



Morgans Emerging Companies Conference Presentation



| | Company Snapshot | | | | |
|--------------------------------------|------------------|---|--|--|--|
| | Name: | Byron Energy Limited | | | |
| | ASX code: | BYE | | | |
| | Issued capital: | 128m ordinary shares 37m options exercisable at \$0.50 before 31/12/16 | | | |
| | Market cap: | \$104m @ \$0.81 | | | |
| | Cash | ~US\$12m (as at 31/12/13) | | | |
| | First well: | Byron Energy South Marsh Island 6 #1 Well (SM6#1) | | | |
| | Well timing: | Expected spud date April 2014 | | | |
| Drilling rig: Spartan 202 Jackup Rig | | Spartan 202 Jackup Rig | | | |
| | Portfolio: | 16 blocks in shallow water Gulf of Mexico, offshore Louisiana | | | |
| | Experience: | Team has more than 20 year history of success drilling in the area | | | |



Byron's Strategy

Experienced Team

 Maintain a small, highly motivated and experienced staff with a proven track record of success in the Gulf of Mexico.

Gulf of Mexico Specialists

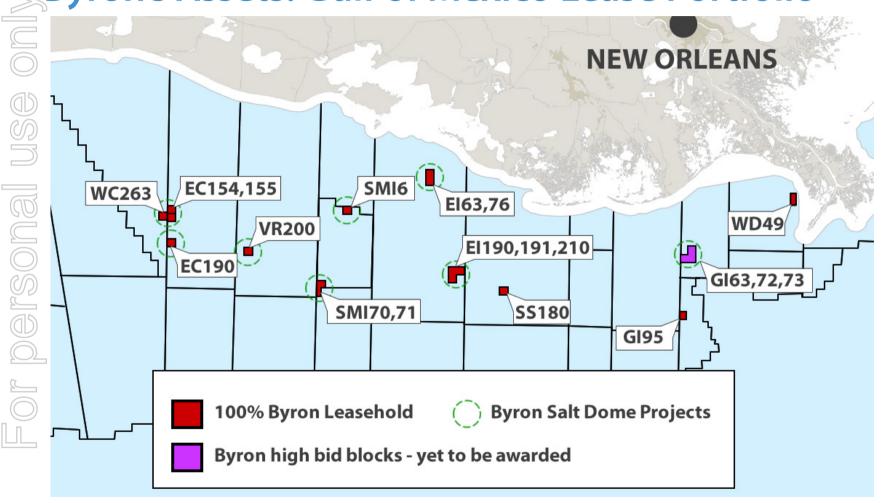
- Focus on oil prospects in the shallow water of the highly prospective Gulf of Mexico
- Take advantage of lower acreage competition associated with the post-Macondo complex regulatory environment.

Geophysical Expertise and Focus

- As early adopters of advanced geophysical technologies we focus our exploration efforts on the structurally and stratigraphically complex areas associated with steep sided salt domes.
- Take advantage of barriers to entry for those who lack this highly specialised technical expertise.



Byron's Assets: Gulf of Mexico Lease Portfolio





| Blocks Owned | | | |
|--|-----------------------------|----------|--------------|
| | Properties | Operator | WI/NRI* (%) |
| 2) | South Marsh Island Block 6 | Byron | 100.00/81.25 |
| 10 | South Marsh Island Block 70 | Byron | 100.00/81.25 |
| | South Marsh Island Block 71 | Byron | 100.00/81.25 |
| | Ship Shoal Block 180 | Byron | 100.00/81.25 |
| | West Delta Block 49 | Byron | 100.00/81.25 |
| | West Cameron Block 263 | Byron | 100.00/81.25 |
| 5 | East Cameron Block 154 | Byron | 100.00/81.25 |
| D | East Cameron Block 155 | Byron | 100.00/81.25 |
| 115) | East Cameron Block 190 | Byron | 100.00/81.25 |
| * Working Interest ("WI") and Net Revenue Interest ("NRI") | | | |

| Properties | Operator | WI/NRI* (%) |
|-------------------------|----------|--------------|
| Eugene Island Block 191 | Byron | 100.00/81.25 |
| Eugene Island Block 210 | Byron | 100.00/81.25 |
| Eugene Island Block 63 | Byron | 100.00/81.25 |
| Eugene Island Block 76 | Byron | 100.00/81.25 |
| Eugene Island Block 190 | Byron | 100.00/81.25 |
| Grand Isle Block 63** | Byron | 100.00/81.25 |
| Grand Isle Block 72** | Byron | 100.00/81.25 |
| Grand Isle Block 73** | Byron | 100.00/81.25 |
| Grand Isle Block 95 | Byron | 100.00/79.75 |
| Vermilion Block 200 | Byron | 100.00/81.25 |

^{*} Working Interest ("WI") and Net Revenue Interest ("NRI")

^{**} Byron was high bidder on these blocks in March 2014 which are yet to be officially awarded to Byron. NOTE: None of Byron's blocks currently has production or production facilities.



Board of Directors

Doug Battersby – Non-Executive Chairman (*MSc Petroleum Geology and Geochemistry*)

Petroleum geologist with over forty years' technical and managerial oil and gas experience. Co-founded Eastern Star Gas, SAPEX and Darcy Energy. Formerly Technical Director at Petsec Energy.

Maynard Smith – Director and Chief Executive Officer (BSc Geophysics)
Geophysicist with over thirty years' technical and managerial experience predominantly in Gulf of Mexico. Cofounded Darcy Energy and Byron. Chief Operating Officer with Petsec Energy (1989-2000).

Prent Kallenberger – Director and Chief Operating Officer (BSc Geology, MSc Geophysics) Geoscientist with over thirty years' experience in oil and gas. Generated prospects leading to the drilling of over 125 wells in the Gulf of Mexico and California. 12 years with Petsec Energy (Geophysical Manager 1992-1998 and Vice President of Exploration 2000-2006).

Charles Sands – Non-Executive Director (BSc)

Former director of Darcy Energy. Thirty years of broad based business and management experience in the USA. President of A. Santini Storage Company of New Jersey Inc.

Paul Young – Non-Executive Director (MA, ACA)

Co-founder and executive director of corporate advisory business Baron Partners. Has been in merchant banking in Australia for more than 26 years. Director of Ambition Group, Tidewater Investments. Former Chairman Peter Lehmann Wines and former director of Sapex.



Operating Track Record

- Wells initiated by Byron executives Doug Battersby, Maynard Smith and Prent Kallenberger (prior to founding Byron) have produced 22 MMBbls of oil and 263 Bcf of gas since 1992.
- This equates to an average of over 3,000 barrels of oil per day and 36 million cubic feet of gas per day over 20 years.
- This production was achieved through 71 producing wells, which were drilled from 86 attempts (an 83% success rate).
- Peak production from wells initiated by Byron executives was approximately 9,000 barrels of oil per day and 100 million cubic feet of gas per day.
- oersonal The team focus exclusively on a 480km stretch of shallow water, offshore Louisiana in the Gulf of Mexico.
 - The Byron team use state of the art geophysical interpretation to acquire blocks and develop prospects, from 3D seismic in the 1990s to Reverse Time Migration in the present.



Corporate Track Record

Petsec Energy Limited

From 1990 to 1997, Maynard Smith and Doug Battersby (joined by Prent Kallenberger in 1992) were directly in charge of the exploration and development activities that resulted in the outstanding early success of ASX listed Petsec Energy Limited.



Darcy Energy Limited

Maynard Smith and Doug Battersby founded the private company Darcy Energy Limited in 2000. The company which had similar activities to those now undertaken by Byron in the Gulf of Mexico, was sold to IB Daiwa Corporation in 2005.

Eastern Star Gas Limited

Doug Battersby was a co-founder of Eastern Star Gas Limited, which was listed on ASX in February 2001. The company was acquired by Santos Limited in November 2011.



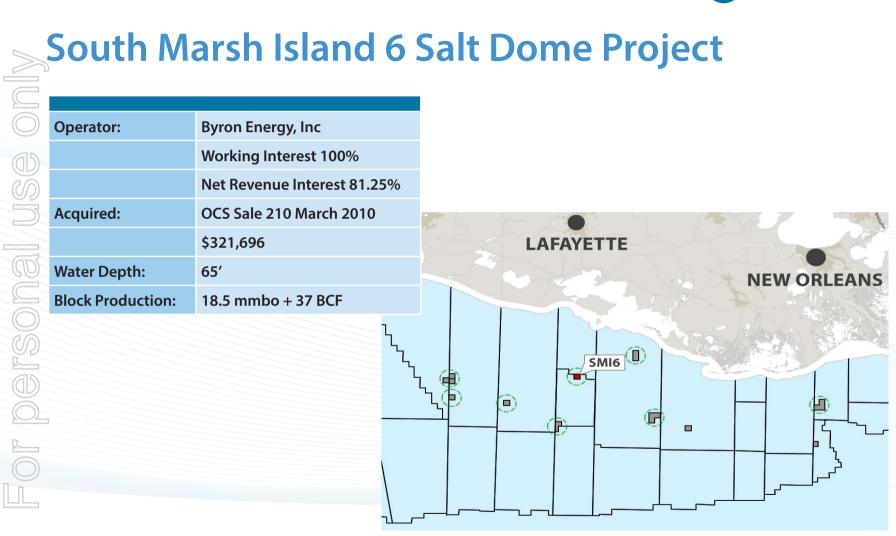
SAPEX Limited

Doug Battersby was a co-founder of SAPEX Limited which was listed on ASX in May 2007. The company was acquired by Linc Energy Limited in October 2008.



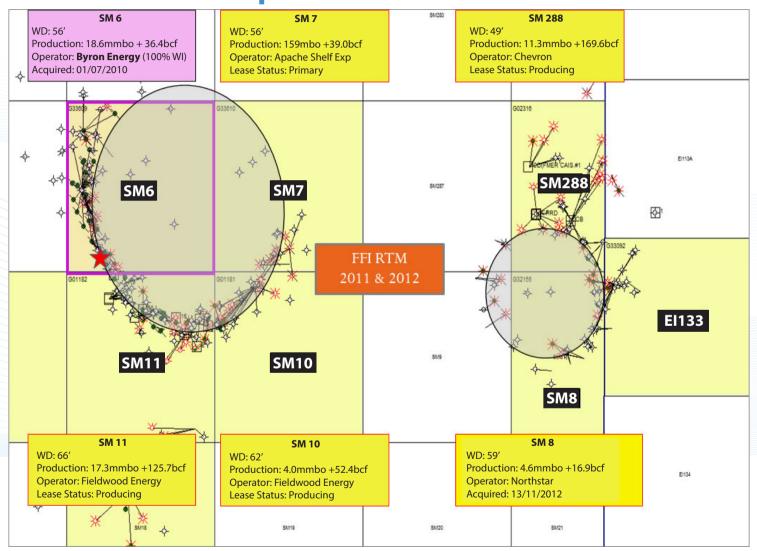


| Operator: | Byron Energy, Inc | |
|-------------------|-----------------------------|--|
| | Working Interest 100% | |
| | Net Revenue Interest 81.25% | |
| Acquired: | OCS Sale 210 March 2010 | |
| | \$321,696 | |
| Water Depth: | 65' | |
| Block Production: | 18.5 mmbo + 37 BCF | |
| | | |





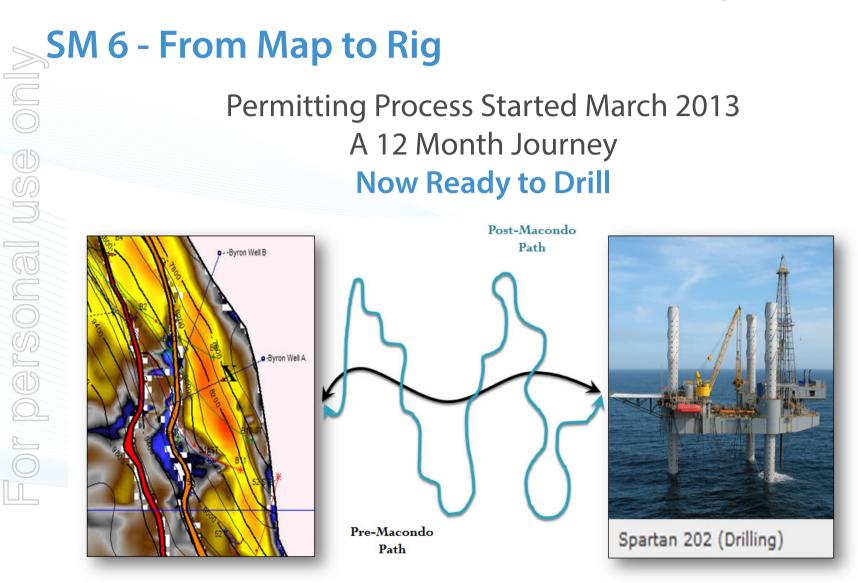
SM 6 Location Map (Total Field Production 40.0 mmbo + 253 BCF)



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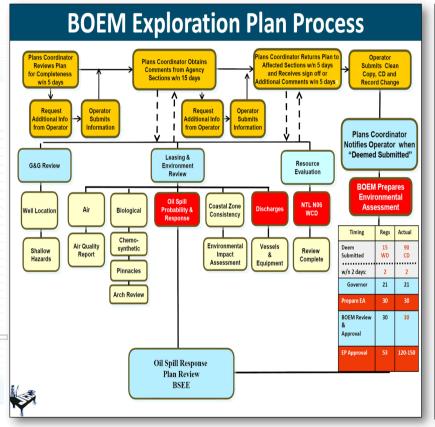


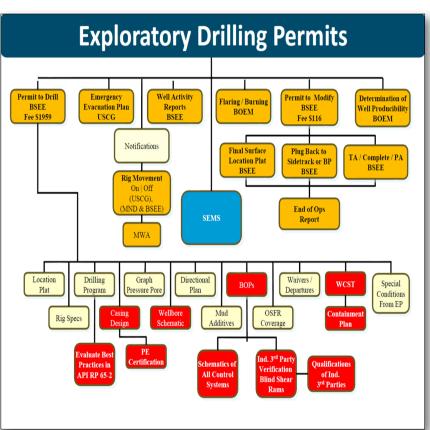
Permitting Process Started March 2013 A 12 Month Journey **Now Ready to Drill**





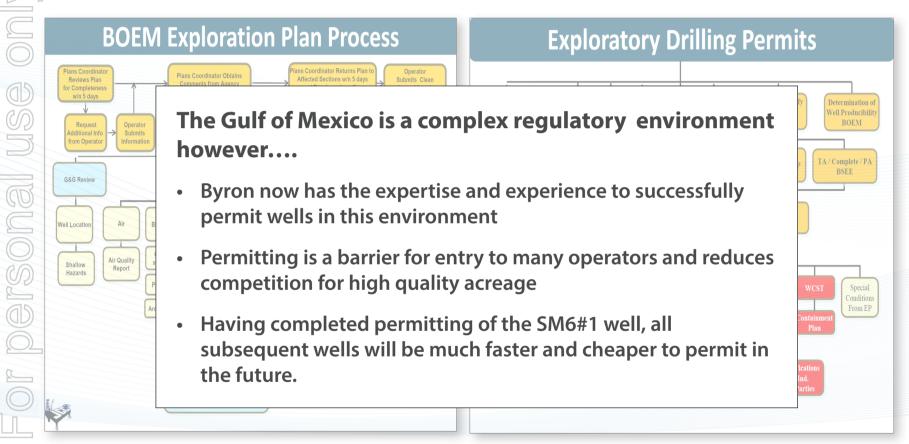
Regulatory Approval Process







Navigating the Regulatory Approval Process





| South Marsh Island 6 - By the Numbers Geological & Geophysical 6 3D Surveys Permitting & Operate Add Pages: Oil Spill Response Plan | | | | | |
|--|------------|----------------------------------|--|-----|----------------------------------|
| | Geol | ogical & Geophysical | | Po | ermitting & Operat |
| | 6 | 3D Surveys | | 444 | Pages: Oil Spill Response Plan |
| | 71 | 3D "Data Types" | | 125 | Pages: EP - Confidential Version |
| | 1562 | Square Miles of Data Types | | 69 | Pages EP – Public Version |
| | | | | 297 | Pages: APD |
| | 225 | Wells | | 22 | Pages: Temporary Caisson Perr |
| | 1321 | Old MMS Well Records | | 13 | Volumes: SEMS |
| | 214* | Horizons | | 1 | Worst Case Discharge Calculation |
| | 119 | Faults | | 1 | Shallow Hazard Survey |
| | | | | 51* | Master Service Agreements |
| | 375* | Contour Files | | 4* | Master Time Charter Agreemen |
| | 200 | Grid Files | | 5* | Master Purchase Order |
| | 291 | Sand Tops | | 1 | Master Construction Agreemer |
| | 35 | Stratigraphic Zones | | 1 | Drilling Contract |
| | | 5 . | | 37* | Credit Applications |
| | 92 | Planimeter Files | | 18* | Misc. Government Regulatory |
| | C | Man-Hours in front of a computer | | 1 | Approved Exploration Plan |
| | Countless: | | | 1 | Approved Temporary Caisson P |
| | | | | 1 | Approved Application for Perm |
| | * | And Counting | | * | And Counting |

| Permitting & Operations | | |
|-------------------------|--|--|
| 444 | Pages: Oil Spill Response Plan | |
| 125 | Pages: EP - Confidential Version | |
| 69 | Pages EP – Public Version | |
| 297 | Pages: APD | |
| 22 | Pages: Temporary Caisson Permit | |
| 13 | Volumes: SEMS | |
| 1 | Worst Case Discharge Calculation | |
| 1 | Shallow Hazard Survey | |
| 51* | Master Service Agreements | |
| 4* | Master Time Charter Agreements | |
| 5* | Master Purchase Order | |
| 1 | Master Construction Agreement | |
| 1 | Drilling Contract | |
| 37* | Credit Applications | |
| 18* | Misc. Government Regulatory Applications | |
| 1 | Approved Exploration Plan | |
| 1 | Approved Temporary Caisson Permit | |
| 1 | Approved Application for Permit to drill | |
| * | And Counting | |





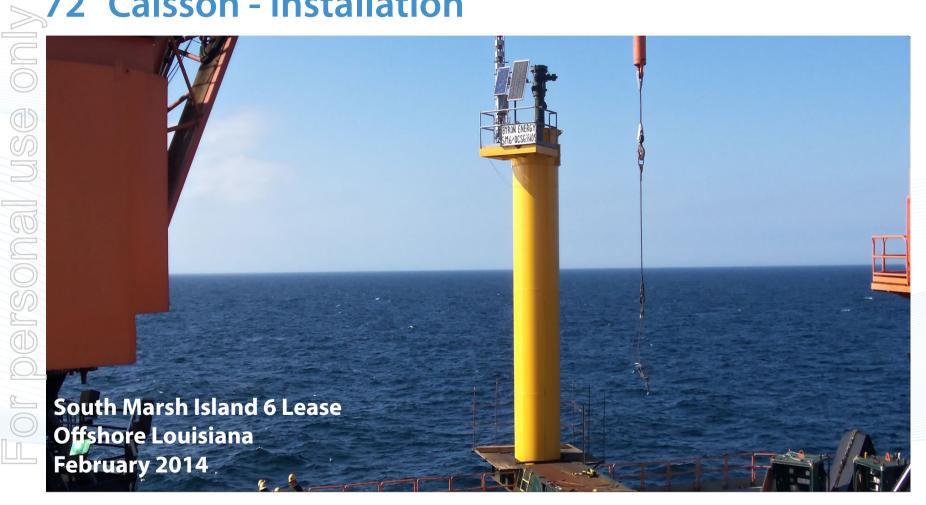
Twin Brothers Marine Franklin, Louisiana January 2014



Louisiana Black Bear tracks at Twin Bros. Yard



72" Caisson - Installation





SM 6 – Geology and Geophysics

Why SM 6?

RTM processing indicates the presence of a salt overhang and significant volume updip to old, previously productive wells drilled on the block.

Old Wells on the block did not have sand control. Nearly every well sanded up not long after water encroachment, resulting in under produced reservoirs.





Anisotropic Reverse Time Migration – State of Play

Full Wave Equation Migration

- A two way WEM migration (from both the source and the receiver)
- Handles complex velocity fields (like salt bodies), images steep dips (> 70 degrees), yields "accurate" amplitudes
- Coupled with new Anisotropic sediment and "dirty" salt velocity modeling, the results are excellent
- Higher frequencies are being achieved at lower costs improved resolution

Downsides

- Lower frequency data, a little noisy
- Still expensive, but costs are decreasing as computing power increases

RTM on the GOM shelf is increasing

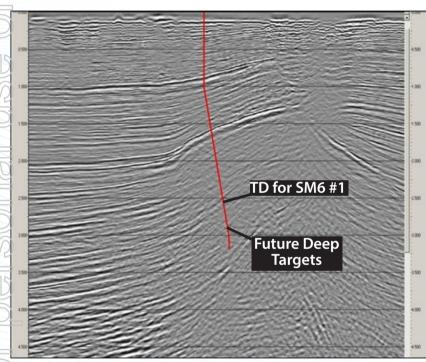
- New players from deep water some with legacy acreage, some seeking new projects with RTM possibilities
- New Full Azimuth Acquisition spec and proprietary

Fairfield Nodal, WesternGeco and Others

- RTM workflows are being refined to cut costs and improve quality
- Byron has been fortunate that two contractors have used leased acreage as "Labs" for RTM processing



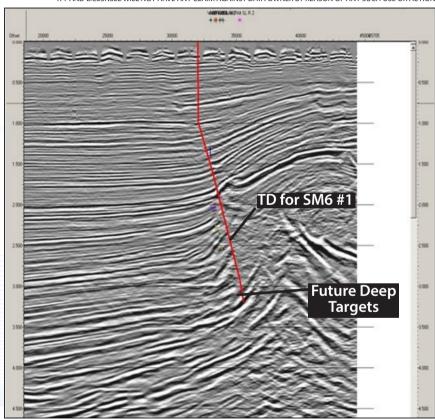
Imaging Evolution - SM 6



1990s Vintage 2D

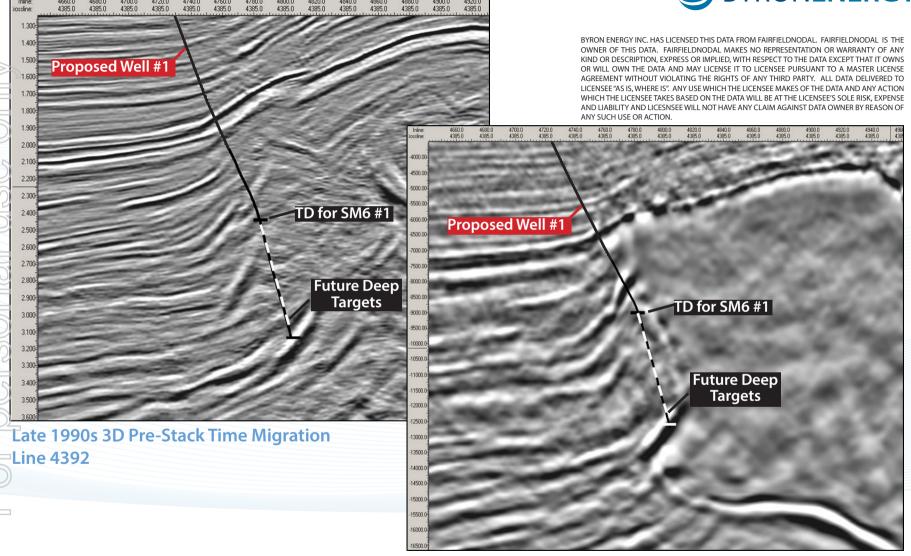
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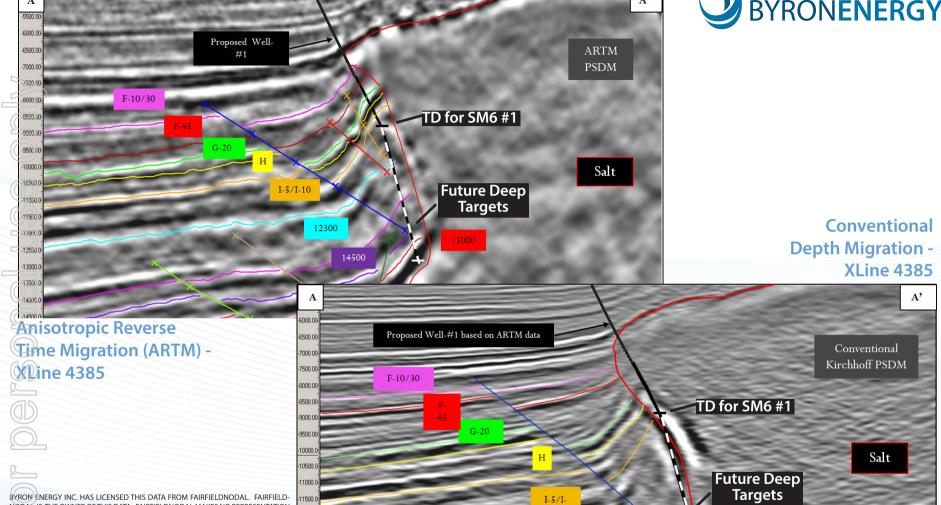
Late 1990s 3D Pre-Stack
Time Migration





2011 Anisotropic Reverse Time Migration Line 4392





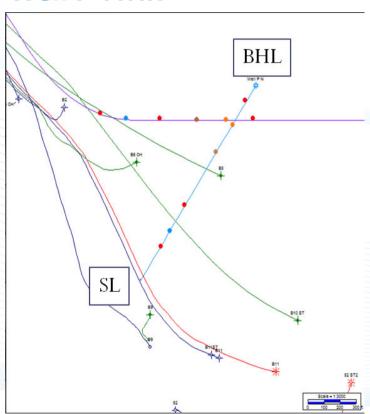
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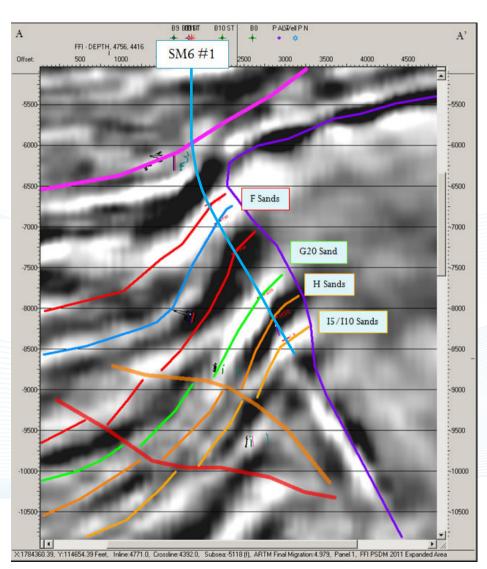
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Byron Energy SM6 #1 "Well P Twin"

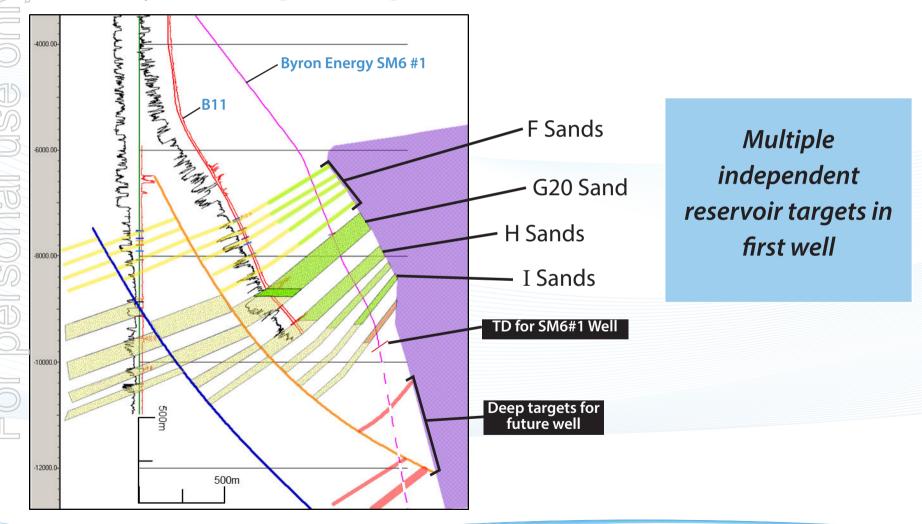


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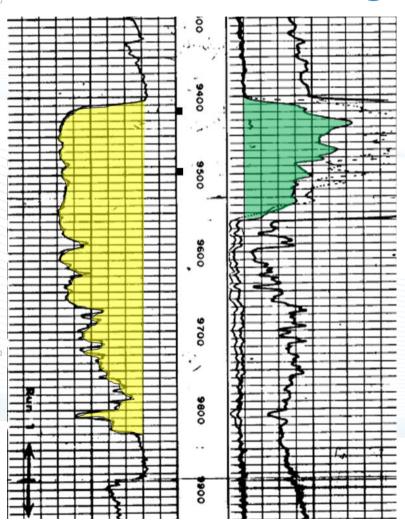


Primary Geologic Targets - SM6 #1 Well





SM6 #1 Well - G20 Target



or personal

| 3/70 to 2/74 | Perfs from 9412' to 9416' |
|--------------|-------------------------------|
| | 321,000 BO + 1.185 BCF + 0 BW |
| 3/74 to 6/75 | Perfs from 9496' to 9502' |
| | 65,000 BO + 1.09 BCF + 47 BW |

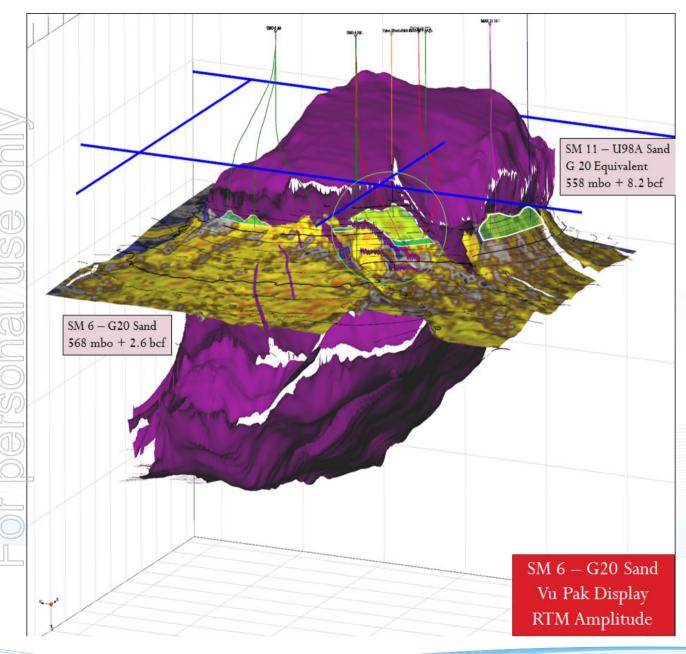
G20 Sand sidewall core data:

Average Perm: 450 millidarcies

Average Porosity: 28.5%

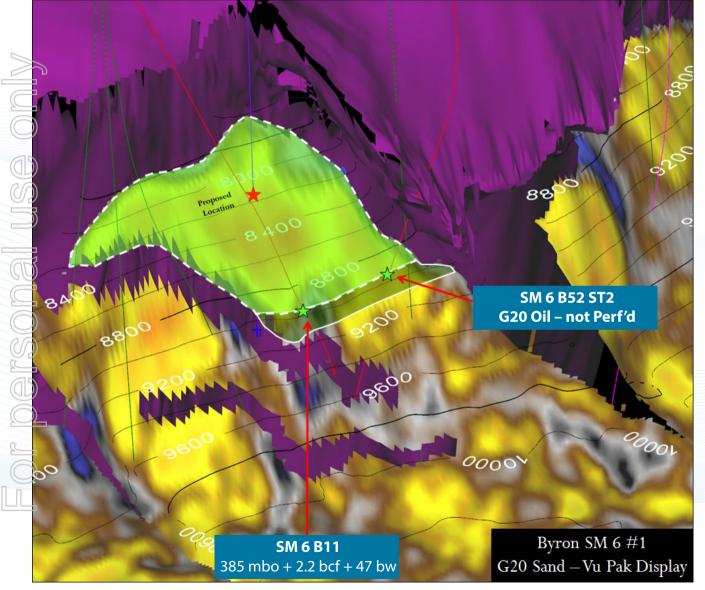
Sidewall cores indicate 37 API oil gravity from 9410' to 9554' MD

Isopach mapping indicates the B11 drained approximately 12 acres using a 28% recovery factor.



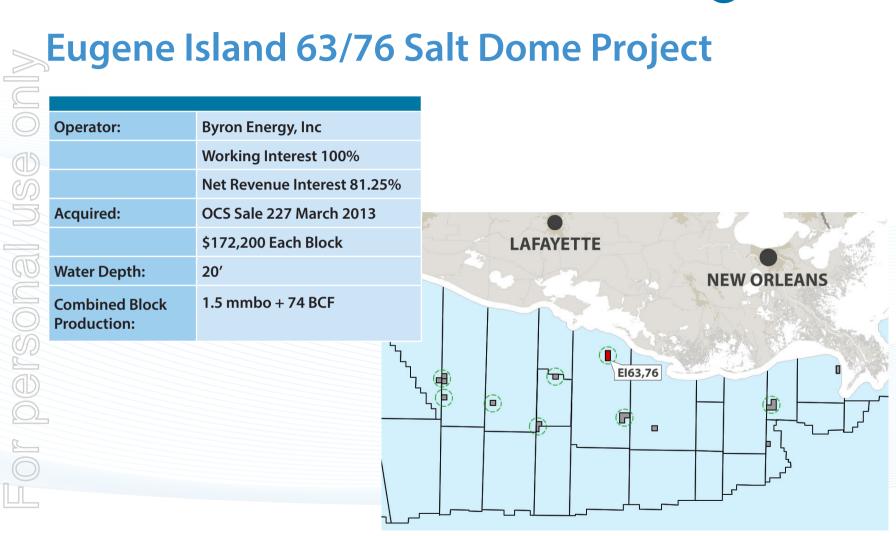








| Operator: | Byron Energy, Inc |
|----------------------------|-----------------------------|
| | Working Interest 100% |
| | Net Revenue Interest 81.25% |
| Acquired: | OCS Sale 227 March 2013 |
| | \$172,200 Each Block |
| Water Depth: | 20' |
| Combined Block Production: | 1.5 mmbo + 74 BCF |
| | 5 |

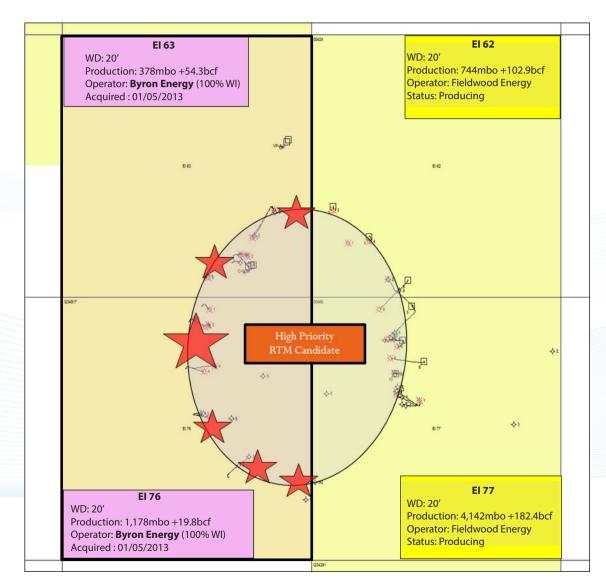




Location Map

Total Field Production 6.4 mmbo + 360 BCF

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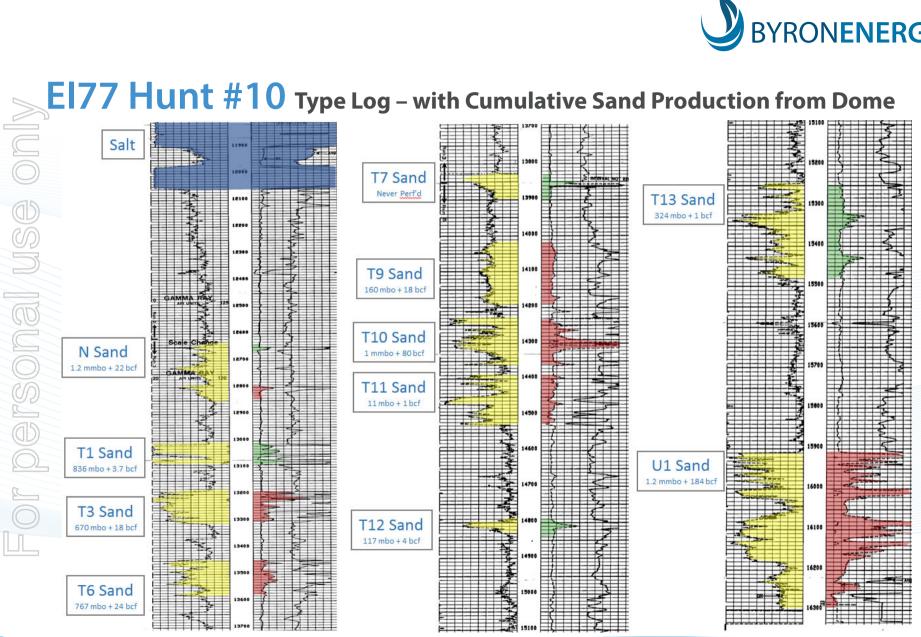


El 63/76 Salt Dome Project

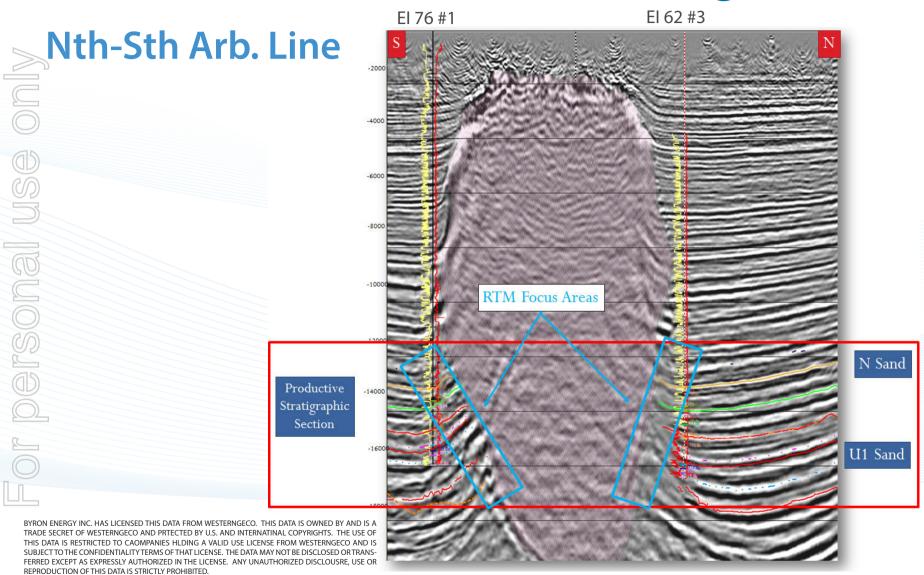
Why EI 63/76?

- The El 63 Dome has been a prolific oil and gas producer beginning in 1957
 - 6.4 mmbo + 360 bcf
- Preliminary 3D interpretation indicates at least four areas where future wells can be drilled for new or overlooked reserves
 - Reserve potential appears to be robust with good liquid expectations
- Although deeper wells are required, the stratigraphic section is not over pressured and water depth is only 25'
- El 63/76 dome has a salt overhang around the entire dome, which makes it an ideal candidate for RTM Processing

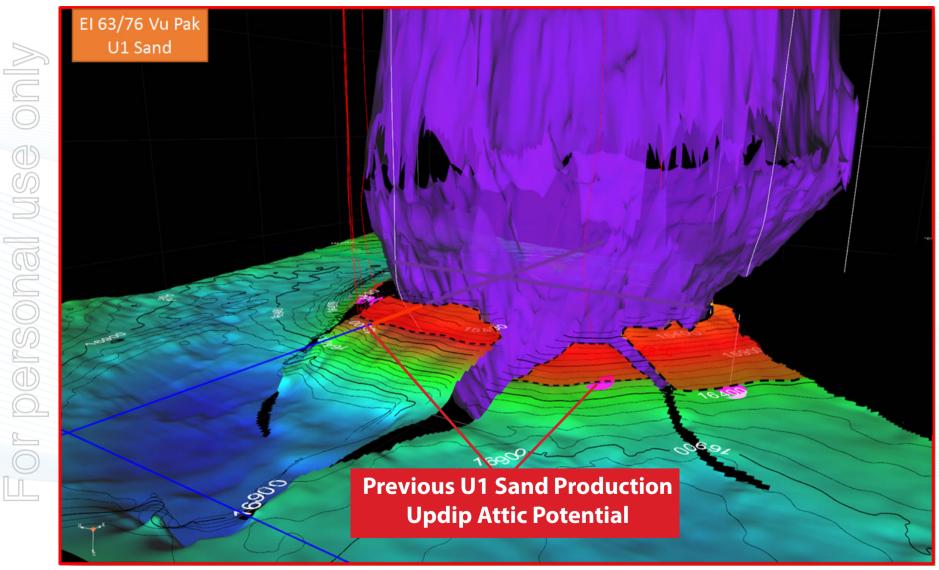






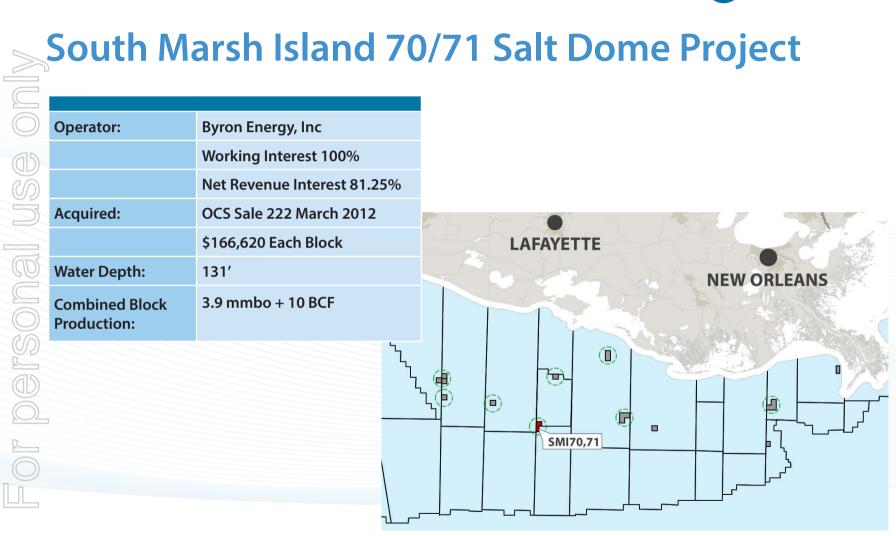




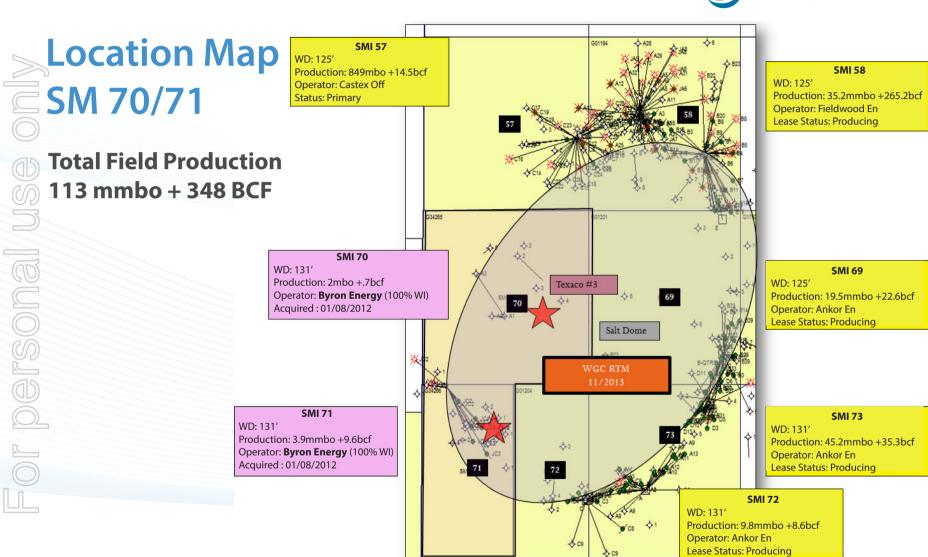




| Operator: | Byron Energy, Inc |
|----------------------------|-----------------------------|
| | Working Interest 100% |
| | Net Revenue Interest 81.25% |
| Acquired: | OCS Sale 222 March 2012 |
| | \$166,620 Each Block |
| Water Depth: | 131′ |
| Combined Block Production: | 3.9 mmbo + 10 BCF |
| | |









South Marsh Island 70/71 Salt Dome Project

Why SM 70/71?

- SM 70 Dome has prolific oil production above 7500'TVD:
 - 75 mmbo
- Preliminary RTM data has defined the structural setting for previously productive sands around the dome.
- RTM data shows prospective areas of attic updip to production on both SM70 and SM71.
- Prospect depths are 5500' TVD to 7000' TVD with large oil potential.
- Because of the stratigraphic nature (and risk) of these opportunities Byron has solicited bids for a Full Waveform Inversion product to further enhance the ability to map these sand bodies as they pinch out up dip.



SM 70/71 - Full Waveform Inversion

Produce 3D Seismic attributes at the reservoir level:

- Acoustic and elastic impedance volumes
- Porosity and pore pressure analysis
- Various geophysical attributes
 - Poisson's Ratio
 - AVO
- FWI uses the full 2-way wave equation to produce high resolution velocity models
- Goal: Predict lithology and hydrocarbons



SM70 Salt Dome

Byron Areas of Interest

SM 70: "J" Sand

Productive in SM 57 C4 – 1.6 mmbo

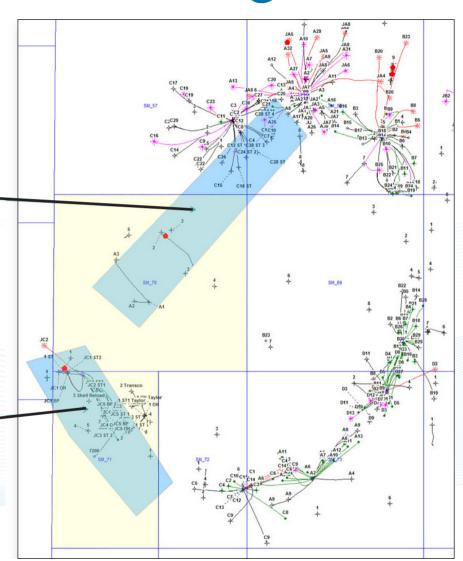
Area of interest

SM 71: "J" Sand

ersonal use

Productive in 4 horizontal wells on SM 71.

Area of interest





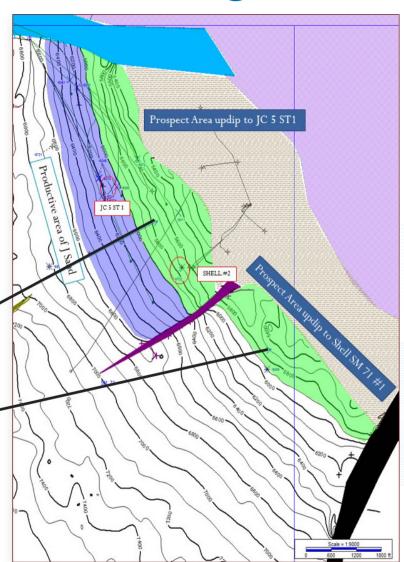
SM71 "J" Sand

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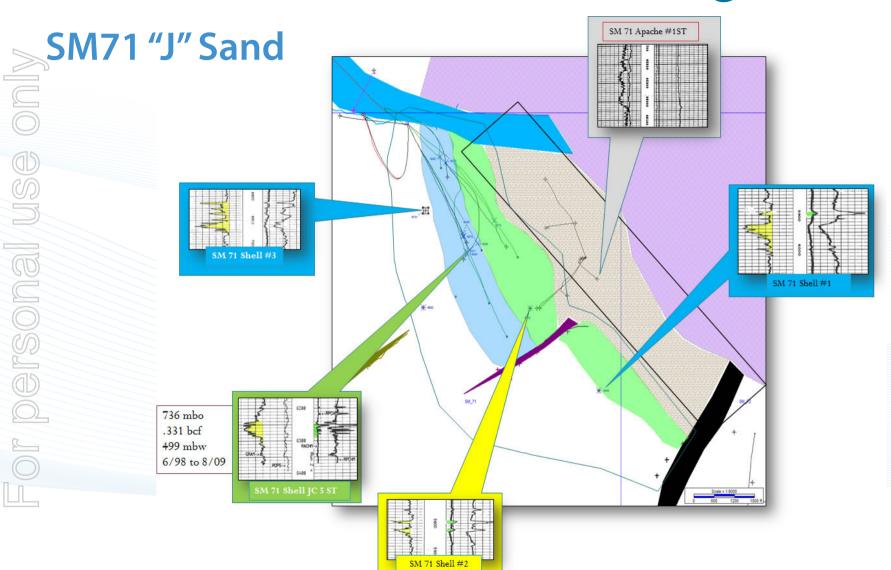
- 4 completions total 3.35 mmbo
- Best well: JC 3ST2 1.297 mmbo 5/1995 to 8/2001
- In May 1966, Shell drilled DST's the Shell #2
 which tested 118 bopd of 37.5 API oil from a
 sand we have correlated to be the J Sand.
- 3D data indicates a 150 acre updip to the highest J Sand producer (JC5 ST1) and the indicated pinch out of J Sands to the east against the dome (or rubble zone around the dome).

Shallow Prospect: 5400' TVD

Offset fault block Shallow Prospect: 5700' TVD









Strategy Recap

Experienced Team

 Proven track record with over 30 years' Gulf of Mexico experience for each staff member

Gulf of Mexico Specialists

- Byron has the staff, contacts and experience to successfully permit and operate in the Gulf of Mexico
- Byron has used this experience to acquire a significant and targeted acreage position

Geophysical Expertise and Focus

- With the use of Reverse Time Migration to help resolve structural issues and Full Waveform Inversion to aid with stratigraphic resolution, Byron has identified numerous prospects in the GOM
- This acreage position was possible by adopting this strategy at least two years ahead of most of the competition in the Gulf



Contact Information

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or personal use

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Technical Information

Technical information contained in this presentation in relation to Byron's projects has been reviewed by Mr Prent Kallenberger, an Executive Director and Chief Operating Officer of Byron. Mr Kallenberger holds a Bachelor of Science degree in Geology and Master of Science degree in Geophysics, and has more than 30 years experience in the practice of petroleum geosciences. Mr Kallenberger has consented to the inclusion in this presentation of the information in the form and context in which it appears.