

# SIDEWALL CORE DESCRIPTIONS

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Date	Nov 26, 2009	Service Company	Baker Hughes / Baker Atlas
Run No	1	Tool Type	RCOR
Top Depth	890.0	Cores Requested	30
Base Depth	1945.0	Cores Obtained	31
Geologist	Michael Smith	Cores Lost	0

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## Geologist Comments regarding visual / microscopic porosity estimates:

The estimates of porosity / cementation in the Sidewall Cores and Cuttings during the drilling operation of the Red Brook # 2 well are based on the Geologists System and Methods, developed during the drilling of the McCully Gas Field in New Brunswick, and adopted for Vulcan Minerals in order to remain consistent within the Carboniferous Basin as a whole.

To avoid confusion with terminology over the Porosity estimates for the Sidewall Cores below and Rock Cuttings recorded in the sample descriptions - The following definitions should be reviewed.

Porosity Estimates Criteria: Sample / Sidewall Core Descriptions and Porosity Estimates are generally recorded under an x10 power magnification. The Well Site geologist used an x20 power magnification for the Red Brook#2 well. Maximum magnification of x45 power was used as required but as a general "rule of thumb" - any visual porosity not seen with an x20 magnification would be considered ineffective.

Visual Porosity: Naturally occurring "holes" within the rock matrix or generally – between or besides touching grains that can be seen with the naked eye - or up to and including an x20 magnification. Also would include secondary "after the fact" porosity generally found in Carbonates but also possible within clastics such as Sandstone – Siltstones resulting from fracturing, diagenesis or leaching.

Effective Porosity: The volume of rock that would be filled by Recoverable Oil and or Gas. For the Red Brook #2 Well, the stated effective porosity is for possible Gas, as generally, effective gas porosity would be higher than effective oil porosity. Effective Porosity does not always equal visible porosity but visible porosity is generally effective. Effective porosity as qualified in this report would also include an educated unseen porosity estimate.

Ineffective Porosity: The volume of rock that is occupied by "hidden" porosity such as Clays, Argillaceous material such as Shale clasts, grains, laminae, and or other material such as a weaker cemented silica silty matrix. Although the Neutron Porosity Tool would record this hidden porosity, the physical characteristics of the "fill" material would not be capable of holding gas within its volume and/or incapable of liberating gas, and could be considered as non Recoverable porosity.

Total Porosity: Visual porosity including Effective + Ineffective porosity. (Generally Neutron Logging Tool)

Grain Relief / Cementation: The Relief of the rock / grains / cuttings / sidewall cores is generally inversely proportional to the cementation. High Relief cuttings generally required weaker cement and/or compaction, and the matrix of the rock will break and/or fracture prior to the quartz grains. Low Relief cuttings are generally very well cemented, resulting in much lower total porosity. The cement is generally silica or calcite/dolomite. The rock with the estimated low relief will be observed to break through the grains as the cement is harder / tougher and the lower stress point would be the quartz grains verses the matrix/cement. High relief can also be observed in cuttings with high ineffective porosity due to the intergranular volume being filled by clays, silica material, argillaceous / shale, pyrobitumen or any other "filling" material.

# SIDEWALL CORE DESCRIPTIONS

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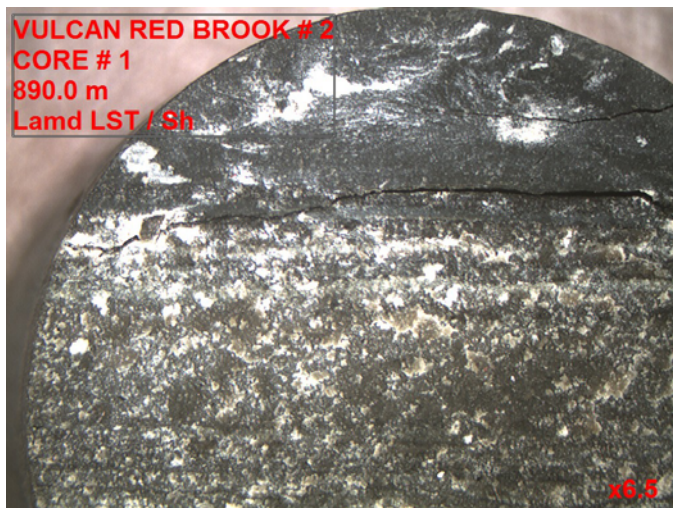
Date	Nov 26, 2009	Service Company	Baker Hughes / Baker Atlas
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**Core # 1**  
**Recovered 90%**  
**890.00 m**

Laminated MARLSTONE - LIMESTONE with Shale

Mudstone, (1a), fresh fractured surface very light mottled buff grey, microcrystalline, overall core light grayish, micro laminated silty Limestone with dirtier argillaceous Marlstone - micro argillaceous laminations, moderate calcareous, hard, well cemented but fragments crushable, some calcareous - dolomitic cleaner microcrystalline (silty) deposited sorted blebs within laminations, thicker calcareous shale laminae parallel to core axis, ( 5 mm ), no fluorescence, no cut, 4-5% hidden, 1-2% effective porosity, CNCSS 12.1%, PZSS -2.7%, Gamma 54 API.



# SIDEWALL CORE DESCRIPTIONS

Core # 2  
Recovered 70%  
900.00 m

## SANDSTONE

Medium grey, lower - upper medium with minor lower coarse, quartz, opaque, whitish to minor semi translucent, 2-5% slightly orange to minor apparent feldspars, minor black lithics, rare trace medium - coarse greenish clay clasts, very weakly consolidated - apparent cement, non calcareous, grain supported, moderate sorted, subangular - subround, very clean, no visible clays, extremely high relief on broken core end, no fluorescence, no cut, 3-5% visible very clean deep pore throats between quartz grains, 0.1-0.15 mm irregular diameter, 15-20% overall porosity, 12-15% effective, CNCSS 16.5%, PZSS 12.3%, Gamma 36 API.



# SIDEWALL CORE DESCRIPTIONS

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**Core # 3**  
**Recovered 100%**  
**1945.00 m**

## GNEISSIC BASEMENT

Massive tombstone, quartz, plagioclase, feldspars, minor black mafic to black mica. (22 minutes to cut core). CNCSS 11.3%, PZSS - 2.4% Gamma 81 API.



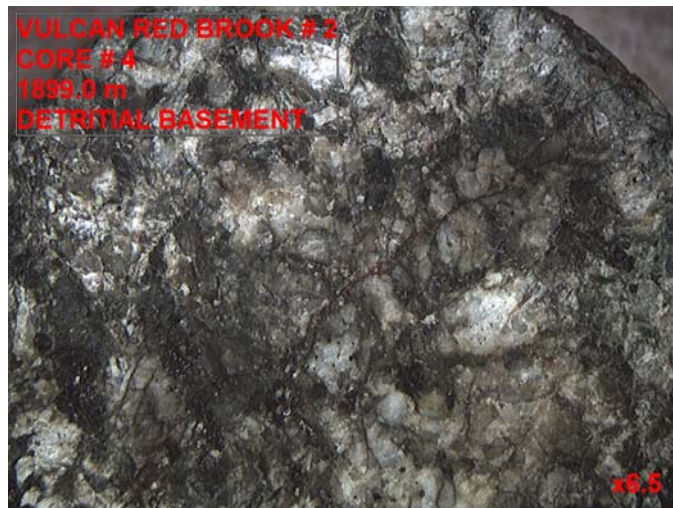
# SIDEWALL CORE DESCRIPTIONS

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Core # 4  
Recovered 80%  
1899.00 m

## DETRITAL BASEMENT?

Mottled light greenish, massive tombstone, very hard, crystalline quartz, plagioclase, minor black mafic - mica, trace subrounded black metallic magnetite, some hematite fracturing, massive igneous basement or possible some breccia with detrital ?, CNCSS 13.1%, PZSS -0.3%, Gamma 84 API.



# SIDEWALL CORE DESCRIPTIONS

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Core # 5  
Recovered 75%  
1761.60 m

## SANDSTONE

Mottled light greenish, medium - very coarse - pebble rounded to angular quartz, opaque, white, trace very slightly orange, grain supported with 100% soft light greenish non calcareous clay infilling matrix, very friable crumbly core, grain supported, very poorly sorted, no fluorescence, no cut, no visible porosity, 20% hidden matrix porosity, no effective porosity due to clays?, CNCSS 18.5%, PZSS 12.5%, Gamma 55 API.



# SIDEWALL CORE DESCRIPTIONS

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**Core # 6**  
**Recovered 60%**  
**1728.41 m**

## SANDSTONE

Mottled light greenish, fine - pebble quartz, opaque, white, semi translucent, rare trace black lithic to very slightly orange quartz? friable, weakly consolidated - light greenish clay matrix - cement, non calcareous, very poorly sorted, subangular - subrounded to rounded to angular quartz, slightly more compact and less clay than 1761 meter core, moderate high relief due to softness of matrix, no fluorescence, no cut, no visible porosity, 15-18% hidden matrix porosity, 1% effective? CNCSS 16.7%, PZSS 8.6%, Gamma 51 API.

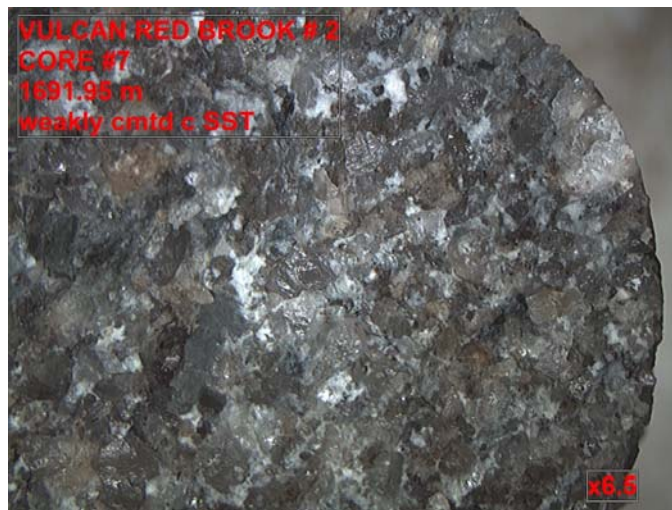


# SIDEWALL CORE DESCRIPTIONS

Core # 7  
Recovered 80%  
1691.95 m

## SANDSTONE

Mottled light grey, medium - very coarse, quartz, opaque grayish, white, translucent, minor very slightly orange, minor traces plagioclase?, clean, non calcareous, weakly cemented with white chalky? clay infilling matrix, grain support, moderately sorted, subangular - subrounded to rounded, rare trace white mica flakes, rare very slightly greenish clay, high relief, very friable coarse visual texture, possible trace pinpoint porosity, 12-15% hidden porosity, 3-4% effective due to clays?, no fluorescence, instant bright yellow mottled cut across core, possible micro pyrobitumen through higher micro porosity?, CNCSS 15.6%, PZSS 10.8%, Gamma 57 API.





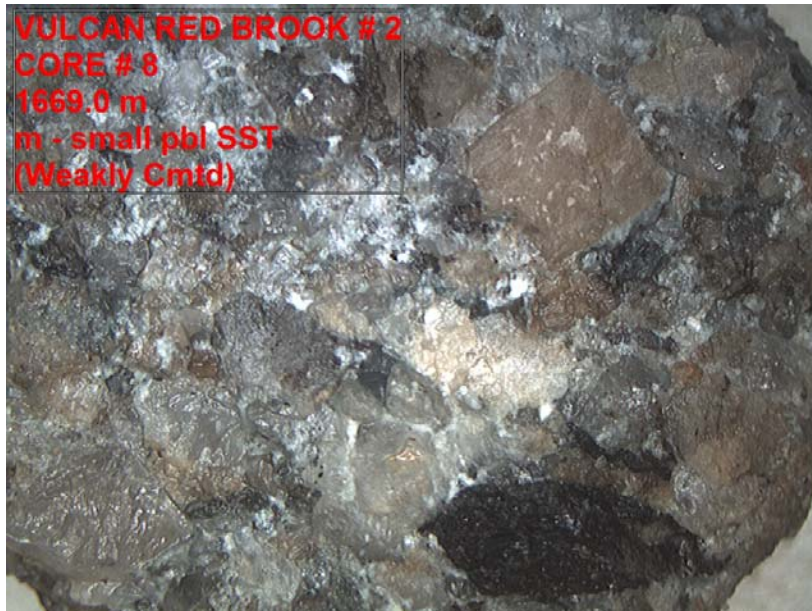
# SIDEWALL CORE DESCRIPTIONS

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**Core # 8**  
**Recovered 20%**  
**1669.00 m**

## SANDSTONE

Mottled very slightly greenish grey ( poor sample), medium - coarse - small pebble, quartz, opaque off white, semi translucent, very light pinkish orange quartz, minor feldspars?, very slightly creamy white with parallel striations, clean, one larger argillaceous clast?, vitreous black, argillaceous, microscopic (x45) black vitreous secondary crystal growth?, (possible pyrobitumen?) within larger mass, rare trace black lithic only, grain support, subangular - subrounded to rounded, (note very angular orange crystals in photo), non calcareous, weaker consolidated, whitish clay matrix infilling, rare trace greenish clay, abundant quartz grain to grain contact, no fluorescence, no cut, 8 -10% hidden porosity due to clays, very friable high relief, possible 3-4% effective?, Gas show 355 units, CNCSS 15.4%, PZSS 10.3%, Gamma 67 API.



# SIDEWALL CORE DESCRIPTIONS

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Core # 9  
Recovered 45%  
1667.79 m

## SANDSTONE

Mottled lighter grey, medium - very coarse to pebbles, quartz, opaque, grayish - white, semi translucent, some orange, minor possible orange pinkish feldspars, possible trace white plagioclase, moderate clean, white and very light greenish clay matrix infilling, very weakly cemented, very friable, non calcareous, trace greenish silty small pebble clasts, minor trace slightly brownish dirty ? inclusions with possible very lightly oil stained?, no fluorescence, weaker slow moderate yellow white cut over time, possible minor micro pyrobitumen within finer micro porosity?, very high relief, very rough friable visual texture, poorer core sample, no visible porosity, 15-20% hidden porosity, 3-5% inferred effective, CNCSS 15.2%, PZSS 10.3%, Gamma 79 API.



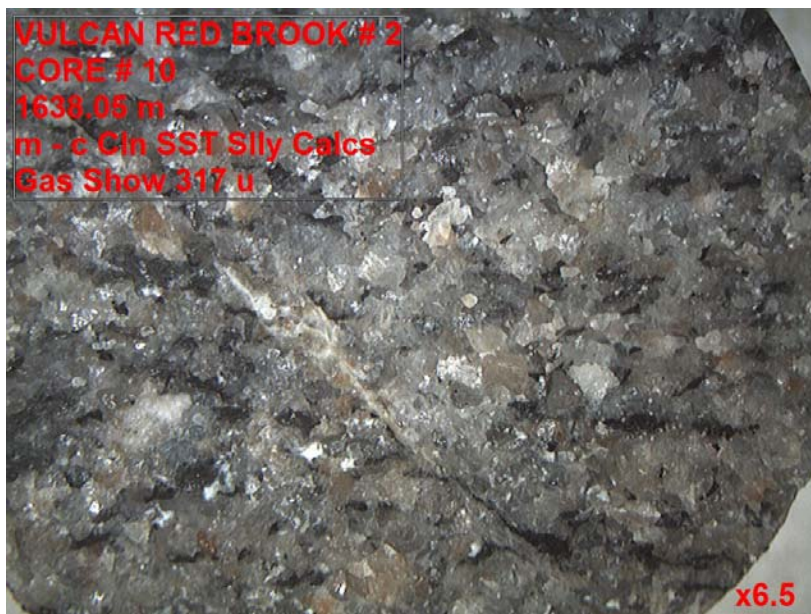
# SIDEWALL CORE DESCRIPTIONS

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**Core #10**  
**Recovered 100%**  
**1638.05 m**

## SANDSTONE

Mottled salt and pepper off white, lower - upper medium with coarse - small floating pebbles, quartz, opaque, white, semi translucent, minor orange, trace black lithics, foliated black micaceous, rare trace coarser white mica, moderate well cemented, 7-10% calcareous component, crystalline texture, clean, possible minor chalky white clay only, grain supported, moderate relief, core broken through and around quartz grains, no visible porosity, 6-9% hidden porosity, 2-3% inferred effective, no fluorescence, no cut, CNCSS 16.2%, PZSS 9.9%, Gamma 79 API.



# SIDEWALL CORE DESCRIPTIONS

Core # 11  
Recovered 90%  
1593.58 m

## SANDSTONE

Lighter grey, fine - medium, quartz, opaque, semi translucent, possible trace plagioclase only, 1-2% orientated - foliated black mica, trace random coarser white mica, moderate well cemented, siliceous component, non calcareous, no apparent clay infilling, grain supported, subangular - subround, moderate relief with apparent micro streaky higher - very high relief, minor apparent micro secondary quartz recrystallization, 2-3% micro - pinpoint irregular visible porosity, deep clean pore throats, core breaks around and through quartz grains, no staining, no fluorescence, no cut, 8-10% overall porosity, 7-8% effective, CNCSS 18.1%, PZSS 10.8%, Gamma 61 API.

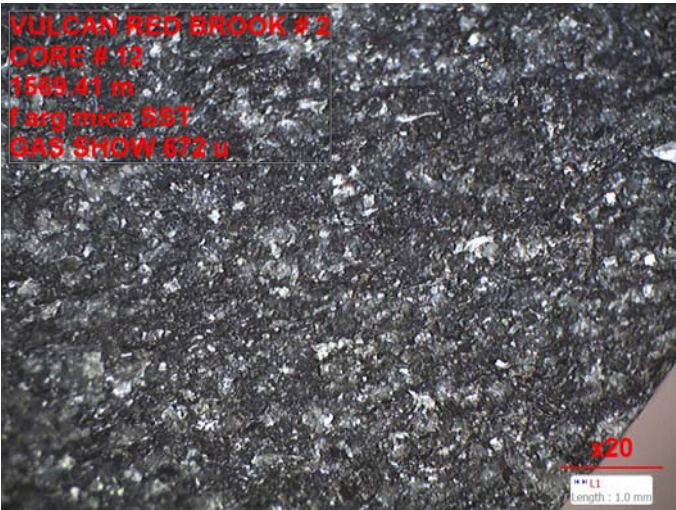
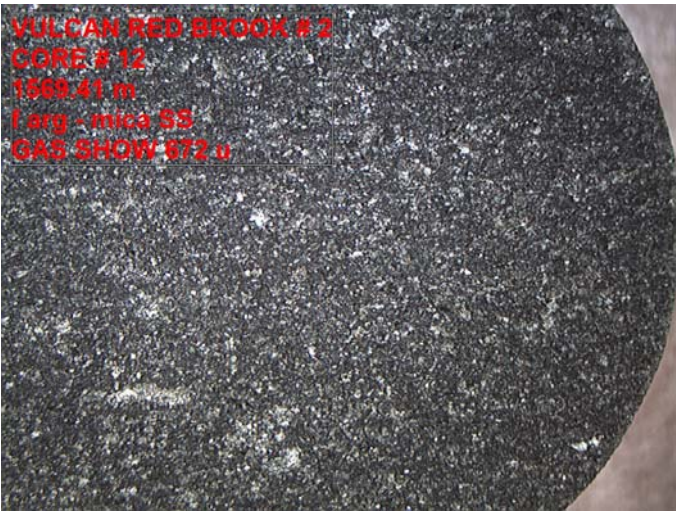


# SIDEWALL CORE DESCRIPTIONS

Core # 12  
Recovered 100%  
1569.41 m

SANDSTONE

Darker - medium grey, fine, quartz, opaque, greyish, rare translucent, 5% black foliated mica , 1% white mica, (foliated aligned mica appears to be apx 80 degs to bedding laminations?), predominately argillaceous shaly matrix support, moderate sorted quartz, subangular - subrounded, non calcareous, competent - solid core, no fluorescence, no cut, Gas show 672 units, no visible porosity, 15-18% hidden non effective porosity due to argillaceous matrix, 1% effective?, CNCSS 20.3%, PZSS 13.5%, Gamma 107 API.



# SIDEWALL CORE DESCRIPTIONS

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Core # 13  
Recovered 100%  
1565.62 m

## SANDSTONE

Medium Grey, lower - upper fine, quartz, opaque, slightly greyish, some translucent, rare trace rose, very slightly yellow, less than 1% black foliated mica, good trace white mica, cleaner with no argillaceous shaly matrix, rare trace - no lithics, moderate sorted, subangular - subrounded, moderate cemented, non calcareous, predominately grain supported, apparent light grayish clay infilling, moderate high relief, rough visual texture to sample, no fluorescence, no cut, no visible porosity, 12-15% hidden porosity, 2-3% inferred effective porosity, CNCSS 17.0%, PZCC 11.5%, Gamma 86 API.



# SIDEWALL CORE DESCRIPTIONS

Core # 14  
Recovered 80%  
1562.81 m

## SANDSTONE

Lighter grey, fine, minor lower medium, rare trace floating very coarse rounded, quartz, opaque, light grey, translucent, trace very slightly yellow, no lithics, good trace white medium mica, no black mica, moderate cemented, non calcareous, grain supported, very light grey to very slightly greenish grey matrix infilling, moderate sorted, subangular - subrounded, moderate high relief, overall rough visual texture to core, core broken around and through some grains, no fluorescence, no cut, 1% micro - pinpoint porosity up to 0.15 mm, clean deep irregular pore throats between quartz grains, 10-12% hidden porosity due to clay matrix, 3-4% effective?, CNCSS 16.5%, PZSS 13.0%, Gamma 63 API.

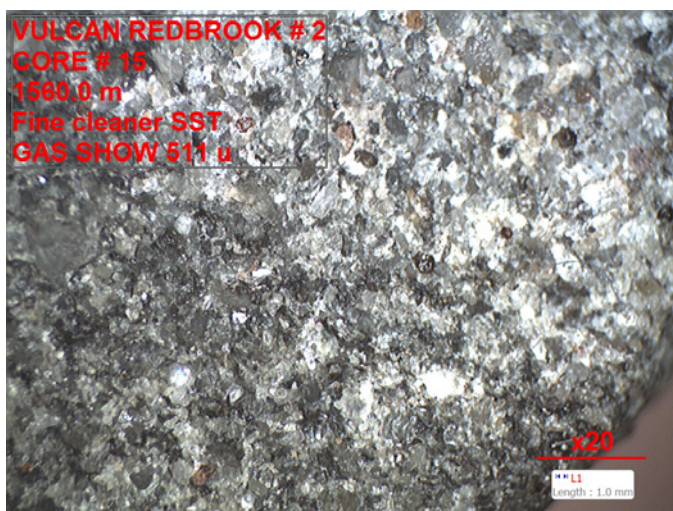


# SIDEWALL CORE DESCRIPTIONS

Core # 15  
Recovered 100%  
1560.00 m

## SANDSTONE

Medium grey, lower - upper fine with minor medium, abundant very fine matrix, quartz, opaque, greyish, translucent, rare trace rose, no lithics, minor foliated black mica, minor trace white mica, overall weakly laminated, very fine - fine very slightly dirty slightly micaceous within cleaner upper fine - minor medium slightly calcareous, grain supported, moderate sorted, subangular - subrounded, minor - 5% white clay infilling, matrix appears to be more siliceous - silty?, slightly calcareous, moderate cemented, moderate relief, core breaks through coarser quartz grains, moderate rough visual texture to core, no fluorescence, no cut, Gas show 511 units, no visible porosity, 8-10% hidden porosity, 3-4% inferred effective, CNCSS 23.8%, PZSS 14.5%, Gamma 85 API.





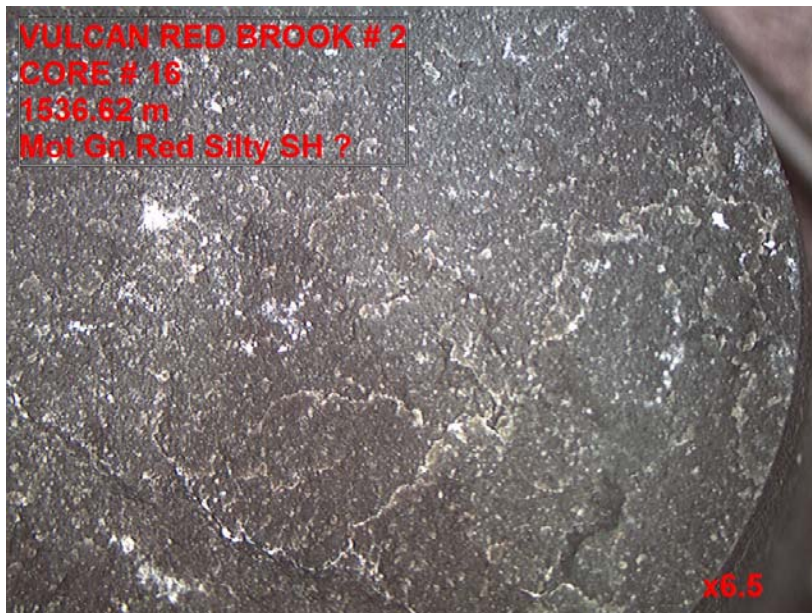
# SIDEWALL CORE DESCRIPTIONS

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**Core # 16**  
**Recovered 100%**  
**1536.62 m**

SHALE

Lighter greenish grey with mottled reddish, massive moderate competent core, non calcareous, silty to some very fine loose quartz, amorphous, uniform, Core Cut off Depth?, CNCSS 4.1%, PZSS -3.5%, Gamma 16 API.



# SIDEWALL CORE DESCRIPTIONS

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**Core #17**  
**Recovered 100%**  
**1464.6 m**

## SANDSTONE

Lighter grey, fine - medium matrix with coarse - small pebbles, speckled pink, quartz, opaque, translucent, good trace slightly orange, trace pinkish orange feldspars, minor trace darker grey argillaceous lithics, trace pyrite, well cemented, crystalline, siliceous with 5-10% calcareous component, hard, massive, moderate poorer sorted, finer quartz matrix, minor white clay?, grain supported, lower relief, core broken through quartz grains, no fluorescence, no cut, no visible porosity, 4-5% hidden porosity, 1-2% effective?, tight, CNCSS 12.7%, PZSS 9.9%, Gamma 58 API.



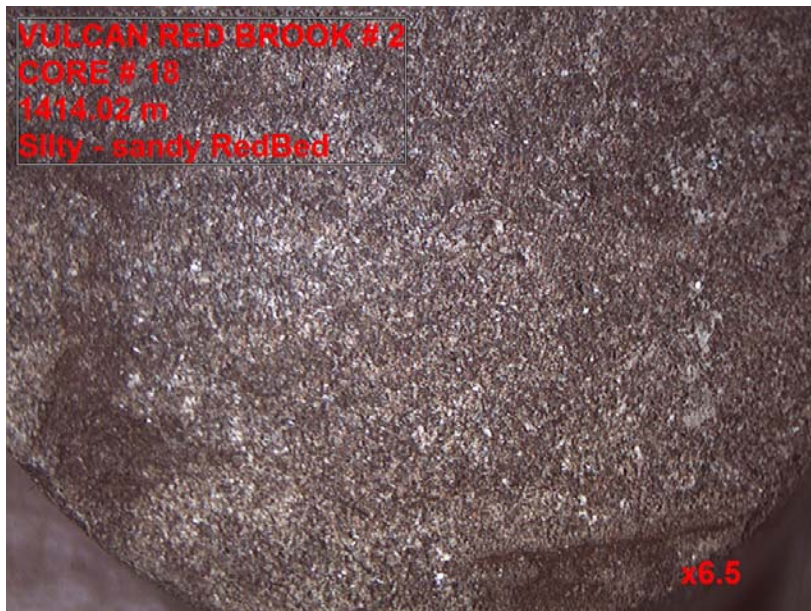
# SIDEWALL CORE DESCRIPTIONS

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**Core #18**  
**Recovered 90%**  
**1414.02 m**

## REDBEDS

Lighter reddish brown, very fine - silt, argillaceous, massive, moderate well consolidated, quartz, whitish, reddish stained, translucent, minor possible feldspars, minor black lithics, argillaceous reddish - grayish matrix, siliceous with calcareous component, uniform, no fluorescence, no cut, no visible porosity, no effective porosity, CNCSS 20.0%, PZSS 13.2%, Gamma 73 API.

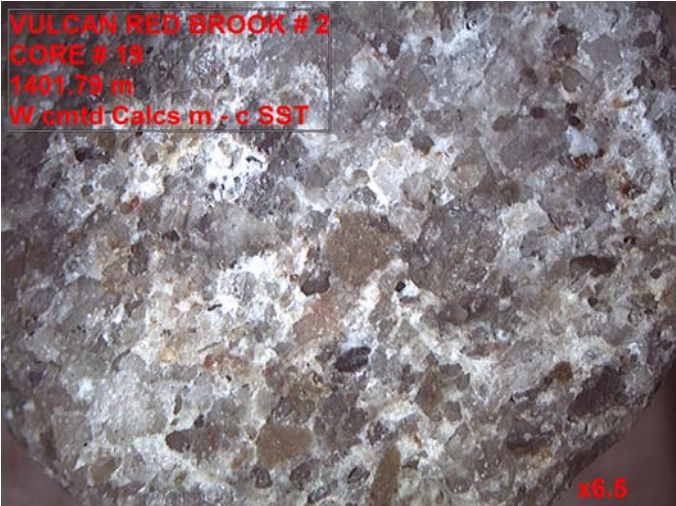


# SIDEWALL CORE DESCRIPTIONS

Core #19  
Recovered 100%  
1401.79 m

SANDSTONE

Lighter grey - off white, fine - medium - coarse - very coarse, small pebbles, quartz, opaque, whitish, greyish to slightly creamy orange, minor trace feldspar?, minor assorted colored lithics, very well cemented, hard, massive, 15-20% calcareous, grain to matrix supported, poorer sorted, subangular - angular - rounded, no fluorescence, no cut, no visible porosity, no effective porosity due to calcite cement, tight, CNCSS 17.1%, PZSS 12.5%, Gamma 58 API.



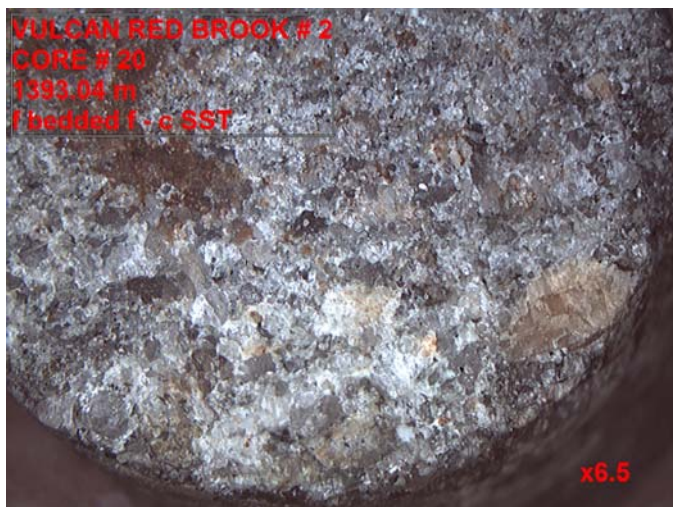
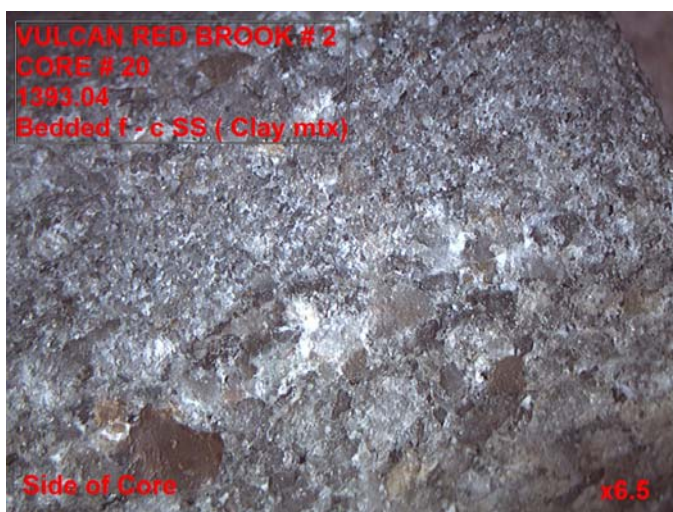
# SIDEWALL CORE DESCRIPTIONS

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Core #20  
Recovered 90%  
1393.04 m

## SANDSTONE

Medium grey, finely bedded lower fine with medium to very coarse, quartz, opaque, light grayish, translucent, minor trace orange - creamy feldspars, clean, rare trace lithics, visible poorly sorted bedded coarse - fine layers, moderate well consolidated, minor - 10% white clay, non calcareous, overall 2-4% calcareous component, very poorly sorted core, subangular - subrounded, minor coarse rounded, no fluorescence, no cut, crystalline appearance, semi rough visual texture, moderate lower relief, no visible porosity, 6-8% hidden porosity, 2-3% inferred effective porosity, CNCSS 14.1%, PZSS 7.7%, Gamma 44 API.



# SIDEWALL CORE DESCRIPTIONS

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**Core #21**  
**Recovered 40%**  
**1376.81 m**

Pebble SANDSTONE

Lighter grayish, lower medium - coarse - pebble, quartz, opaque grey, slightly semi translucent, minor slightly creamy grey, blackish grey lithics, very poorly sorted, angular - subangular - rounded, grain supported, moderate well cemented, 7-10% calcareous infilling with 5% white chalky? non calcareous clays, poor core sample, friable?, core breaks through grains, no fluorescence, no cut, no visible porosity, 12-15% hidden porosity, 1-2% effective due to clays - calcite matrix infilling, CNCSS 16.3%, PZSS 12.7%, Gamma 45 API.

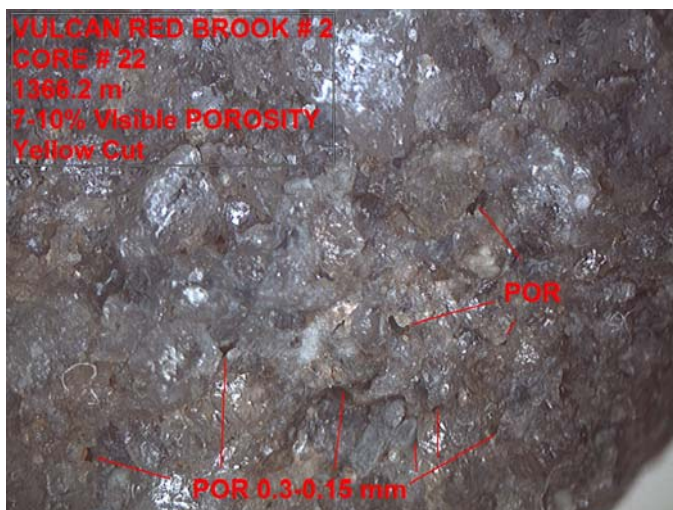
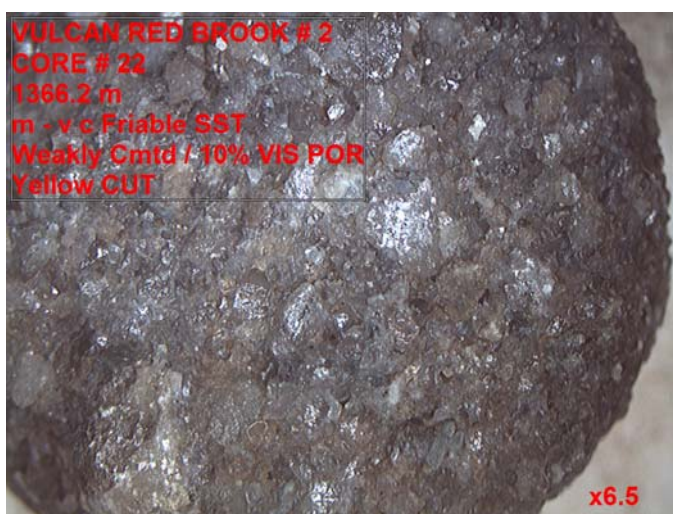


# SIDEWALL CORE DESCRIPTIONS

Core # 22  
Recovered 20%  
1366.2 m

## SANDSTONE

Excellent high porosity Sand, lighter grey, fine - very coarse, quartz, opaque, grayish, minor translucent, rare trace lithics, very weakly cemented, non calcareous, very friable, poor core sample due to friability, clean, rare apparent clay infilling, poorer sorted, subangular - subrounded, grain supported, Gas show 195 units, no fluorescence, *instant pale yellow even cut*, extremely high relief, very rough visual surface, 7-10% plus visual porosity, very clean very deep irregular pore throats (no blockage), no hidden porosity, 12-15% effective, CNCSS 14.8%, PZSS 8.5%, Gamma 45 API.



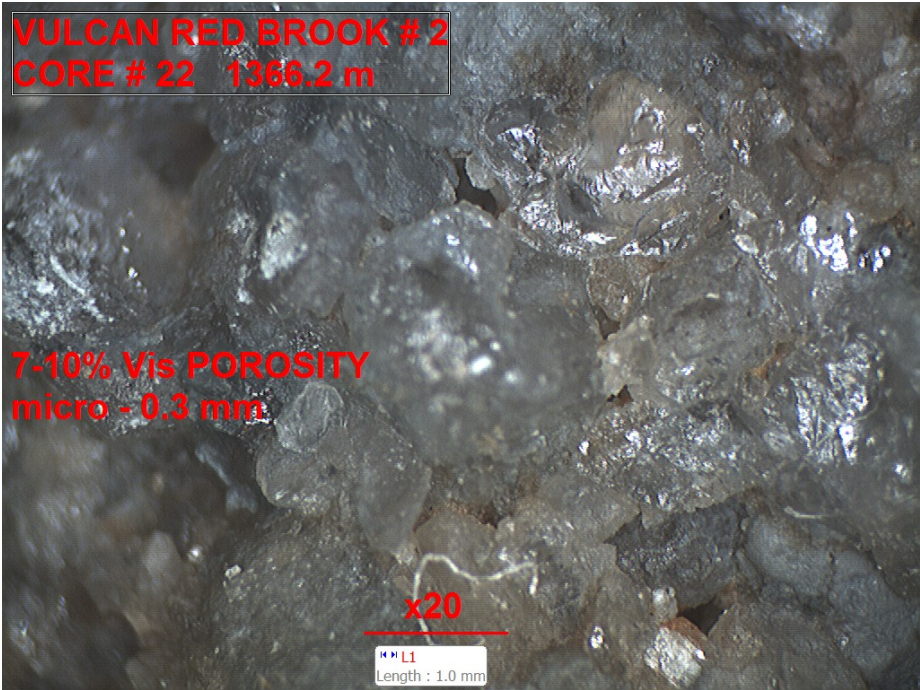
# SIDEWALL CORE DESCRIPTIONS

Continued

**Core # 22**  
**Recovered 20%**  
**1366.2 m**

SANDSTONE

Excellent high porosity Sand, lighter grey, fine - very coarse, quartz, opaque, grayish, minor translucent, rare trace lithics, very weakly cemented, non calcareous, very friable, poor core sample due to friability, clean, rare apparent clay infilling, poorer sorted, subangular - subrounded, grain supported, Gas show 195 units, no fluorescence, instant pale yellow even cut, extremely high relief, very rough visual surface, 7-10% plus visual porosity, very clean very deep irregular pore throats (no blockage), no hidden porosity, 12-15% effective, CNCSS 14.8%, PZSS 8.5%, Gamma 45 API.



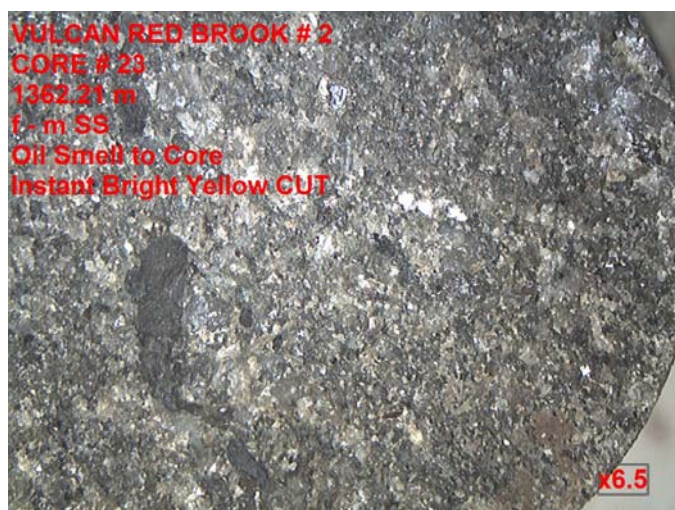


# SIDEWALL CORE DESCRIPTIONS

Core # 23  
Recovered 75%  
1362.21 m

## SANDSTONE

Lighter grey, fine - medium, quartz, opaque, light greyish, minor translucent, clean, possible trace plagioclase?, trace shale lithic fragments, trace pyrite - possible chalcopyrite, well cemented, siliceous?, 3-5% calcareous cement, minor - 5% chalky infilling, moderate sorted, subangular - subrounded - rounded, grain supported, moderate relief, core breaks predominately around quartz grains, *Oil smell to core, slight gas smell when acid added, instant bright yellow cut*, no visible porosity, 8-10% ineffective porosity, 2-3% inferred effective porosity, CNCSS 11.8%, PZSS 5.3%, Gamma 51 API.



# SIDEWALL CORE DESCRIPTIONS

Core # 24  
Recovered 60%  
1336.19 m

## SANDSTONE

Light Grey, fine - medium, quartz, opaque grayish, some translucent, clean, trace - no lithics, minor trace medium - coarse black mica, rare white mica, grain supported, moderate sorted, subangular - subrounded, weakly cemented, 1-2% calcareous only, 2-3% clay infilling, moderate friable - firmer, no fluorescence, no cut, high relief, visual rough texture to core, Gas Show 482 units, 3-4% visible pinpoint to 0.1 mm porosity, clean deep irregular pore throats between quartz grains, 4-5% hidden, 8-9% effective porosity, CNCSS 20.4%, PZSS 11.2%, Gamma 50 API.

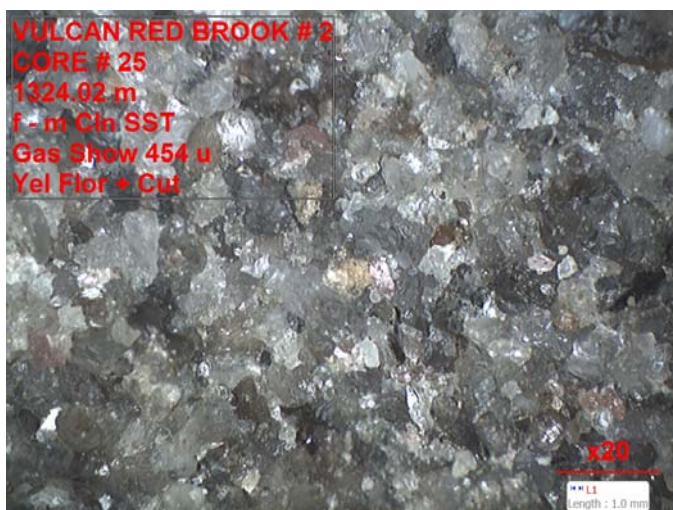


# SIDEWALL CORE DESCRIPTIONS

Core # 25  
Recovered 50%  
1324.02 m

## SANDSTONE

Mottled lighter grey to slightly greyish white, fine - upper medium with minor lower coarse, quartz, opaque, greyish, rare whitish, trace very slightly creamy - yellow, trace translucent rose, trace black lithics, no mica, rare trace disseminated pyrite, moderate sorted, subangular - subrounded with some rounded, moderate cemented, siliceous?, 5-6% calcareous component, 1% very light greyish blue? clays only, competent, harder, high relief on broken core end, cement weaker as core broken around quartz grains, blotchy yellow fluorescence, instant moderate bright yellow (whitish) mottled overall cut, trace micro secondary quartz crystal growth, good 3-4% visible porosity, irregular clean deep pore throats between quartz grains under 0.1 mm, 3-4% hidden?, 6-7% effective porosity, CNCSS 16.3%, PZSS 6.8%, Gamma 49 API.



# SIDEWALL CORE DESCRIPTIONS

Continued

Core # 25  
Recovered 50%  
1324.02 m

## SANDSTONE

Mottled lighter grey to slightly greyish white, fine - upper medium with minor lower coarse, quartz, opaque, greyish, rare whitish, trace very slightly creamy - yellow, trace translucent rose, trace black lithics, no mica, rare trace disseminated pyrite, moderate sorted, subangular - subrounded with some rounded, moderate cemented, siliceous?, 5-6% calcareous component, 1% very light greyish blue? clays only, competent, harder, high relief on broken core end, cement weaker as core broken around quartz grains, blotchy yellow fluorescence, instant moderate bright yellow (whitish) mottled overall cut, trace micro secondary quartz crystal growth, good 3-4% visible porosity, irregular clean deep pore throats between quartz grains under 0.1 mm, 3-4% hidden?, 6-7% effective porosity, CNCSS 16.3%, PZSS 6.8%, Gamma 49 API.

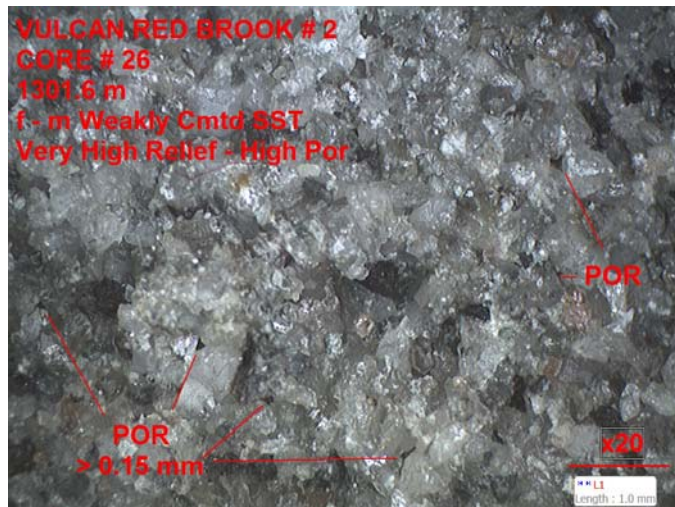
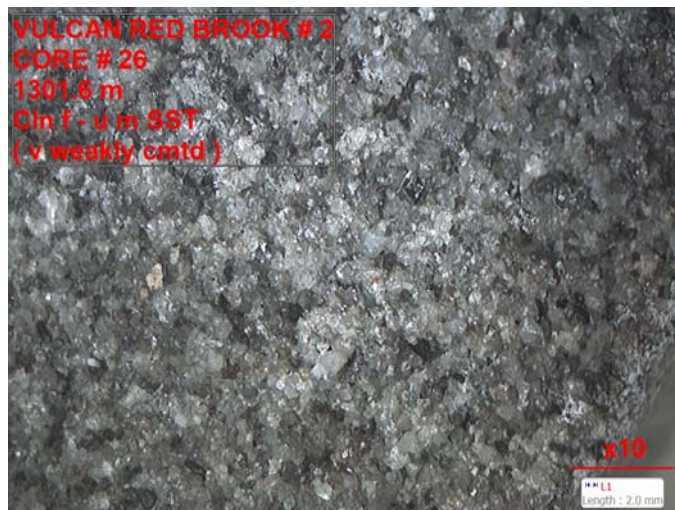


# SIDEWALL CORE DESCRIPTIONS

Core # 26  
Recovered 70%  
1301.60 m

## SANDSTONE

Very light grey, fine - upper medium, quartz, opaque, translucent, rare rose, trace black lithic only, rare trace disseminated micro pyrite blebs, very clean, abundant micro secondary - partial secondary quartz recrystallization - growths, moderate sorted, subangular - subrounded to rounded, grain supported, very weakly cemented, non calcareous, no clays, no fluorescence, no cut, Apx 200 unit Gas Show, extremely high relief, rough visual texture to core, no hidden porosity ?, 6-8% visible porosity with irregular visible voids averaging 0.1 mm, several voids up to .25 mm between quartz grains, 10-12% effective porosity, CNCSS 16.0%, PZSS 4.6%, Gamma 45 API.



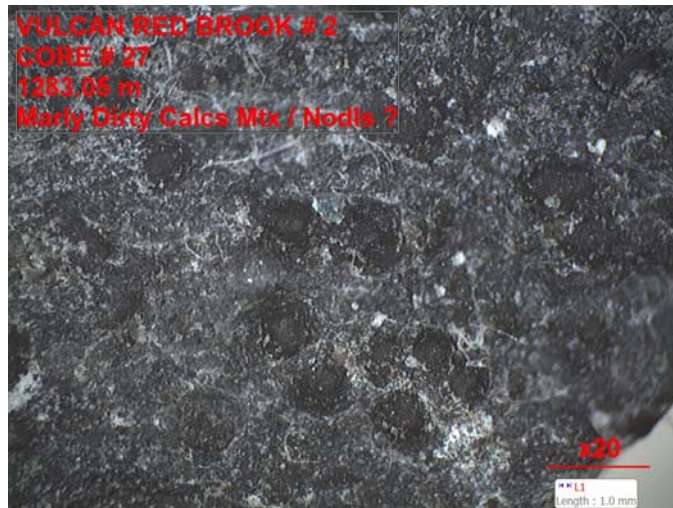
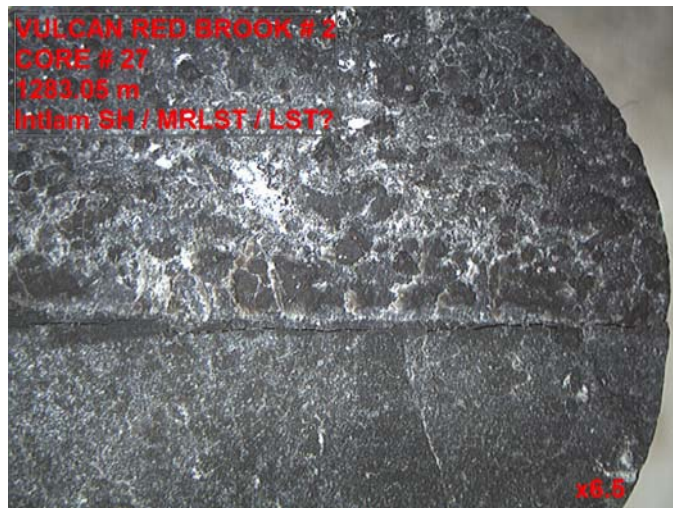
# SIDEWALL CORE DESCRIPTIONS

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Core # 27  
Recovered 100%  
1283.05 m

## MARLSTONE – SHALE

Medium grey, finely bedded to laminated very slightly calcareous shale with silty calcareous very dirty argillaceous Marlstone with black calcareous nodulars 0.2-0.5 mm diameter, hard massive well cemented, competent rock, no fluorescence, no cut, no visible, no effective porosity, CNCSS 27.7%, PZSS 1.1%, Gamma 74 API.



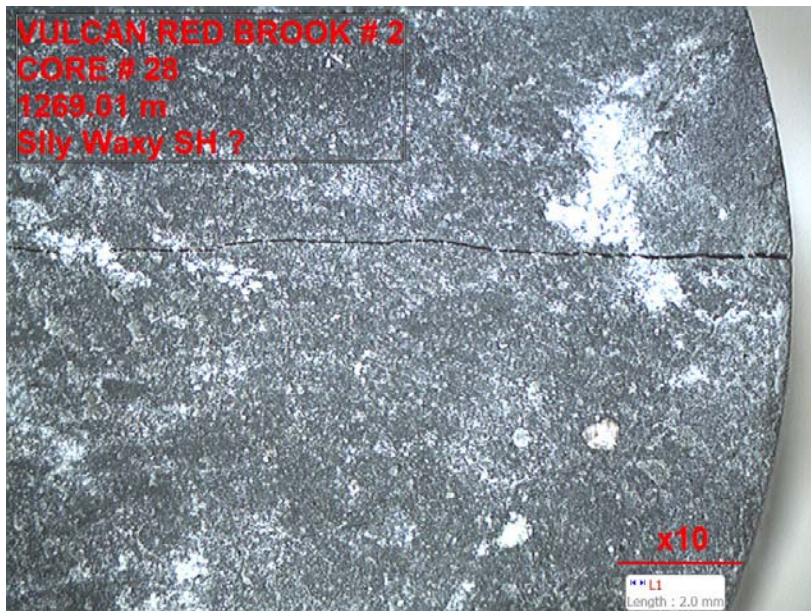
# SIDEWALL CORE DESCRIPTIONS

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Core # 28  
Recovered 90%  
1269.01 m

## SHALE

Lighter grey with very slight greenish tinge, massive, amorphous, microcrystalline? competent, well consolidated, calcareous component, semi waxy lustre under microscope, harder "clay" like, no fluorescence, no cut, no visible, no effective porosity, CNCSS 16.1%, PZSS 10.2%, Gamma 83 API.

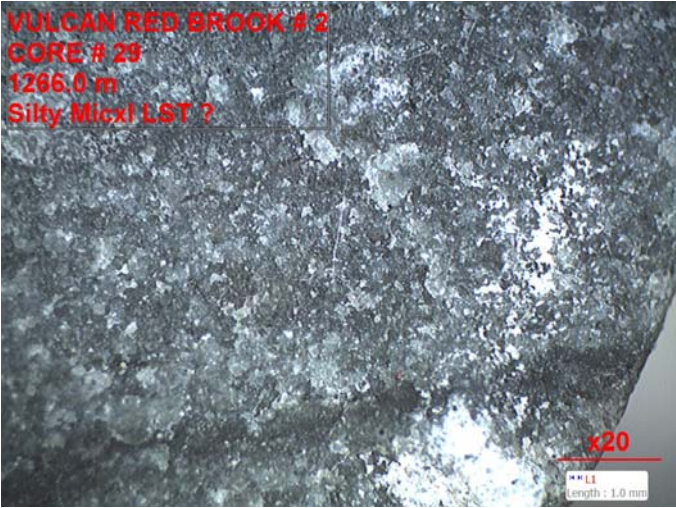


# SIDEWALL CORE DESCRIPTIONS

Core #29  
Recovered 90%  
1266.0 m

SILTSTONE with MARLSTONE ?

Lighter greyish to slightly off white with some slightly greenish grey argillaceous clay rich microlams, massive, amorphous, very silty, calcareous matrix, well consolidated, competent, no fluorescence, no cut, no visible porosity, 4-6% hidden, no effective porosity, CNCSS 12.0%, PZSS -1.4%, Gamma 53 API.



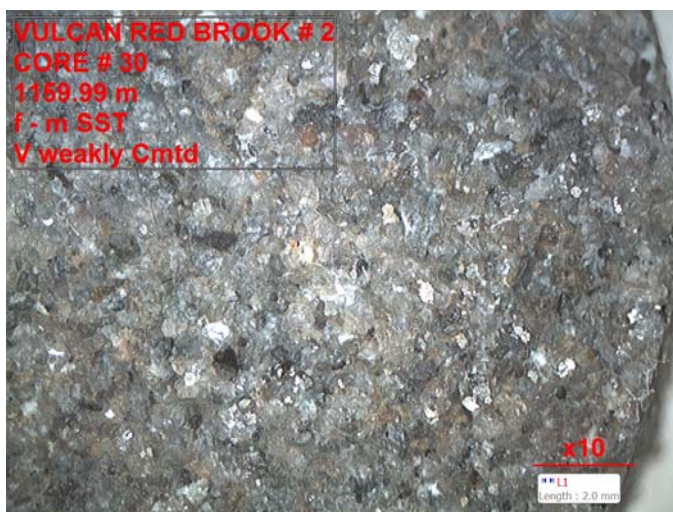


# SIDEWALL CORE DESCRIPTIONS

Core # 30  
Recovered 100%  
1159.99 m

## SANDSTONE

Lighter grey, fine - medium, quartz, opaque, translucent, minor trace orange, trace black lithic, trace black - white mica, moderate sorted, subangular - subrounded, minor rounded, very weakly cemented, 7-10% whitish clay component, 3-5% calcareous?, grain supported, high relief, rough visual texture to core, core breaks easily around quartz grains, no fluorescence, no cut, 4-5% visible porosity, 12-15% hidden porosity, 6-8% effective, CNCSS 16.6%, PZSS 9.7%, Gamma 39 API.  
(Note - Geologist spilt extra acid on sample resulting in higher apparent visual porosity due to calcite dissolved out between quartz grains).



# SIDEWALL CORE DESCRIPTIONS

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**Core # 31**  
**Recovered 30%**  
**1668.91 m**

SANDSTONE ( Re Cut of Core # 8 )

Mottled very slightly greenish grey (poor sample), medium - coarse - small pebble, quartz, opaque off white, semi translucent, very light pinkish orange quartz, minor feldspars?, very slightly creamy white with parallel striations, clean, one larger argillaceous clast?, vitreous black, argillaceous, microscopic (x45) black vitreous secondary crystal growth?, (possible pyrobitumen?) within larger mass, rare trace black lithic only, grain support, subangular - subrounded to rounded, (note very angular orange crystals in photo), non calcareous, weaker consolidated, whitish clay matrix infilling, rare trace greenish clay, abundant quartz grain to grain contact, 8-10% hidden porosity due to clays, very friable high relief, possible 3-4% effective?, Gas show 355 units, no fluorescence, no cut, CNCSS 15.4%, PZSS 10.0%, Gamma 63 API.



**END OF CORE DESCRIPTIONS**