SPR&CO

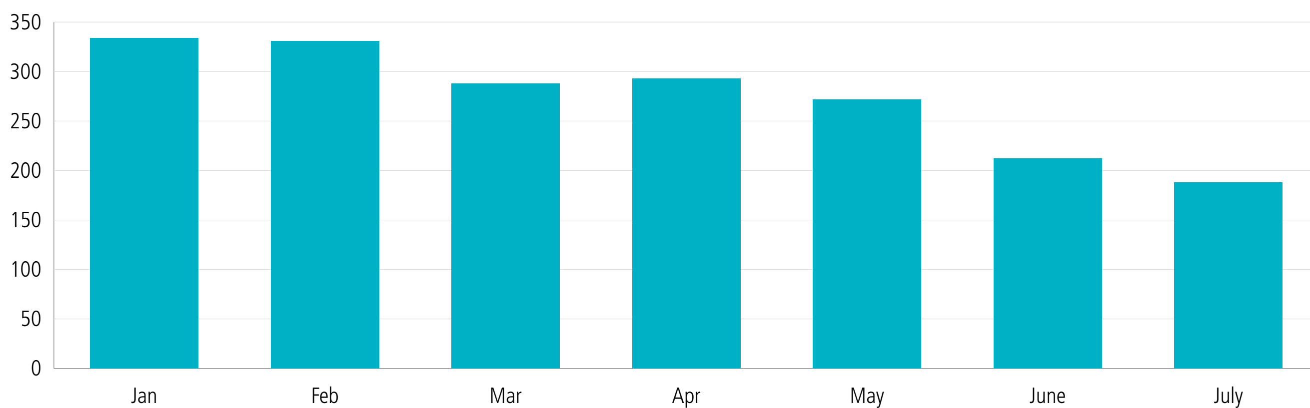
SPROTT ENERGY FUND

August 2017 Commentary

The energy investment world has turned into one giant game of Survivor. Epically challenging performance has led to a record number of energy dedicated hedge funds (and pods within multi-manager/strategy firms) closing their doors either due to client withdrawals (14 energy hedge funds/pod wind downs amounting to $13BN of energy assets under management and levered at least 2X+ = ~$30BN of selling YTD) or some simply choosing to do something else with their lives (Andy Hall, the oil "God", decided to shut down his Energy hedge fund in August). We can empathize. Every morning it feels like we wake up to yet another negative headline and it feels like one's marginal utility for incremental marginal effort is now zero as stocks seem to fall every day (the XOP has fallen 23 out of 35 weeks YTD and the down weeks have been MUCH deeper than the up ones). Day to day life as an energy fund manager is not fun these days: the phone barely rings, energy companies don't bother traveling to discuss well results or company developments (don't remind someone they own your stock…the might sell it!), and when analysts do come into our office they look like their dog died that same day (I had the worst meeting of my career 2 weeks ago when a U.S. boutique brought in their energy service analysts and they could barely look up from the table). The energy tape continues to be dominated by quants/algos (one valued source says macro/quant/technical shops = 47% of energy trading flows now vs. the 3-year average of 6%) as generalist investors continue to avoid the sector amidst record highs for the S&P 500. The result of this "human buyers strike" is that energy equity direction is more determined by the breaching of key technical levels rather than valuations or actual company fundamentals (hence why we are able to hold companies posting near record quarterly results and yet their share prices fall every day).

Due to this extreme level of bearishness (institutional ownership is at the lowest on record at 6.5%) it would be very easy to buy into the universal group think of massive global oversupply, imminent demand destruction due to electric cars, and the irreversible trend of infinite U.S. oil production growth at $50/bbl. That however would be (eventually) a costly error. Data without the negative spin clearly shows an oil market that is quickly tightening (possibly at the fastest pace in history):

Figure 1: OECD Total Petroleum Surplus vs. 5 yr avg

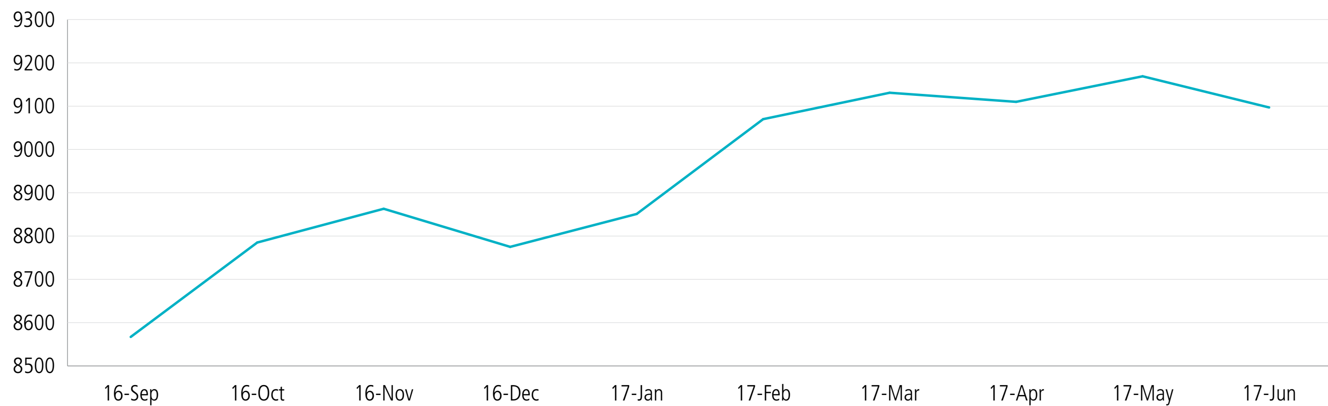


Source: IEA.

Oil inventories are correcting (the oil "glut" versus the 5-year average has fallen by 44% as of the end of July) as OPEC compliance remains good, global demand growth continues to exceed expectations (1.8MM Bbl/d YOY?), and **U.S. production growth stalls**. Wait a second…what did you just say?!?

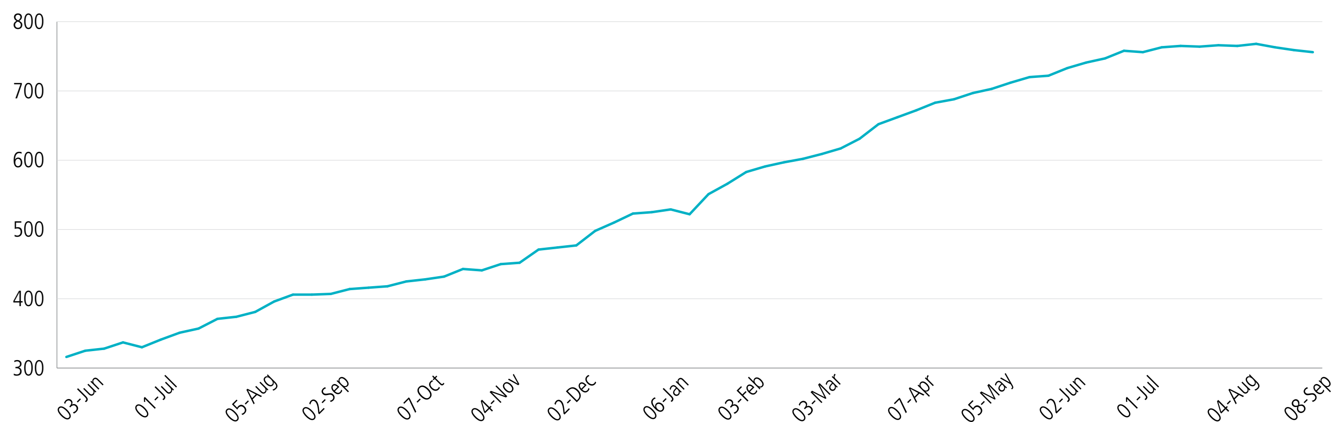
Effective August 1, 2017, SPR&Co LP has assumed portfolio management of the Canadian diversified assets of Sprott Asset Management LP.

Figure 2: U.S. Oil Production (000's Bbl/d)



Source: EIA.

Figure 3: U.S. Oil Directed Rig Count



Source: Baker Hughes.

Since the beginning of 2017 the number of rigs drilling for oil has increased from 525 to 756 (a 44% increase). Prior to that period the rig count had already staged an impressive increase from the lows seen in May 2016 with the rig count increasing from 316 (May 27th). Over the same time frame U.S. oil production has failed to keep up with the same percentage move with U.S. production reaching bottom in September 2016 at 8.57MM Bbl/d (4 months after the low in the rig count) and has now increased by 6.2% to 9.1MM Bbl/d as of the end of June (the most up to date reliable information). Importantly, **U.S. production has been flat lining for the past 5 months** (and was actually DOWN 73,000 Bbl/d June over May versus expectations for growth of 220,000 Bbl/d) despite the rig count having meaningfully increased. Some of this flattening could be attributed to the increasing trend towards pad drilling which elongates the spud-to-sales cycle time or to a lack of pressure pumping equipment which has resulted in an increase of DUC (drilled uncompleted) inventory. One other explanation for this trend was offered by Mark Papa who was the CEO of EOG Resource for 14 years and is considered to be one of the most informed and respected persons in the business. It was under Mr. Papa's stewardship that EOG remained at the cutting edge of shale gas development which then leveraged this expertise into becoming the world's leader in shale oil development. At the Barclays Energy Conference on September 6th Mr. Papa offered the following comments on the subject:

> *"Conventional wisdom is no matter what OPEC decides to do that it is going to be trumped by U.S. shale, that shale in infinite and there is a tsunami of U.S. shale if OPEC cut. If they extend the cut it doesn't matter because U.S. shale will just subsume global demand and we're going to be in lower prices forever"*
>
> *"I'm here to tell you that I never believed in conventional wisdom and the reason I'm unretired… is because I don't believe the conventional wisdom as it relates to what is going to happen over the next several years with U.S. shale production."*
>
> *"It has been pretty much underreported but if you look at it you'll see a surprising thing: total U.S. production has been flat for five months running. No one would have predicted this 6 months ago. What that means is that U.S. production is stalled out in the U.S. and my prediction is that if you take if you take total U.S. production we're going to see 325,000 Bbl/d growth this year which is considerably less than what anyone would have predicted just a few months ago. Why is U.S. production stalled out in the U.S.? It's not because of lack of capital, it's not because people were deferring wells into the second half of the year, it's not because of a lack of service company infrastructure, it is simply because of one thing. It's because of lack of Tier 1 geologic quality drilling locations in the Bakken and the Eagleford and* ***I happen to know something about the Bakken and the Eagleford because I discovered those plays in my previous job so I am talking with some degree of authority****. If you fast forward a year from now the Eagleford will be a spent force as a growth driver. The Bakken is already a spent force as a growth driver. That is only going to leave the Permian as a growth driver and the Permian is not going to offset 1.5MM Bbl/d of growth in oil demand.* ***So the big surprise that I'm going to predict in a year from now is that total U.S. oil production is underperforming expectations*** *of 99% of the populace and that conventional wisdom is once again turned on its ear just like the whole oil shale revolution turned conventional wisdom on its ear and we're going to find that we're lucky even when the price stimulus is right to see U.S. oil production growing at 700-800,000 Bbl/d and that all the predictions of U.S. production growing by 1.5, 1.6MM Bbl/d YOY are not even close to being right. So what this means is we're seeing the beginning signs of the fact that U.S. production is not nearly the big bad wolf that everyone thinks it is. As we move in 2018 you're going to see more cracks in the façade of U.S. production growth in aggregate. Five months of flat production is telling you something. That's long enough to indicate a trend."*

Should this highly informed prediction even partially come to fruition it would be transformative to the now widely held negative belief that oil prices will remain capped given the success of improved efficiency gains at lowering U.S. shale oil break evens into the $40's (using stale service costs).

If geology does not act as a constraining factor over the next year or two perhaps a new emerging theme will: capital discipline. There is a palpable change in tone amongst large institutional investors (which is then finding its way into corporate presentations) regarding the maniacal obsession of oil executives on production growth via the use of excess leverage and the chronic outspending of cash flow. Given pathetic shareholder returns over the past 5 years the strategy of "growth for growth's sake" which widely resulted in sacrificing acceptable rates of return is now being strongly challenged by investors and questions are increasingly being asked about what variables are used in executive compensation plans (people do what they are financially motivated to achieve). Just in the past few months we have heard an increasing number of management teams using terms like "return on invested capital", "spending within our means", and "returning capital to our shareholders" which just several months ago would have been a far, far, far distant after thought to focusing on higher and higher production growth rates. Only time will tell if this is all just lip service or the beginning of a shift in corporate mindset. The latter would certainly alter the narrative around the outlook for U.S. production growth rates.

From client meetings and conversations across the country it is abundantly obvious that another key concern that investors have is the (imminent?) demand destruction resulting from greater adoption of electric cars. Headlines such as "Scotland to phase out new petrol and diesel cars by 2032", "Britain to ban all new petrol and diesel cars by 2040", "China looks at plans to ban petrol and diesel cars", "Mercedes-Benz plans electric versions of all of its models by 2022", and "Volkswagen to electrify vehicle models by 2030" have become a daily occurrence. It is likely that one day electric cars will eventually replace the global fleet of internal combustion engines...where we take issue is the belief that this mass adoption can occur within any time frame relevant to an investor. While headlines about ending the sale of internal combustion engines by 2040 sounds doomsday-ish let's recognize: 1) that is in 23 years from now 2) over the next 23 years oil demand will still grow 3) over that same time frame cumulative oil declines that need to be made up for account for almost 100% of existing demand (using 100MM Bbl/d of demand and a 4% global decline rate) and 4) Tier 1 U.S. shale oil will have been exhausted well before that time and the world will be reliant on conventional projects with much higher required prices than current "shale break evens". Over the next 10 years it is highly unlikely that electric car adoption is going to make a dent in oil demand growth. Currently the global fleet of passenger vehicles is approximately 1.2BN with electric cars representing 0.2% of that number (3MM). On a sales basis electric cars make up 1% of annual sales. In order to make a material dent in oil demand over the next 10 years (say 10% penetration of global fleet in 10 years?) EV sales would have to grow by 49% per year each year over the next 10 years and get to 49MM EVs sold in 2027 vs. 0.85MM today. 49MM would represent 52% of today's run rate of unit sales. As well over that 10 year time frame about 140MM internal combustion vehicles would be sold as the global fleet typically grows at a GDP type rate of 2% so there is not a simple linear relationship between EV sales growth and oil demand erosion. The blanket assumption of mass adoption also ignores one aspect and that is existing sales have been to a certain extent supported by government subsidies (Ontario currently offers up to a $14,000 rebate given how strong our economy is performing!). When such subsidies end, so do electric car sales. In Hong Kong in April 2017 Tesla sales went to zero from 3,000 the month prior as the government ended a tax break (which resulted in the car suddenly becoming 73% more expensive). In Denmark which began phasing out EV subsidies in Q1 2016 sales fell by nearly 60% over the next year and have dropped a further 60% YOY in Q1 2017. There are also some adoption challenges in countries with high electricity prices (ie. Europe). It is estimated that in Germany the "fuel cost" for an EV is actually **higher** than that of an internal combustion engine. It is difficult to fight fantasy with facts when no one truly knows how the future of electric car adoption will play out but at least in the next several years the current hysteria seems misplaced.

Regarding Fund positioning we have met with the majority of Fund holdings and/or competitors in recent weeks. Not much with respect to fundamentals has changed. Pressure pumping companies report continued traction in pricing increases (leading edge margins up 300% from the beginning of the year), equipment being sold out for the remainder of the year, and customers that are exploring locking in 2018 capacity at similar or higher leading edge prices. Importantly none consider pricing at high enough levels to justify fleet expansions (a chronic concern in a cyclical business) suggesting continued tightness in 2018. Our sand companies report continued increases in demand with 2018 demand estimated to grow by approximately 50% over 2017. E&P's continue to test higher sand usage on a per stage basis and the average sand intensity per well is still well below leading edge well designs. We continue to believe that demand growth will outstrip supply growth especially when one takes into account differing mesh sizes of production. Pricing increases have stalled in Q4 as the market digests the amount of in basin projects coming online in 2018 (what is real and what is not?) and we would expect continued tightness in 2018 with commensurate prices again in Q1 2018. Both pressure pumper and frac sand stocks continue to trade at about 50% of their typical mid-cycle valuations despite extremely strong underlying fundamentals.

We have further increased our U.S. exposure (and have been taking serious flak from our friends in Calgary for it). We feel this decision was further justified not just by the recent rise in the loonie (whose impact is being totally ignored…the $0.10 move in CAD/USD = 20% drop in revenue for the average Canadian producer) but also from a recent decision by the National Energy Board (the federal regulator for pipeline construction). On August 23rd the NEB declared that it "will consider upstream and downstream greenhouse gas emissions (GHGs) in determining whether these projects [pipelines] are in the public interest. The NEB also wants to examine the potential market impacts of GHGs reduction targets embedded in laws and policies on the economic viability of the projects." So basically if building a pipeline would mean that oil companies could actually justify spending more money on drilling to grow oil production (and with it tax revenue and jobs) because they would now have certainty about being able to economically transport their production then this would work to the disadvantage of the pipeline approval because it would mean more GHGs being created. What?!?!? Is it any wonder why international companies are fleeing our country and why as a Fund Manager we have been forced by our government to seek more stable and economic jurisdictions in which to invest our clients' money? The Canadian Government needs to get its act together as this very important industry represents about 15% of Canadian GDP and all of the selfies in the world won't repair the irreparable reputational damage that is being inflicted upon it.

In closing, the ingredients for a powerful rally are in place: epically horrible sentiment (lowest energy ownership on record), extremely attractive valuations (stocks trading at half their normal valuations), very high short interest in many stocks (some Fund holdings have >30% short interest), and an already strong and improving fundamental backdrop (OECD inventory overhang plunging, U.S. production growth stalling, global oil demand strongly increasing).

Eric Nuttall
Senior Portfolio Manager
Sprott Energy Fund

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COMPOUNDED RETURNS (%) AS AT AUGUST 31, 2017[1]

	1 MTH	YTD	3 MTH	6 MTH	1 YR	3 YR	5 YR	10 YR	ANNUALIZED INCEPTION (04/15/04)
SPROTT ENERGY FUND, SERIES A	-6.6	-48.4	-21.6	-38.2	-38.9	-25.1	-7.3	-6.3	1.0
S&P/TSX CAPPED ENERGY TRI	-3.9	-21.7	-7.2	-12.3	-10.8	-17.0	-4.8	-3.7	2.7

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[1] All returns and fund details are a) based on Series A units; b) net of fees; c) annualized if period is greater than one year; d) as at August 31, 2017; e) 2004 annual returns are from 04/15/04 to 12/31/04. The index is 100% S&P/TSX Capped Energy TRI and is computed by SPR&Co LP based on publicly available index information.

The Fund is generally exposed to the following risks. See the prospectus of the Fund for a description of these risks: concentration risk; credit risk; currency risk; derivatives risk; exchange traded funds risk; foreign investment risk; inflation risk; interest rate risk; liquidity risk; market risk; regulatory risk; securities lending, repurchase and reverse repurchase transactions risk; series risk; short selling risk; small capitalization natural resource company risk; tax risk.

SPR&Co LP is the investment manager to the Sprott Funds (collectively, the "Funds"). Commissions, trailing commissions, management fees, performance fees (if any), other charges and expenses all may be associated with mutual fund investments. Please read the prospectus carefully before investing. The indicated rate of return for series A units of the Fund for the period ended August 31, 2017 is based on the historical annual compounded total return including changes in unit value and reinvestment of all distributions and does not take into account sales, redemption, distribution or optional charges or income taxes payable by any unitholder that would have reduced returns. Mutual funds are not guaranteed, their values change frequently and past performance may not be repeated. The information contained herein does not constitute an offer or solicitation by anyone in the United States or in any other jurisdiction in which such an offer or solicitation is not authorized or to any person to whom it is unlawful to make such an offer or solicitation. Prospective investors who are not resident in Canada should contact their financial advisor to determine whether securities of the Fund may be lawfully sold in their jurisdiction.

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