.
- **Other properties:** STP has another 242 sections of oil sands leases in regions of Alberta that are relatively unexplored (average 0.4 coreholes per section). We do not include anything for these leases in our valuation.
- **Sensitivities (see pg. 14 for detail):**
  - Crude price – We assume WTI is \$90/bbl long-term. Each \$10/bbl higher adds C\$0.70/sh to NAV.
  - Blend differential – We assume blend realizations at 80% of WTI. If realizations at 90%, adds C\$1.70/sh to NAV.
  - Timing – We assume approvals on-time and 1 year ramp-up. If projects delayed 1 year, reduces our NAV by C\$0.60/sh.
  - SOR – We assume a 3.0 SOR at McKay. A reduction of SOR by 0.25 adds C\$0.30/sh to NAV.
- STP has a C\$55mm credit facility available, with nothing outstanding as of 6/1/2010 and zero debt.
- We estimate cash flow/capex of C\$38mm/C\$28mm in FY'2010 (excluding \$90mm Senlac acquisition and C\$33mm acquisition of remaining 20% interest in McKay) and C\$53mm/C\$305mm in FY'2011 on build-out of McKay Phase I.

**Map of Acreage Position:**



**McKay Project Layout:**



Source: Southern Pacific Resources

### **Analyst Certification:**

We, David Heikkinen and Jessica Chipman do hereby certify that, to the best of our knowledge, the views and opinions in this research report accurately reflect our personal views about the company and its securities. We have not nor will we receive direct or indirect compensation in return for expressing specific recommendations or viewpoints in this report.

### **Important Disclosures:**

The following analysts were involved in creating or supervising the content of this message; David Heikkinen and Jessica Chipman. One of the analysts above (or members of their household) has a long stock position in Occidental Petroleum.

Analysts' compensation is not based on investment banking revenue and the analysts are not compensated by the subject companies. In the past 12 months, Tudor, Pickering, Holt & Co. Securities, Inc. has received investment banking or other revenue from Berry Petroleum, Concho Resources, Enerplus Resources, MEG Energy, Oasis Petroleum, and Plains Exploration and Production. In the next three months we intend to seek compensation for investment banking services from the companies mentioned within this report.

Tudor, Pickering, Holt & Co. uses a Buy, Accumulate, Hold, Trim and Sell rating system.

#### **Opinion Key:**

**Buy** - The stock should be purchased aggressively at current prices. The stock has among the best combination of risk/reward and positive company specific catalysts within the sector. Stock is expected to trade higher on an absolute basis and be a top performer relative to peer stocks over the next 12 months.

**Accumulate** - The stock should be purchased consistently at current prices. The stock has above average risk/reward and is expected to outperform peer stocks over the next 12 months.

**Hold** - Do nothing with the stock at current prices. The stock has average risk/reward and is expected to perform in line with peer stocks over the next 12 months.

**Trim** - The stock should be sold consistently at current prices. The stock has below average risk/reward and is expected to under perform peer stocks over the next 12 months.

**Sell** - The stock should be sold aggressively at current prices. The stock's risk/reward is skewed to the downside with possible negative company specific catalysts or excessive valuation. The stock is expected to trade lower on an absolute basis and be among the worst performers relative to peer stocks over the next 12 months.

### **Price Target Methodology:**

Price targets are developed using the stock's forward price-to-earnings ratio as a primary valuation metric. Target prices are typically 20-25X forward price-to-earnings for oil service companies, with validation of this range is driven by examination of EBITDA multiples and price-to book value metrics. For offshore drilling companies, price targets are developed using 10-15X multiples of upside earnings. These are calculated using our assumptions of normalized day rates and utilization. Validation of our target is done by examining net

asset values, and private market transactions. There is a risk that the stock will never reach the price target. These risks include market conditions and unforeseen events that may affect the company's business.

For E&P businesses, we value proved reserves by assessing the net present value of current production. For probable and possible reserves, we attempt basin-by basins analysis of the reserves, with the key variable being the timing of drilling.

Investment Rating Distribution: (as of June 30, 2010)

Coverage Universe -

Stock Rating Category	Count	% of Total
Overweight / Buy	52	73%
Equal-weight / Hold	19	27%
Underweight / Sell	0	0%

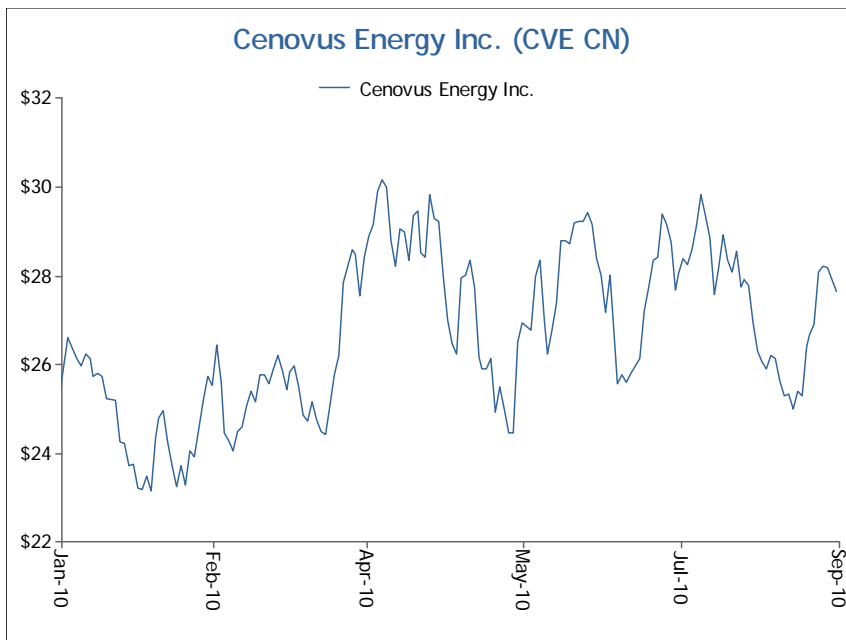
Investment Rating Distribution of Investment Banking Clients: (as of June 30, 2010)

Coverage Universe -

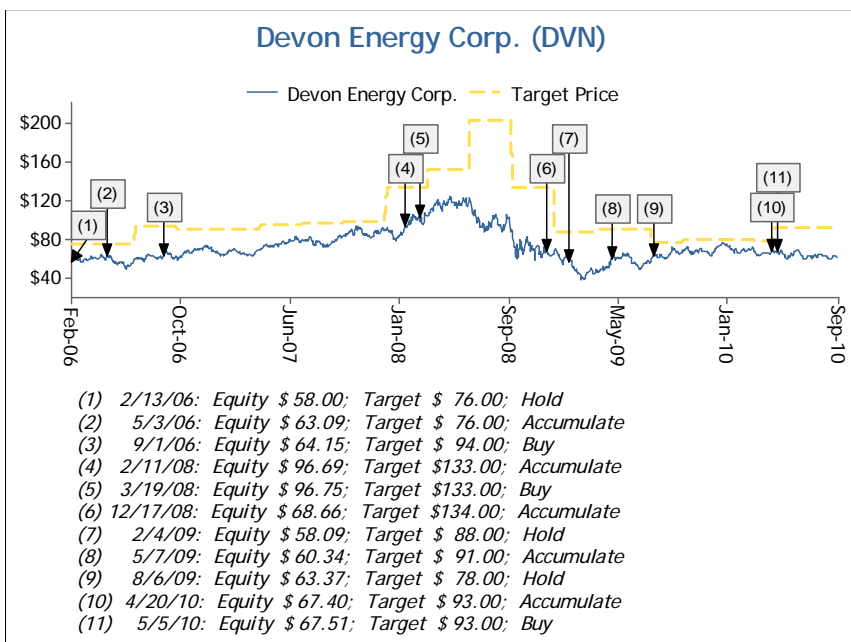
Stock Rating Category	Count	Percent
Overweight / Buy	10	77%
Equal-weight / Hold	3	23%
Underweight / Sell	0	0%

For detailed rating information, distribution of ratings, price charts and disclosures regarding compensation policy and investment banking revenue, please visit our website at [www.tudorpickering.com/Disclosure/](http://www.tudorpickering.com/Disclosure/) or request a written copy of the disclosures by calling 713-333-2960.

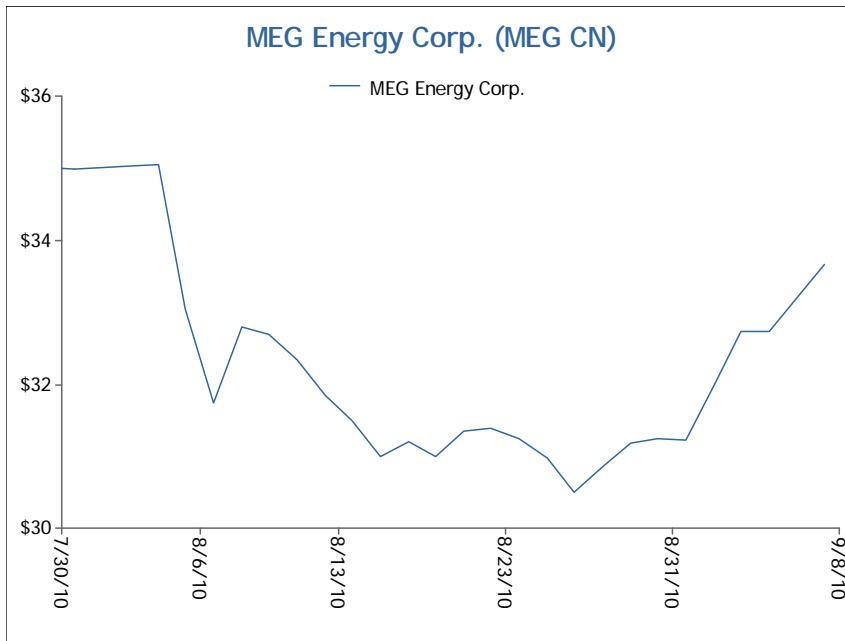
Price History for Cenovus Energy as of 9/08/10



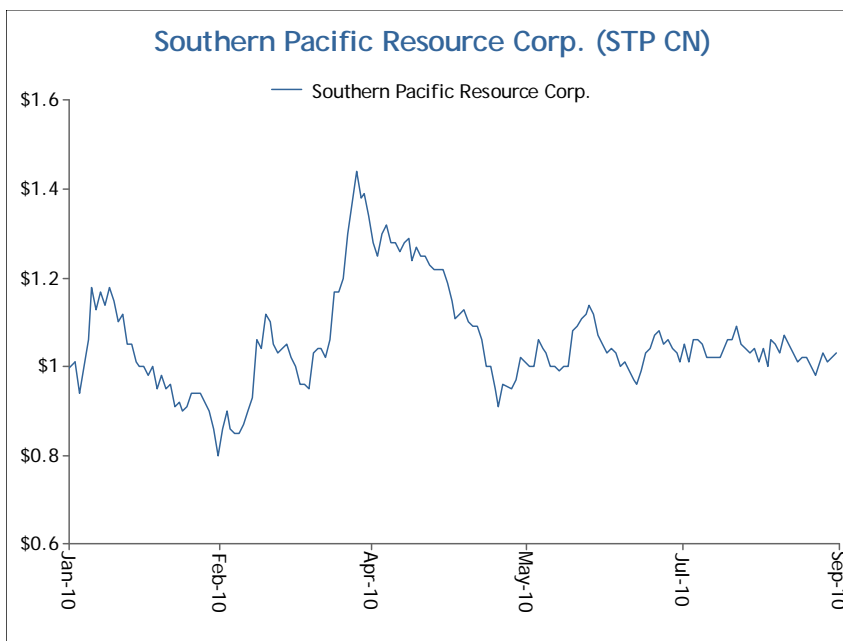
Price History for Devon Energy as of 9/08/10



Price History for MEG Energy as of 9/08/10



Price History for Southern Pacific Resource Corp. as of 9/08/10



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