Glori Energy Inc. (GLRI – $8.72)

Houston, TX
July 16, 2014

Coverage Initiated
Outperform
Price Target: $13.00

STOCK DATA	
52-Week Range	7.51 - 12.44
Three-Month ADTV	142,934
Dividend Yield	0.0%
Market Cap (mil)	$304
Shares Outstanding (mil)	32
Beta	-0.10
Float (%)	41%
Fiscal Year-End	December

EARNINGS DATA			
EPS	2013A	2014E	2015E
1Q		(1.60)	(0.01)
2Q		(0.02)	0.08
3Q		(0.01)	0.07
4Q		0.02	0.14
FY	(7.79)	(0.18)	0.29
P/E	*-1.22*	*-52.94*	*32.98*
CFPS Fiscal	2013A	2014E	2015E
1Q		(1.44)	0.06
2Q		0.01	0.20
3Q		0.03	0.19
4Q		0.09	0.31
FY	(7.36)	(0.02)	0.76

Pricing as of July 14, 2014.

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Biotech Meets Oil Production in Disruptive Fashion—Initiating at Outperform

Summary and Recommendation

We are initiating coverage of Glori Energy Inc. (GLRI) with an Outperform rating and a 12-month price target of $13 per share. Based on field applications to date, we believe Glori's proprietary AERO System technology, an enhanced oil recovery (EOR) tool, has the potential to dramatically enhance production from mature oilfields and, perhaps more importantly, at a much lower cost per incremental barrel, compared with other EOR technologies, such as thermal and gas injection. Glori is undergoing an opportunistic transition from a third-party service provider to a producer that can reap 100% of the benefits of AERO technology deployment. We expect numerous catalysts to drive multiple expansion as Glori demonstrates results and delivers solid production growth over the next several years.

Key Points

- **Acquisition strategy key to growth.** Glori recently closed the acquisition of the Coke and Quitman fields in East Texas, with AERO deployment expected later this year. Following the completion of a reverse merger earlier this year, Glori has $44 million in cash on its balance sheet, and when combined with an estimated 200 potential field acquisition targets, this supports our expectation for 249% and 85% total production growth in 2015 and 2016.
- **Strong potential for a disruptive technology.** Although lengthy sales and testing cycles have led to relatively slow industry adoption, we believe that as Glori demonstrates results at its own fields, industry uptake should accelerate. AERO, in our minds, has a sustainable competitive advantage in the EOR market stemming from a very competitive cost per incremental barrel of production of just $6, low up-front capital costs, and environmental friendliness.
- **AERO production impact.** We currently model a 30% uplift in production from AERO, which could prove conservative, as Glori's data from nine existing wells show a 62% increase in oil production. We also model a reduction in oilfield decline rates of 50%.
- **Valuable institutional knowledge.** The AERO technology was developed using more than 25 years of data from a joint research and development partnership with Statoil (STO). In addition, Glori has worked with 19 companies as a third-party service provider in various geologic settings, providing valuable information as Glori fine-tunes its AERO technology and application.

The Debate™

Debatable Point	Our Thoughts	Time Frame	Impact
Will service segment results be volatile, and will they affect the investability of the stock?	We believe that service net income will be volatile because customer contract awards will be lumpy and the timing difficult to predict. Deferred revenue policies make forecasting even more complicated. In our view, however, the primary reason to own GLRI is for production upside from the oil and gas segment. Furthermore, we view the service segment as customer-funded research and development and believe the institutional knowledge gained by deploying the AERO technology for different customers in different fields will be very valuable as the company works to enhance its technology and deploy it in its own oil and gas fields. We model rapid growth of the segment, with a revenue CAGR of 162% through 2016, although this will still only constitute approximately 20% of the company's total revenue.	6 to 12 Months	⬌
Can Glori consistently deliver base production growth via acquisitions?	Crucial to our production and EBITDA estimates is the successful implementation of the company's acquisition strategy. The company anticipates the ability to acquire total production of 1,200–1,500 bbls/d on an annual basis on which to implement AERO. A target list of more than 200 properties is encouraging, as is the company's current net debt position. We currently model an acquisition approximately every six months between now and 2016 for a total of 3,100 bbls/d of acquired production.	6 to 18 Months	⬆
Is the transition from an oilfield service company to an energy and production company the correct approach?	We believe Glori's transition to an energy and production company, where it can deploy AERO in its own assets, provides a more immediate method of monetizing this disruptive technology. Lengthy test periods and sales cycles are likely to result in a more measured pace of industry adoption, and in the meantime, Glori can reap 100% the benefits of AERO as a first mover while other E&P companies catch up. We view the company's willingness to assume the risk of deploying the technology as an operator as a vote of confidence for the technology, and as Glori is able to demonstrate results at Coke and complete subsequent acquisitions, this should validate AERO and accelerate customer uptake.	12 to 24 Months	⬆
Does AERO have a sustainable competitive advantage?	Yes, we believe AERO has a competitive advantage within the EOR market. The biotechnology boasts a very low cost per incremental barrel, and Glori has gained valuable institutional knowledge from deploying the AERO System for a myriad of clients in fields with various reservoir and geologic characteristics. Furthermore, because AERO uses existing well and pipeline infrastructure of waterflooded fields, this lowers up-front capital expenditures.	2 Years+	⬆

Investment Thesis

We are initiating coverage of Glori Energy Inc. with an Outperform rating, as we (1) expect a solid acquisition pipeline to support meaningful production growth over the next several years, (2) expect that success from deploying AERO on the company's own properties will accelerate uptake by third parties, and (3) ultimately believe that the AERO System has a defendable position in the EOR market.

Valuation

We base our $13 price target on an estimated 5.3x 2016 EBITDA multiple.

Catalysts/Milestones

- Additional acquisitions and evidence of successful AERO implementation at the Coke field.

Initiating at Outperform

We are initiating coverage of Glori Energy Inc. with an Outperform rating and a $13 price target. In our view, the company's proprietary AERO System offers a unique value proposition within the enhanced oil recovery market given the product's cost effectiveness, sustainability, and broad application potential. As other producers take time to get comfortable with the potential production uplift from AERO deployment, Glori's transition from a third-party service provider to producer should allow the company to reap the benefits of this disruptive technology and increase production at impressive rates over the next several years. A healthy pipeline of potential acquisitions and a strong balance sheet underpin our positive investment thesis.

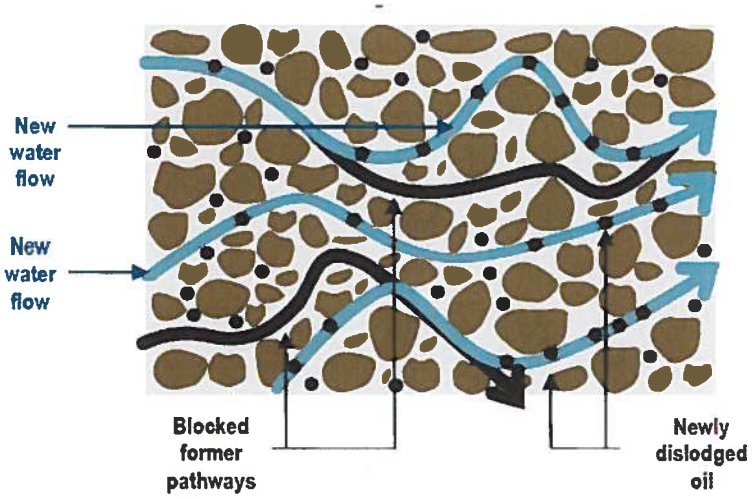
AERO Technology Overview

How It Works

Glori's AERO technology uses customized nutrients to grow the existing indigenous microbes in oil reservoirs to increase the production rate and free trapped oil, which is often left unrecovered under traditional extraction methods; typically a mere 30% of original oil in place is produced over the life of a well. Microbes residing in oil reservoirs are naturally capable of using oil as a food source. AERO adds nutrients to injection waters used in waterflooding to stimulate microbe growth, enhancing oil recovery through two main mechanisms.

- **Microbes reduce oil-water tension.** The tailored nutrients that are added to injection waters nurture the native microbes, which act as a natural surfactant, reducing the interfacial tension between the water injected in the waterflooding/water-drive process and the reservoir oil, thereby increasing the mobility of the oil in the water flow.
- **Microbes change the preferential flow of water underground.** Over time, water starts to take only the path of least resistance through the sandstone, leaving trapped oil unrecovered. Microbes being stimulated with the injected nutrients multiply and produce biomass blocking those preferential paths, forcing water to flow in new pathways and releasing new trapped oil.

AERO System Mechanics



Source: Company presentation

Implementation

AERO is implemented in a two-step process:

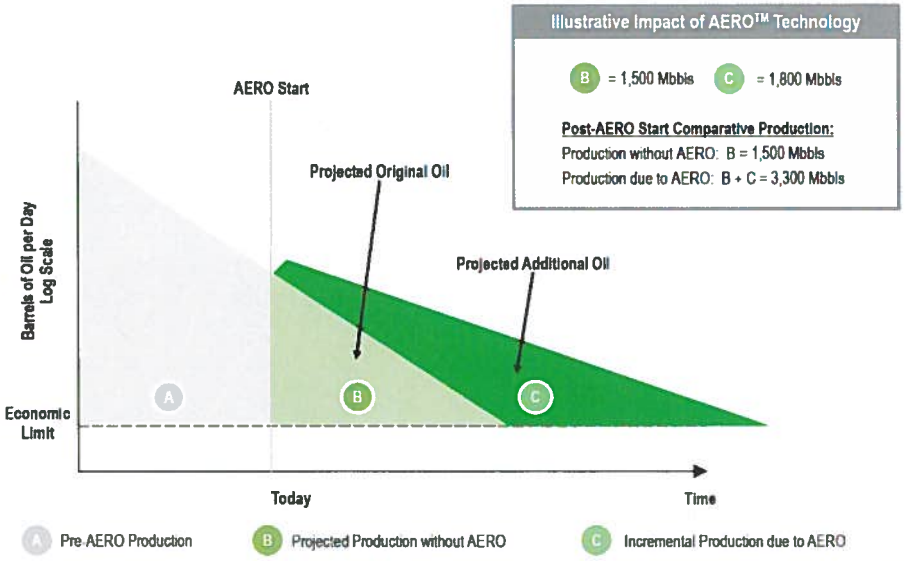
- **Reservoir analysis and treatment design phase (analysis phase).** Glori obtains representative oil and water samples from the target field to evaluate AERO System potential. Glori's Houston laboratory performs geochemical analysis and assesses the indigenous microbes' functionality. The phase takes two to four months, on average.
- **Field deployment phase.** Once Glori determines that the oilfield is suitable for AERO, a detailed project development plan is finalized, and Glori initiates the injection process with its skid-mounted equipment in the field location. It typically takes two to three months for initial results to be detected.

Projected Results

Results from AERO deployment are twofold:

- Glori estimates production uplift of 30%–60% after six months of implementation. In our model, we assume 30% production uplift, leaving room for upside.
- The production decline rate can decrease by 50%.

Example of AERO Production Uplift



Source: Company presentation

Strategic Partnership with Statoil (STO) Is Key

The development of the AERO System was based on 25 years of research and development from Statoil and other partners to enhance oil recovery technology. Other partners include The Energy and Resources Institute (TERI) and the Winogradsky Institute of Microbiology. **Glori controls all of the required IP for the AERO System and is, therefore, well positioned to develop and perfect the technology.**

Norne field posted promising results and indicates the offshore potential of AERO technology. Statoil deployed the AERO System at its Norne oilfield in the Norwegian Sea. The initial results show an increase in oil production and a flattening of the decline rate, and the company expects total production to be boosted by 30 million barrels of oil over the life of the field. We believe the success of the Norne field is an important milestone in validating the AERO System.

A Closer Look at the Addressable Market and Competition

Primary recovery: the initial oilfield production in which the internal natural pressure in the reservoir forces the oil to flow out. During this phase, 10%–20% of the original oil is released.

Secondary (waterflood) recovery: the second phase, when the natural reservoir pressure depletes. Water is injected into the oil reservoir to force out the trapped oil in the porous and permeable sandstone. During this process, another 10%–15% of original oil can be recovered.

Tertiary recovery (EOR): the final stage, when only one-third of the reservoir oil has been released, and most of the injected water follows the preferential pathways, reducing the recovery greatly. Several technologies are available to extract more trapped oil:

- **Thermal injection:** the most popular EOR method in which heat is used to loosen the trapped oil and make it flow more easily through the reservoir. Thermal injection requires significant up-front capex and is typically more fitting for heavy crude reservoirs.
- **Gas injection:** the method in which CO_2 and hydrocarbon are injected to increase pressure in the reservoir and the viscosity of the oil, enhancing the recovery. Gas injection has a long lead time, up to two years, for production uplift. Another drawback is the need for the gas to be piped to the entire reservoir.
- **Chemical injection:** the technology in which chemicals, typically polymers, are pumped into the reservoir in mass amounts to reduce the surface tension of the oil, helping the oil to flow better. The method requires a large quantity of chemicals and may have potential environmental risks.

The main competitors come from both the traditional EOR segment and microbial technology companies.

- **Denbury Resources, Inc. (DNR):** focuses on CO_2 flooding EOR technology. The firm operates in both the Rocky Mountain and Gulf Coast regions. In addition to the gas injection EOR business, DNR also supplies CO_2 to its industrial customers.
- **Micro-Bac International, Inc. (Private):** develops microbial products for wastewater and petroleum industries. Its Para-Bac business line competes with Glori for the microbial EOR products that alter the formation flows of oil reservoirs.
- **Titan Oil Recovery (Private):** focuses on microbial EOR products, which pushes customized nutrients into oil reservoirs to boost the extraction rate and extend the life of the oilfields.

According to a 2006 study by the U.S. Energy Information Administration (EIA), there are 2.4 trillion barrels of uncovered reserves worldwide.

Acquisition Pipeline and Balance Sheet Pave Way for Growth

Glori is currently undergoing a transition from a pure oilfield service company to an exploration and production company. Glori plans to acquire existing mature oilfields, initially in the U.S., and to subsequently implement the AERO System.

Acquisition targets plentiful. With 19 active AERO projects worth of data, the partnership with Statoil, and R&D collaboration with other producers such as Shell, Glori has honed in on the geologic characteristics required for successful AERO implementation.

Preferred characteristics include the following:

- Sandstone reservoirs.
- Permeability greater than 50 milli-darcies.
- Must be waterflooded or have a suitable water source (water drive field).

Based on the above criteria and on reservoir and geologic data gathered from HIS, Drillinginfo, TRRC, and BEG, as well as consultants, management has compiled an acquisition target list. Glori currently estimates that in East Texas, Illinois, and DJ Basins alone, it sees 200 actionable prospects. Glori has a deal generation team focused on the DJ Basin. The company currently has two fields in Texas under review with 600 Boe/d total production, and we expect an acquisition by year-end.

But timing is not certain. An abundance of properties with favorable reservoir and geologic characteristics is an encouraging and essential foundation for Glori's acquisition strategy; execution is another crucial aspect of the equation. Specifically, the Glori team must successfully secure transactions through both direct private negotiations and the public bid process. Thus, the timing of future deals, and consequently our production estimates, can be highly variable. Management hopes to acquire 1,200–1,500 barrels of production per year over the next several years. We currently model approximately two acquisitions per year, amounting to acquired production of 3,100 Boe.

Acquisition Schedule Estimates

Acquisition	Date	Production Assumption (Mboe/d)
COKE	2Q14	0.5
Acquisition No.2	4Q14	0.5
Acquisition No.3	2Q15	0.6
Acquisition No.4	4Q15	0.75
Acquisition No.5	2Q16	0.75
	Total	**3.1**

Source: FBR Research

Balance Sheet Should Support Additional Acquisitions

As of March 31, 2014, Glori had cash amounting to $44 million and total debt outstanding of $22 million (pro forma). Based on our expectation that the company will look to pay $75,000–$85,000 per flowing Boe and to finance acquisitions using 60% debt, we believe the company has the capacity for another transaction in 2014. We assume that future transactions would be similar in size to the Coke and Quitman fields (500 Boe/d). We emphasize that Glori will see cash flows from day one of acquisition closing and prior to AERO deployment, which mitigates risk and improves overall project economics.

Coke and Quitman overview. Glori closed the Coke and Quitman field acquisitions on March 14, 2014, for $38 million. Located in East Texas, these fields currently produce roughly 500 Boe/d net from a total of 28 wells. The reserve-to-production ratio is estimated at 19 years, and proved reserves stand at 2.8 MMboe (56% are proved developed producing). Glori retained personnel, is awaiting unitization approval, and expects to see benefits from AERO System deployment in 1H15. As this is a water-drive field (oil driven through the reservoir by an aquifer), success should support a wider application of the company's technology.

Coke Field

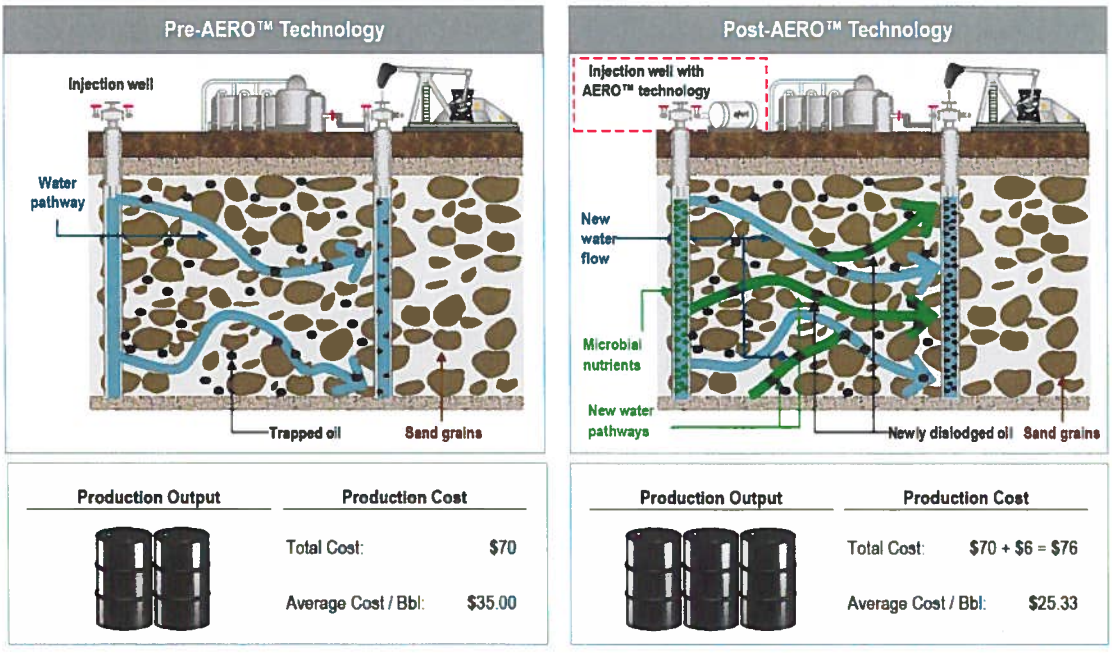
Source: Company reports

The AERO Advantage Defined

Although commercialization of AERO is in the relatively early stages, we believe there is a high likelihood of the biotechnology becoming a disruptive technology in the oil and gas production industry. As a result, we believe Glori will have a sustainable competitive advantage, particularly as an early adopter of the EOR technique. Below, we identify several factors that we believe contribute to Glori's competitive strengths.

- **Low incremental cost per barrel.** We currently model that each incremental barrel of oil resulting from AERO implementation is just $6. As a result, the EOR technology is profitable on a field-level basis. The low incremental cost per barrel drives overall average oil production costs materially lower, as evidenced in the graphic below. We estimate that other EOR technology currently available today can cost anywhere between $25 and $60 per barrel.

Favorable Project Economics Example



Source: Company presentation

- **Smaller relative infrastructure footprint.** Implementation of AERO results in minimal infrastructure requirements, and the overall footprint of the technology is much smaller than that of other EOR technologies, such as thermal injection. Specifically, the AERO technology is designed to integrate into existing infrastructure and equipment present in waterflooded fields, limiting the magnitude of up-front costs. In that vein, oil produced from the reservoir will utilize existing pipelines to transport the product to market. Management has indicated that the cost of the AERO System is just $125,000 and that it is much more of a modular operation than other EOR technologies. These skid units hold up to a 45-day supply of nutrients, are mostly self-sustaining, and require minimal maintenance. Furthermore, field units are equipped with sensors that allow for remote performance monitoring.
- **Use of naturally occurring agents.** Glori limits the amount of exogenous elements it introduces into the reservoir. Specifically, the company does not use genetically engineered microorganisms or introduce microbes but instead works with naturally occurring microbes in the reservoir. This is unlike other EOR technologies, which typically introduce chemicals and other agents into the reservoir and have larger environmental and greenhouse gas footprints (chemical and gas injections).

How Does the Service Business Fit into Glori's Strategy?

In addition to applying the AERO System to its own acquired oilfields, Glori's service segment deploys the technology for third-party oil producers, which generally opt for a pilot program prior to full implementation. The pilot contract structure typically includes an up-front fee for the analysis phase of a project and then a monthly fee for the field development validation phase, which can be a long period given the time it takes to demonstrate results. Each nutrient "cocktail" is customized and lab tested prior to implementation to maximize results.

We Expect Solid Growth but Variability from Quarter to Quarter

Overall, we forecast impressive growth for service revenue over the next several years, modeling 56.6%, 162%, and 100% revenue growth in 2014, 2015, and 2016, respectively. However, we expect Glori's service revenue and margins to be inherently volatile quarter to quarter, increasing the importance of analyzing segment performance on an annual or even multiyear basis. Although field-level margins for the service business run 50%–55%, they could also vary dramatically by quarter due to the following drivers:

- **Third-party service contracts will be lumpy in nature.** The timing of additional contract awards is uncertain and subject to delays. Furthermore, there is a high degree of customer concentration; at year-end 2013, all revenue was generated by just 11 customers.
- **Revenue recognition accounting.** Revenue for research-related services is deferred until the conclusion of the service, while for field-related services, revenue is recognized over the life of the contract. Deferred revenue at the end of 1Q14 stood at $2.4 million.

Volatile Revenue Stream Should Not Affect the Stock's "Investability"

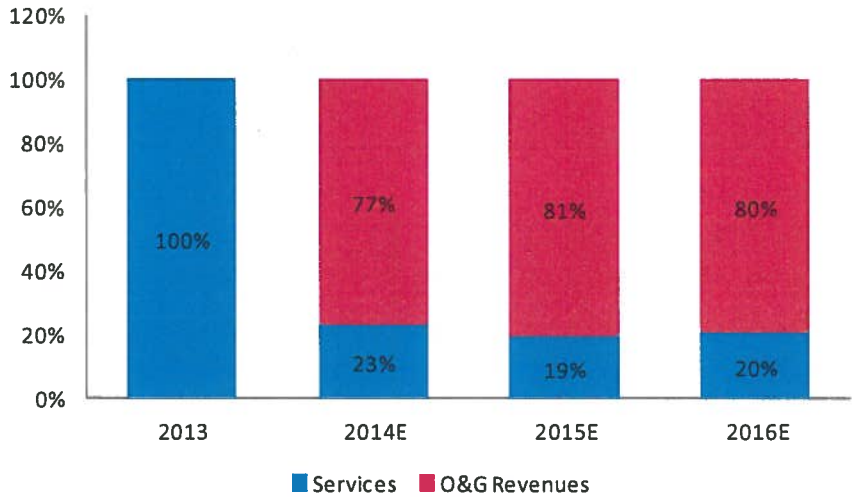
We view production and income growth from the oil and gas segment as a primary driver of growth, as well as the rationale behind our Outperform rating. Accordingly, any contribution from the service business is a bonus while Glori waits for broader-scale adoption by the industry. We expect long test and sales cycles to result in relatively slow industry uptake. As Glori demonstrates results with the Coke field (and subsequent acquisitions), this should promote adoption. Longer term, we believe the company could consider spinning off this division.

Customer-funded research and development. In many ways, we believe it is also important to consider the service business as customer-funded research and development. Each reservoir and project will be different, and as Glori continues to expand its customer base, we expect the company

to tweak its technology and learn more about how best to implement it. This institutional knowledge gained as a first mover with the technology should prove to be quite valuable over time.

Small portion of overall revenue. Despite our expectation for rapid revenue growth over the next several years, this is off a very small base. Thus, we expect the service segment to constitute just 20% of revenue by 2016 and to, therefore, be less of a determinant of stock performance than the oil and gas segment.

Revenue Breakdown by Segment



Source: FBR Research

Risks

Commodity price risk. The primary risk of investing in E&P stocks is the potential for pullbacks in commodity prices. A drop in commodity prices or a widening of differentials would reduce Glori's cash flow generation ability and, consequently, production and reserve growth. Oil comprises the vast majority of projected volumes (92%), magnifying the risk. Mitigating this risk, Glori currently hedges 75% of its projected volumes from Coke's proved developed reserves with a four-year swap contract.

Acquisition timing. Glori has identified more than 200 actionable reservoir targets in the DJ, East Texas, and Illinois Basins for deploying AERO. We view this as a healthy pipeline, and our estimates and price targets are based on roughly two acquisitions per year. Any delays in deal execution could have negative implications for operating results and the stock price.

Limited operating history as a producer. Glori was founded in 2005 as an oilfield services company. The company has only recently begun commercializing the AERO System. Furthermore, Glori only began acquiring E&P assets in the last year, and successful implementation of the AERO System is not guaranteed.

Limited float. With insiders owning 58% of shares outstanding, GLRI's float is very limited. Although the company is currently working to increase institutional ownership, it is currently just 14% of the float. GLRI's 30-day average daily trading volume is just 142,934, making liquidity a risk for investors.

Geographic concentration. Glori is targeting oilfields primarily in three U.S. basins: DJ, East Texas, and Illinois. This makes Glori more susceptible to weather events, infrastructure delays, and basis differential blowouts than some of its more diversified peers.

Competition. Although there is no true direct competitor for Glori, it competes with companies providing other EOR technologies, including gas and thermal injection. Increased competition could slow industry adoption of AERO.

Company Profile

Glori Energy Inc. is an energy technology company that applies its proprietary AERO System technology to enhance oil recoveries of its conventional and mature oil and gas assets. Glori's AERO System is a unique and cost-effective EOR technology that uses nutrients to stimulate naturally occurring reservoir microorganisms that, in turn, improve rock flow patterns and production rates. Glori also deploys its services to third-party exploration and production companies for a fee. Glori was founded in 2005 and is headquartered in Houston, Texas.

Income Statement—Glori Energy Inc. (GLRI)

$ in Millions

	2Q14 Estimate	3Q14 Estimate	4Q14 Estimate	2014 Estimate	1Q15 Estimate	2Q15 Estimate	3Q15 Estimate	4Q15 Estimate	2015 Estimate	2016 Estimate
Income Statement ($ millions)										
Total Revenues	**4.83**	**6.01**	**10.03**	**21.88**	**8.98**	**17.61**	**17.72**	**24.78**	**69.09**	**130.21**
Oil and Gas Revenues	4.05	4.01	8.03	**16.84**	7.68	13.71	13.72	20.78	**55.89**	**103.81**
Services	0.78	2.00	2.00	**5.04**	1.30	3.90	4.00	4.00	**13.20**	**26.40**
Expenses	**4.98**	**5.69**	**8.41**	**22.88**	**7.98**	**13.37**	**13.43**	**18.05**	**52.83**	**85.59**
Oil and Gas Operations	1.72	1.71	3.42	**8.07**	3.30	5.72	5.73	8.57	**23.32**	**33.22**
Service Operations	0.47	1.20	1.20	**3.41**	0.65	1.95	2.00	2.00	**6.60**	**15.84**
Science and Technology	0.45	0.45	0.45	**1.67**	0.38	0.54	0.54	0.54	**2.00**	**2.40**
G&A	1.26	1.26	1.26	**5.05**	1.64	1.64	1.64	1.64	**6.56**	**7.87**
DD&A	1.08	1.07	2.08	**4.68**	2.00	3.52	3.52	5.30	**14.34**	**26.25**
Interest Expense	(0.60)	(0.60)	(0.91)	**(2.46)**	(1.22)	(1.61)	(1.99)	(2.47)	**(7.29)**	**(14.17)**
EBITDAX	0.93	1.39	3.70	**3.68**	3.00	7.76	7.81	12.03	**30.60**	**70.86**
Operating Income	(0.15)	0.32	1.62	**(1.00)**	1.00	4.24	4.29	6.73	**16.26**	**44.61**
Earnings Before Taxes	(0.75)	(0.28)	0.71	**(1.00)**	(0.22)	2.63	2.30	4.26	**8.97**	**30.44**
Tax Benefit / (Expense)	-	-	-	**-**	-	-	-	-	**-**	**10.65**
Deferred Taxes	-	-	-	**-**	-	-	-	-	**-**	**10.65**
Recurring Net Income	(0.75)	(0.28)	0.71	**(5.58)**	(0.22)	2.63	2.30	4.26	**8.97**	**19.79**
Recurring EPS ($/Share)	*(0.02)*	*(0.01)*	*0.02*	***(0.18)***	*(0.01)*	*0.08*	*0.07*	*0.14*	***0.29***	***0.64***

Proprietary to FBR Capital Markets & Co. July 16, 2014

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Source: Company documents and FBR Research