



**DAILY PPFG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP00  
OCS-G-32306  
API-60-817-4116900  
Macondo Exploration Well



**WELL INFORMATION**

Rig : Marianas RT - MSL : 89 ft Water Depth : 4992 ft RT - Mudline : 5081 ft

**OPERATIONS SUMMARY**

Cut MW to 9.7 ppg. Repeated LOT. Drilled 39'

MD	TVD	Progress (24 hr)	Hole size	Current formation
8050'	8049	39'	18x22"	Shale, siltstone
Sensor Distances		Sonic: NA	PWD: 26.67'	GR: 29.17' Res: 29.00'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (ft MD)	9.0 ppg	PP Bottom hole	9.0 ppg	Last LOT: 7952 ft TVD (shale/sand)	10.38 ppg
Surf MW:	9.7 ppg	ECD:	9.97 ppg	ESD min/ ESD max: (7872 MD)	9.91 /10.37 ppg

**Resistivity Analysis:** 40 ft of new hole had resistivity ranging from .75 to 1.00 ohmm with 1.00 being the shale base line. No change in pore pressure estimation.

**Sonic Analysis:** NA

**Additional Observations:** The LOT after dropping the MW back repeated the results of the earlier LOTs ; 10.38 ppg. The last LOT had a clear linear build up pressure to leak off. The earlier tests appeared ambiguous due to the minimal build up pressure available. MWD repeated response of 10.37 ppg. This value corresponds to a sand LOT value.

New footage drilled appeared to be a gamma ray shale response. Washed out hole response appeared uniform and at bit gamma ray also indicated a shale response throughout the open hole section. Cuttings inspection confirmed the primary lithology to be shale.

Pressure Analyst: Paine

Date and Time: Oct. 22, 2009 6:00AM



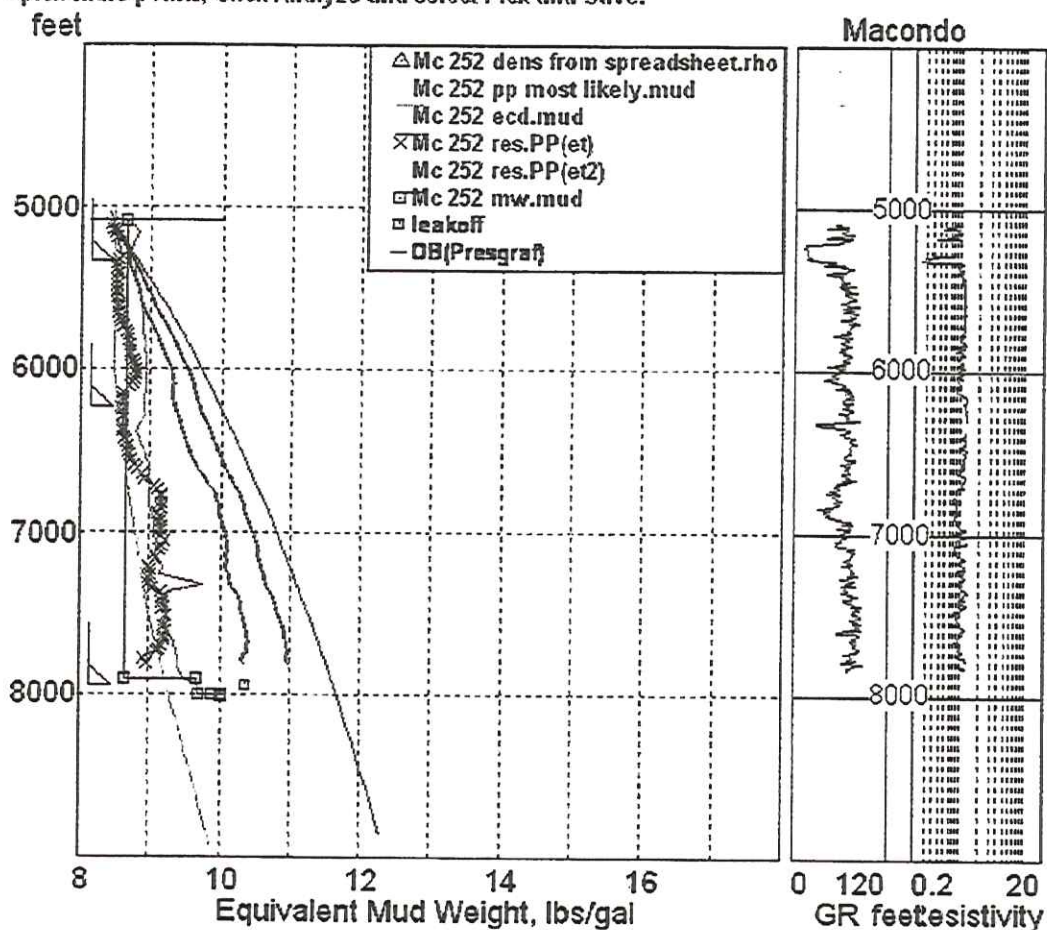
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## DAILY PRESSURE PLOT:

pick shale points, click Analyze and select PPR and Save.





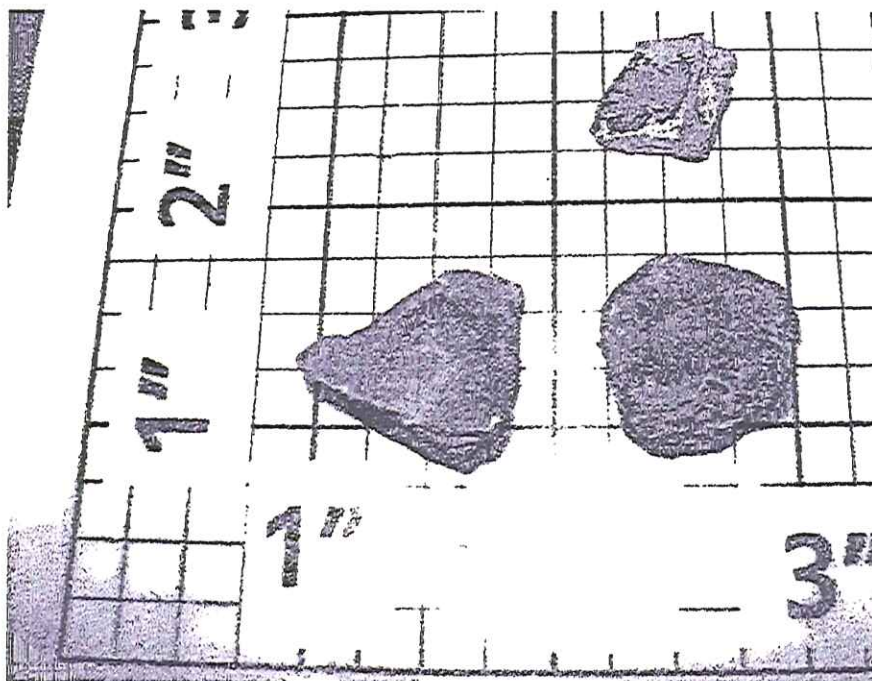
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**Cuttings/Cavings Analysis:**

Blocky pieces that came over the shakers were all cement. Bit cut pieces were shale.

**Cuttings/Cavings Photograph :**



Cement examples from 8030'





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## WELL INFORMATION

Rig : Marianas	RT - MSL : 89 ft	Water Depth : 4992 ft	RT - Mudline : 5081 ft
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## OPERATIONS SUMMARY

Drilled 10' and attempted LOT

MD	TVD	Progress (24 hr)	Hole size	Current formation	
8011'	8010'	10'	18"	Shale, siltstone, sandstone	
Sensor Distances		Sonic: NA	PWD: 26.67'	GR: 29.17'	Res: 29.00'

## PORE PRESSURE SUMMARY

Max PP: Open hole (ft MD)	9.0 ppg	PP Bottom hole	9.0 ppg	Last FIT/LOT: 7952 ft TVD (lith)	10.38 ppg
Surf MW:	10.0 ppg	ECD:	10.28 ppg	ESD min/ ESD max: (depth MD)	10.26 /10.40 ppg

**Resistivity Analysis:** No additional data

**Sonic Analysis:** NA

**Additional Observations:** LOT not a standard pressure up curve. Achieved a maximum of 100 psi within 0.5 bbl of pumping and then remained 80-100psi for subsequent barrels. The ESDs pre-LCM were min/ave/max: 10.27/10.27/10.37 ppg. The ESDs post-LCM test were 10.26/10.26/10.40 ppg

The reported LOT was 10.38 ppg based on 10.0 MW (surf), 10.24 MW (dh), and 59 psi added from the test.

In order to calibrate the sand FG to the measured LOT, a Poisson's ratio of 0.35 was used. This is an extreme sand PR.

Pressure Analyst: Paine

Date and Time: Oct. 22, 2009 6:00AM





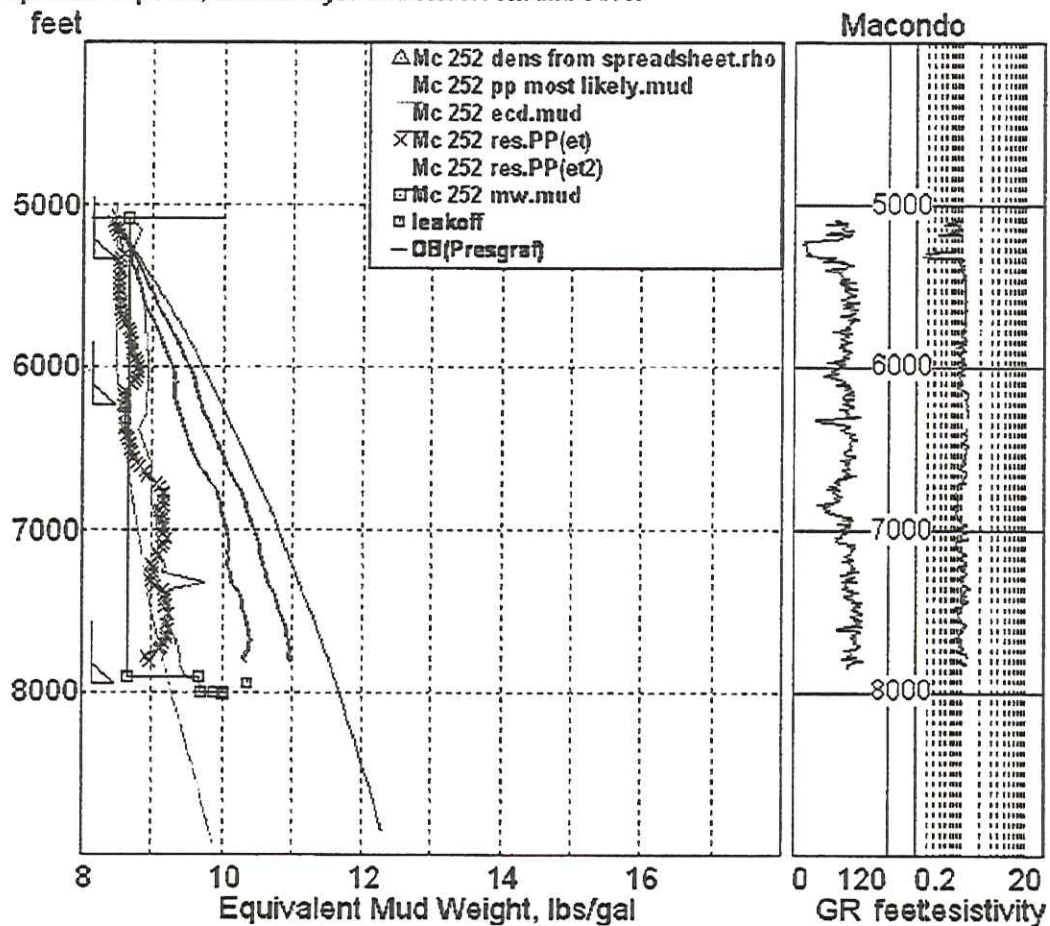
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## DAILY PRESSURE PLOT:

pick data points, click Analyze and select OK and Save.





# DAILY PPFPG REPORT

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OCS-G-32306  
API-60-817-4116900  
Macondo Exploration Well



## WELL INFORMATION

Rig : Marianas	RT - MSL : 89 ft	Water Depth : 4992 ft	RT - Mudline : 5081 ft
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## OPERATIONS SUMMARY

Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation
8878'	8877'	818'	18x22"	Shale, siltstone, sandstone
Sensor Distances		Sonic: NA	PWD: 27.57'	GR: 29.17' Res: 29.90'

## PORE PRESSURE SUMMARY

Max PP: Open hole (ft MD)	9.5-9.6 ppg	PP Bottom hole	9.5-9.6 ppg	Last LOT: 7952 ft TVD (lith)	10.37 ppg
Surf MW:	9.8 ppg	ECD:	10.15 ppg	ESD min/ ESD max: (8424 MD)	10.10 /10.17 ppg

**Resistivity Analysis:** Resistivity initially shifted from 1.00 ohmm baseline to 0.77-0.83 baseline indicating an increasing PP trend. Since then resistivity remained between 0.8 and 0.9 indicating a constant PP.

**Sonic Analysis:** NA

**Additional Observations:** LOT repeated multiple times ranging from 10.35-10.40 ppg.

No connection gas. Background gas slowly increased from 10u to 60u over the course of the hole section. During extended circulation after a sweep, corresponding lag gas later cyclically ranged from 50 u to 150 u. This corresponded to the 8745 connection. The H-2 well had a gassy - silty/shaly zone which corresponded to 3800-4000 ft BML which was not to be confused as a pressure indicator.

Increasing PP estimate to 9.5-9.6 based on the gas response. Resistivity does not indicate increased pressure. Dxc does not indicate increased pressure, however Dxc is a dubious pore pressure indicator in the best of times.

Pressure Analyst: Paine

Date and Time: Oct. 25, 2009 6:00AM



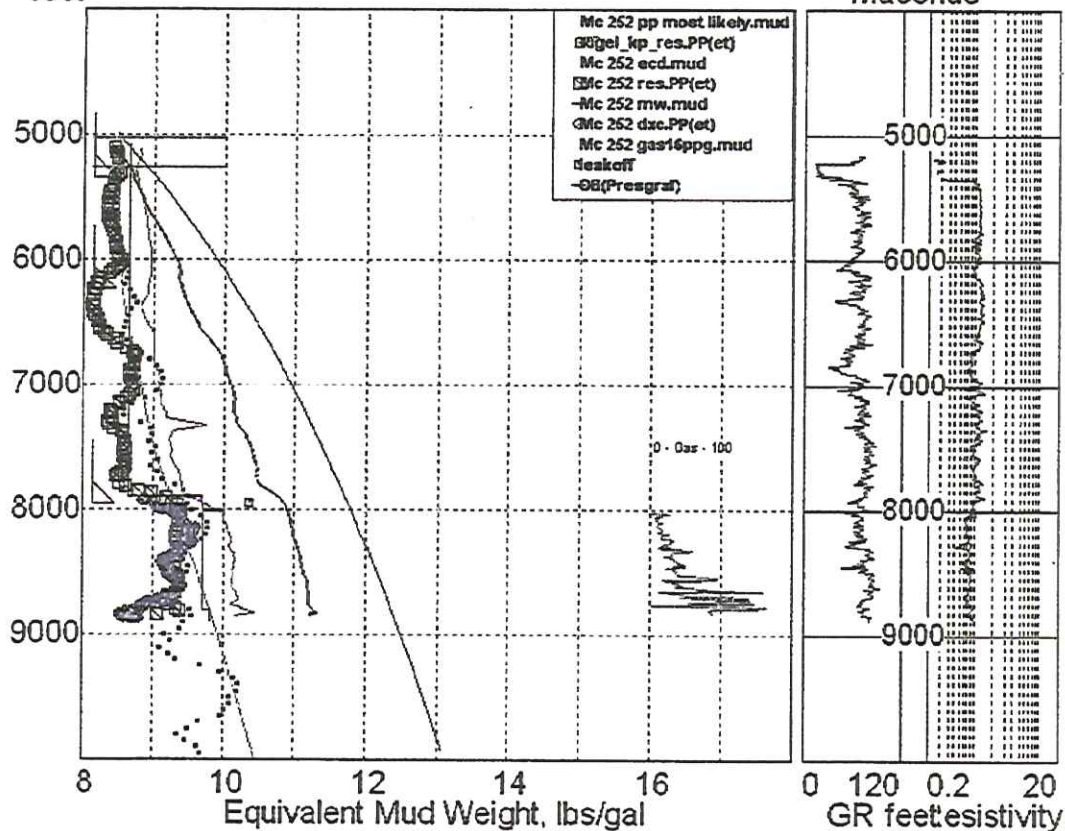
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## DAILY PRESSURE PLOT:

feet







**DAILY PFIG REPORT**  
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**WELL INFORMATION**

Rig : Marianas RT - MSL : 89 ft Water Depth : 4992 ft RT - Mudline : 5081 ft

**OPERATIONS SUMMARY**

Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation	
8500'	8499'	440'	18x22"	Shale, siltstone, sandstone	
Sensor Distances		Sonic: NA	PWD: 26.67'	GR: 29.17'	Res: 29.00'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (ft MD)	9.4 ppg	PP Bottom hole	9.4 ppg	Last LOT: 7952 ft TVD (lith)	10.37 ppg
Surf MW:	9.7 ppg	ECD:	10.12 ppg	ESD min/ ESD max: (8424 MD)	10.07 /10.17 ppg

**Resistivity Analysis:** Resistivity has shifted from 1.00 ohmm baseline to 0.77-0.83 baseline indicating an increasing PP trend.

**Sonic Analysis:** NA

**Additional Observations:** LOT repeated multiple times ranging from 10.35-10.40 ppg.

No connection gas. Resistivity showed the onset of pressure. Background gas increasing as cuttings fill the hole. Background gas has increased from 10u to 40u with formation but is not being interpreted as increasing pore pressure.

Pressure Analyst: Paine

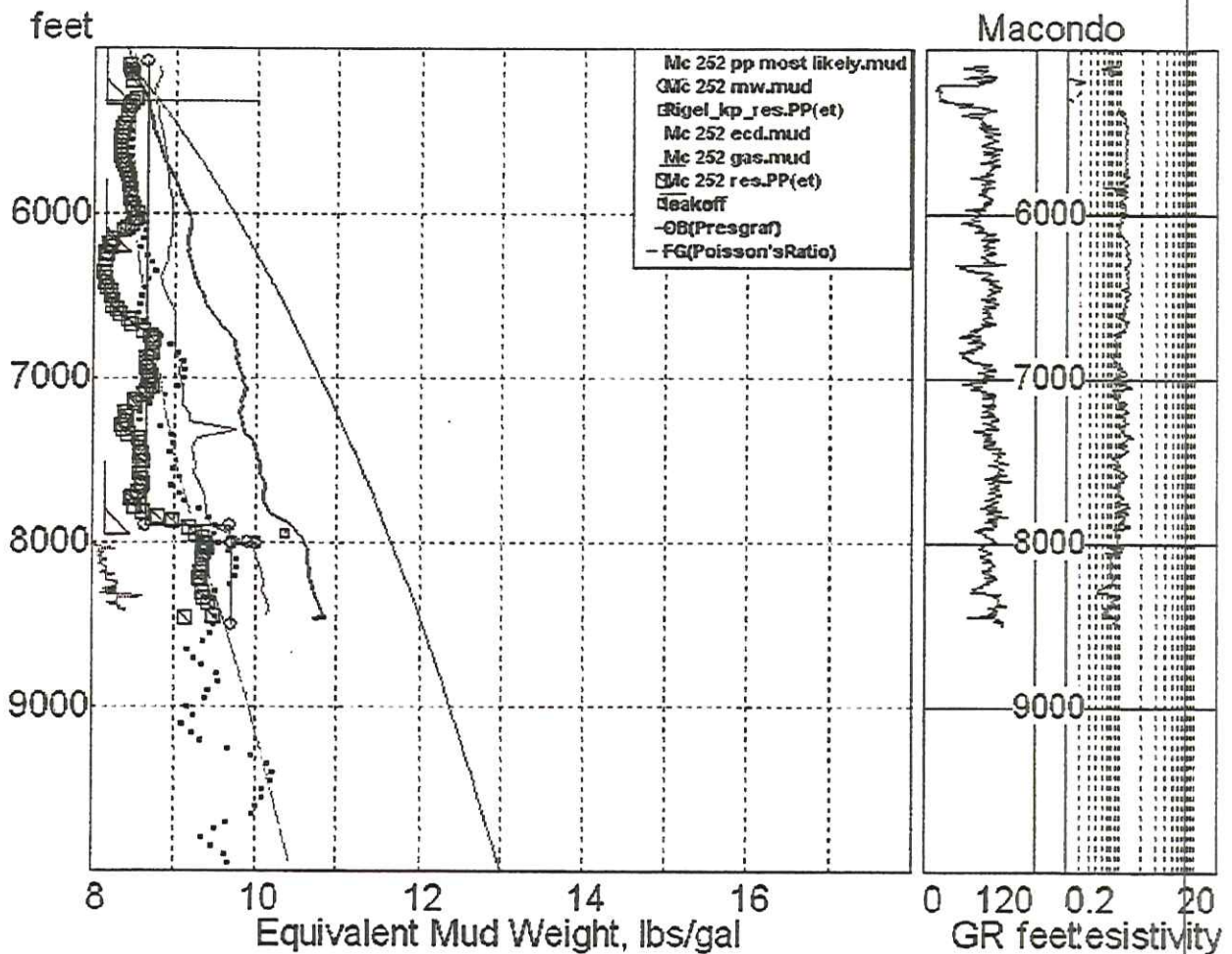
Date and Time: Oct. 25, 2009 6:00AM



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DAILY PRESSURE PLOT:





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**WELL INFORMATION**

Rig : Marianas RT - MSL : 89 ft Water Depth : 4992 ft RT - Mudline : 5081 ft

**OPERATIONS SUMMARY**

On the choke

MD	TVD	Progress (24 hr)	Hole size	Current formation
8970'	8969'	818'	18x22"	Shale, siltstone, sandstone
Sensor Distances		Sonic: NA	PWD: 27.57'	GR: 29.17' Res: 29.90'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (ft MD)	10.2 ppg	PP Bottom hole	10.2 ppg	Last LOT: 7952 ft TVD (lith)	10.37 ppg
Surf MW:	9.8 ppg	ECD:	10.11 ppg	ESD min/ ESD max: (8898 MD)	10.04/10.23 ppg

**Resistivity Analysis:** Resistivity initially shifted from 1.00 ohmm baseline to 0.77-0.83 baseline indicating an increasing PP trend. Resistivity leveled off at 0.8-0.9 ohmm until 8870 ft TVD. At that point a sand package corresponded with a resistivity shift to 0.63.

**Sonic Analysis:** NA

**Additional Observations:** LOT repeated multiple times ranging from 10.35-10.40 ppg.

No connection gas. Background gas slowly increased from 10u to 60u over the course of the hole section. During extended circulation after a sweep, corresponding lag gas later cyclically ranged from 50 u to 150 u. This corresponded to the 8745 connection.

Increased PP estimate to 9.5-9.6 based on the gas response. Resistivity value decreased to 0.63 ohmm. Multiple flow checks for each of the sand lobes. Final flow checks showed a change in flowback character. On the choke.

Pressure Analyst: Paine

Date and Time: Oct. 25, 2009 6:00AM

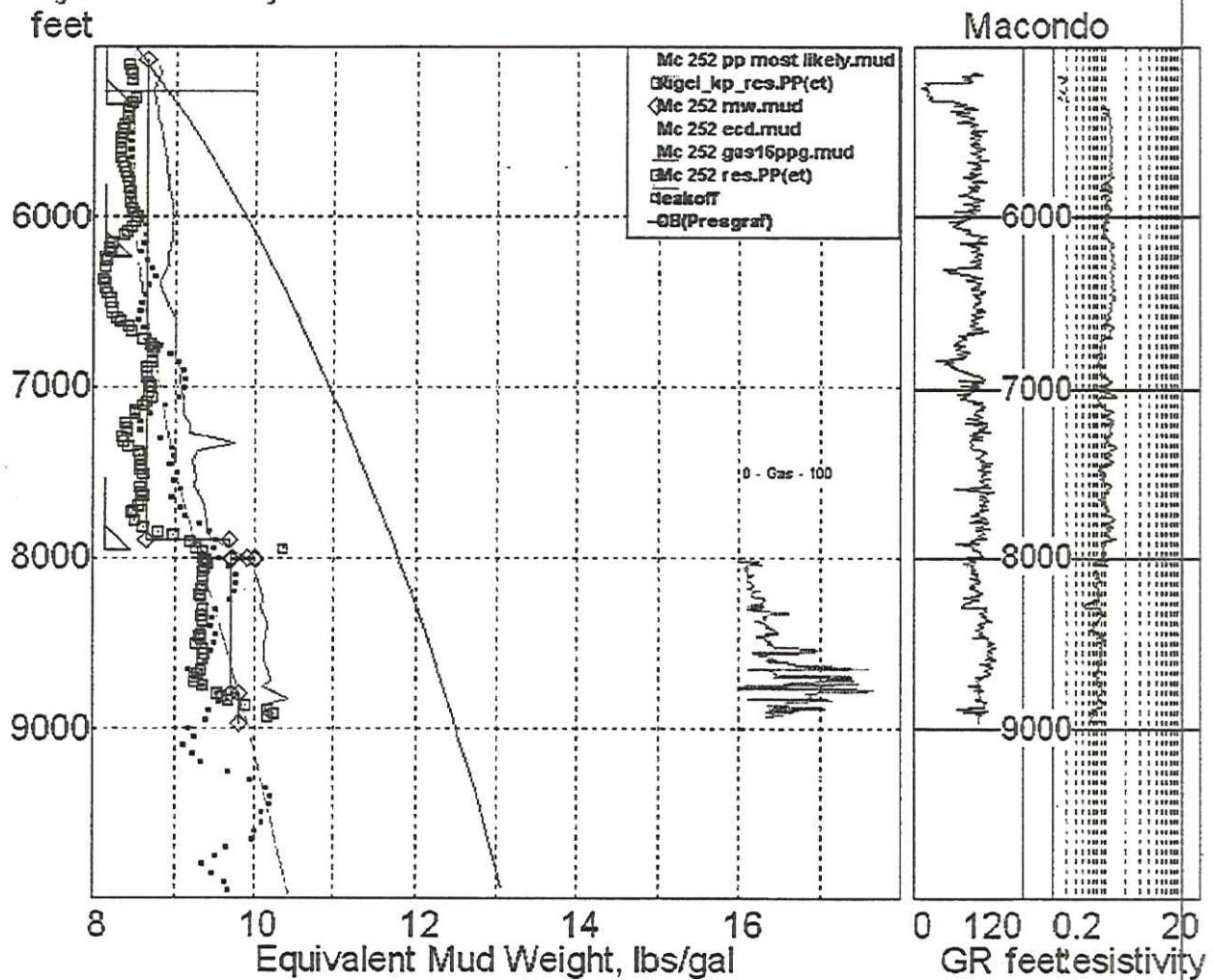




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DAILY PRESSURE PLOT:





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**WELL INFORMATION**

Rig : Marianas RT - MSL : 89 ft Water Depth : 4992 ft RT - Mudline : 5081 ft

**OPERATIONS SUMMARY**

TD hole section

MD	TVD	Progress (24 hr)	Hole size	Current formation
9090'	9089'	120'	18x22"	Shale, siltstone, sandstone
Sensor Distances		Sonic: NA	PWD: 27.57'	GR: 29.17' Res: 29.90'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (ft MD)	10.2 ppg	PP Bottom hole	10.2 ppg	Last LOT: 7952 ft TVD	10.46 ppg
Surf MW:	10.1 ppg	ECD:	10.32 ppg	ESD min/ ESD max: (8898 MD)	10.24/10.31 ppg

**Resistivity Analysis:** Resistivity did not drop below 0.60 ohmm. Interpretation was that the pressure did not increase over this interval. Low resistivity values corresponded with more calcareous formation, however coincidentally calculated near the degree of the influx pressure.

**Sonic Analysis:** NA

**Additional Observations:**

After killing the well the decision was made to drill additional footage for casing seat purposes. Drilled with 10.1 ppg mud. Updated LOT value to 10.46 ppg for reporting purposes.

Let the MW drift down to 10.0 heavy from 9064 to 9073 in order to maintain ECDs below 10.3 ppg. Slight flow on flow check, increase MW back to 10.1 ppg. Trace splintery and angular cavings noted at 9073 ft MD. Trace splintery and angular cavings noted at 9090 ft MD. ESD minimum at 9073 connection was 10.24 ppg.

Connection gas:  
8937 234/43  
8971 178/35  
9065 209/50

Pressure Analyst: Paine

Date and Time: Oct. 28, 2009 6:00

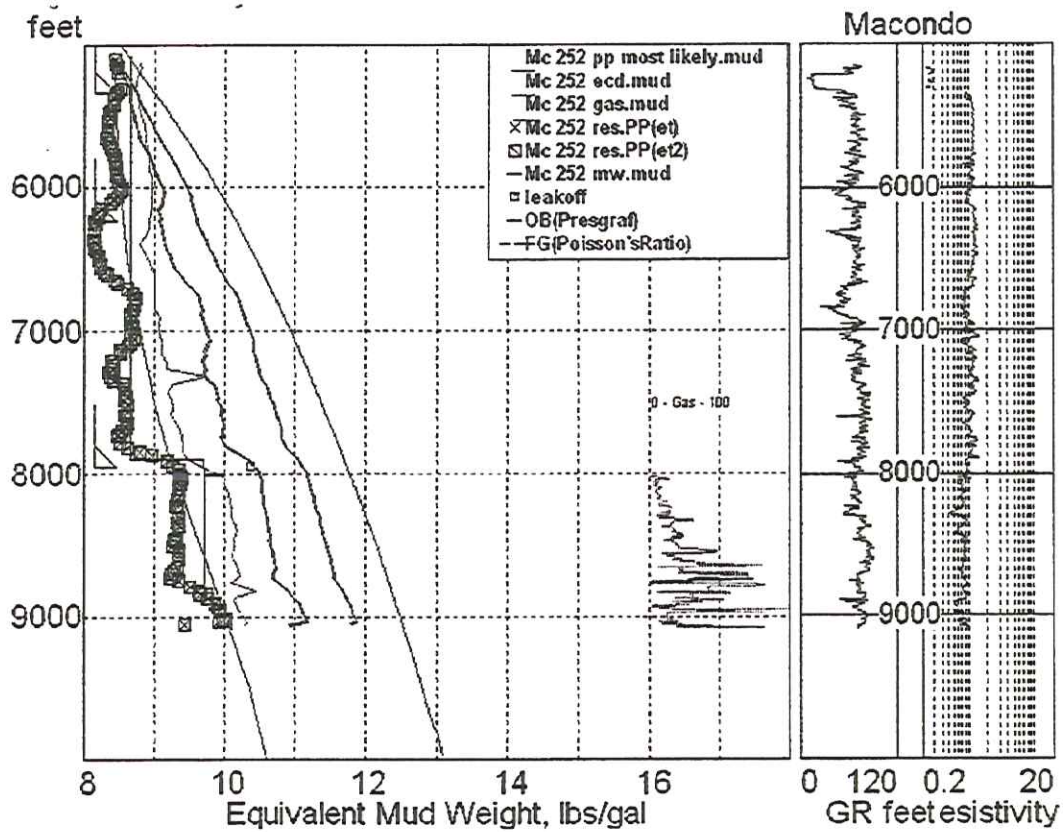


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## DAILY PRESSURE PLOT:







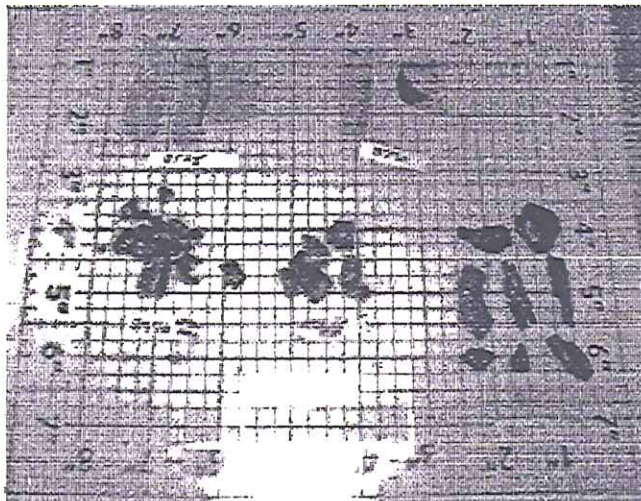
**DAILY PPFPG REPORT**  
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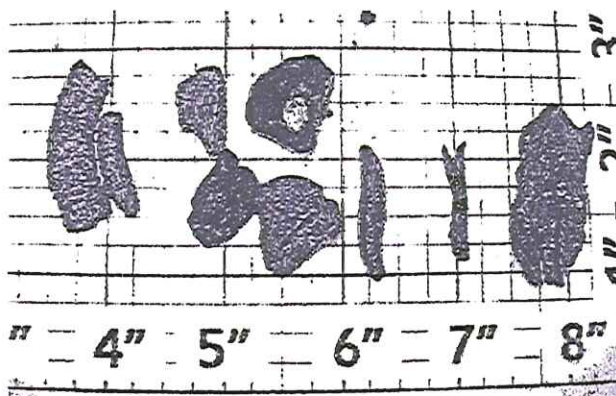
**Cuttings/Cavings Analysis:**

Prior to the kick, cuttings 1-3in long. After the kick, cuttings small, but clearly bit cut. Trace cavings noted with the 9073 circulation. Primarily angular with a few splintery coinciding with the pumps off gas and slight flow noted. Trace splintery and angular cavings noted at casing point 9090 ft MD.



**Cuttings/Cavings Photograph :**



Cuttings and cavings from 8000 to 9073



Cuttings and cavings from 9090 ft MD

	<b>DAILY PPEFG REPORT</b> Green Canyon Block 823 #2 ST00-BP00 OCS-G-16808 No. 2 API 60-811-40525-00 Puma Appraisal Well		



WELL INFORMATION			Jan. 31, 2009
Well : GC-823-2. PUMA 4			Report No. 6
Rig : Deepwater Horizon	RT – MSL : 75 ft	Water Depth : 4222 ft	RT – Mudline : 4297 ft

OPERATIONS SUMMARY ( 00:00 to 24:00hrs for 30 <sup>th</sup> January 2009)				
Drill to 19312, CBU and control mud losses				
MDBRT (24:00hrs)	TVDRT	Progress (24 hr)	Hole size	Current formation
19312'	19281'	278'	12 ¼" x 14 ¼"	Shale, marl, limestone

OPERATIONS SUMMARY ( 00:00 to 05:00hrs for 31 <sup>st</sup> January 2009)					
Test BOPs					
Sensor Distances	EWR: 45.69'	PWD: 35.81'	BAT: 71.14	DIR: 28.58	GR: 36.52'

PORE PRESSURE SUMMARY							
Est. Pore Pressure:	14.2	Fracture Gradient:	14.8-15.2	Last FIT:		15.6 PPG @ 16743 ft TVD (salt)	
ECD:	14.55	ESD Min:	14.37	ESD Max:	14.57	MW	14.2
<b>Resistivity Analysis:</b> Resistivity has been steadily increasing from 0.6 ohm-m since 18200 ft MD. Since 18730 ft MD, resistivity has been consistently over 1.0 ohm-m was around 1.4 ohm-m at TD.							
<b>Sonic Analysis:</b> Overall, sonic has been running between 100 usec/ft and 120 usec/ft. Below 18650 ft MD, sonic values have been running 100 to 110 usec/ft.							
<b>Additional Observations:</b> Drilled to 19312 ft MD and started CBU. After 10 min, lost 50 bbls. Pull to shoe and reestablished circ. Max gas 1150 u with mud cut to 13.7ppg. Predominate lith. has been marls and shale.							
Analyst Confidence Level with data:		50% Resistivity		70% Sonic			





	<b>DAILY PPFG REPORT</b> Green Canyon Block 823 #2 ST00 BP00 OCS G-16808 No. 2 API 60-811-40525-00 Puma Appraisal Well		

Connection Gas summary:				
Depth (MDKB)	Depth (TVD)	Peak Reading (units)	Background gas (units)	Net CG (units)

GeoTap Formation pressures		GeoTap set up in pilot hole. 89.12' from bit.			
Depth (MDKB)	Depth (TVD)	Pressure (PPG)	Pressure (PSI)	Lithology	Comments



Depth (TVDRT)	Estimated @	Min in Open Hole	Max in Open Hole
Estimated Shale PP	14.2	13.5	14.2
Estimated Shale Frac Gradient (v=0.42)	15.2	15.1-15.2	15.3-15.4
Estimated Sand PP	14.0	13.4	14.0
Estimated Sand Frac Gradient (v=0.33)	14.6	14.6-14.7	14.8 - 14.9



	<b>DAILY PPFG REPORT</b> Green Canyon Block 823 #2 ST00 BP00 OCS-G-16888 No. 2 API-60-811-40525-00 Puma Appraisal Well	
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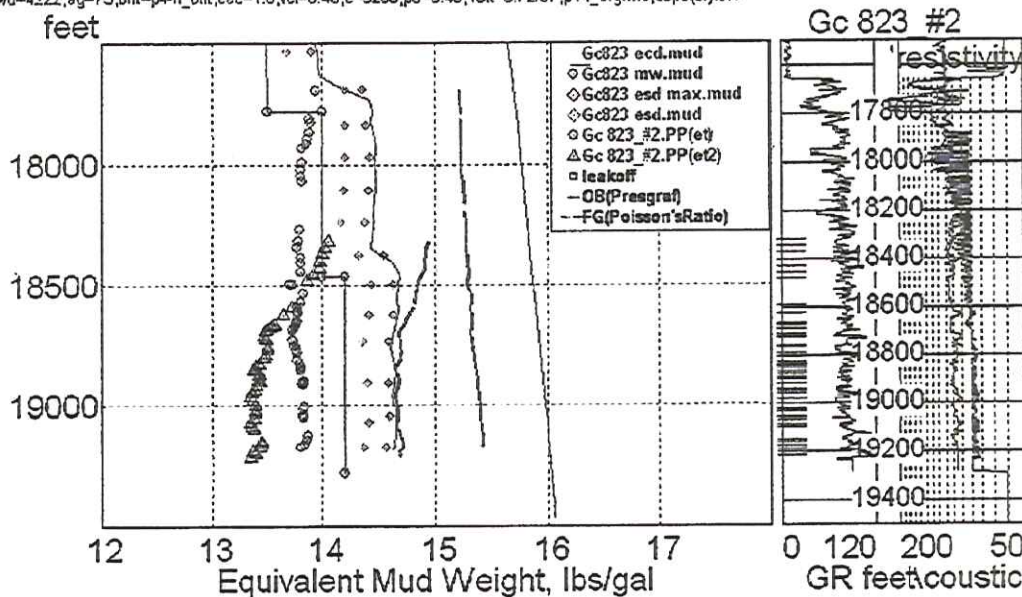
WELLBORE STABILITY / CONDITIONS
<u>Cuttings/Cavings Analysis:</u>

Cuttings/Cavings Photograph:
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	<h1>DAILY PPFG REPORT</h1>		
	Green Canyon Block 823 #2 ST00 BP00		
	OCS-G-16608 No. 2		
	API 60-811-40525-00		
	Puma Appraisal Well		

**DAILY PRESSURE PLOT**

wd=4222, sg=75, bht=p4-h\_bht, cec=1.6, vcl=0.40, c=5200, p0=0.43, 10k=0.72/97, p4-i\_avg\_rho, c5p6(3.)19f4



OB = Presgraf, TREND = DeepWater, PRES = Eaton, FG = Poisson'sRatio, BHT = P4-H\_BHT.BHT, SCL = None, D2TWT = None Files open: 7

Pressure Analyst:	John Brannen	Date and Time:	1/31/2009 6:00
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# DAILY PPFG REPORT

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## WELL INFORMATION

Rig : Horizon	RT – MSL : 75 ft	Water Depth : 4992 ft	RT – Mudline : 5067 ft
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## OPERATIONS SUMMARY

Tripped in hole. Successful LOT. Drilling ahead

MD	TVD	Progress (24 hr)	Hole size	Current formation
10010'	10010'	934'	16x20"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: NA	PWD: 34.71'	GR: 35.38' Res: 44.55'

## PORE PRESSURE SUMMARY

Max PP: Open hole (10010 ft MD) 10.6 ppg	PP Bottom hole 10.6 ppg	Last LOT: 8969 ft TVD 11.78 ppg (surf) 11.71 ppg (dh)
Surf MW: 10.9 ppg	ECD: 11.21 ppg	ESD min/ ESD max: (9867 MD) 11.08/11.22 ppg

**Resistivity Analysis:** Resistivity has decreased from 0.85 ohmm to 0.65 with a corresponding pore pressure increase from 10.1 ppg to 10.6 ppg at 9975 TVD. Rate of increase is approximately 0.1 ppg / 130-150 ft. Tail resistivity response currently being interpreted as a averaging (filtering) artifact.

**Sonic Analysis:** NA

**Additional Observations:** Surface LOT 11.78 with a max pressure of 550 psi using surface MW of 10.6 and a shoe depth of 8969 ft. MWD max pulsed up 11.71 ppg.

Pore pressure interpretation based on resistivity response. No connection gas. No cavings. No surface indicators. Surface mudweight of 10.9 ppg (11.2 downhole) is sufficiently overbalanced that surface indicators ought not be present.

The expected sands between 10,700-11,000 ft TVD may have some additional pressure due to centroid effect. Estimation is that they may be as high as 11.3-11.4 ppg downhole.

Pressure Analyst: Paine

Date: Feb 16, 2009



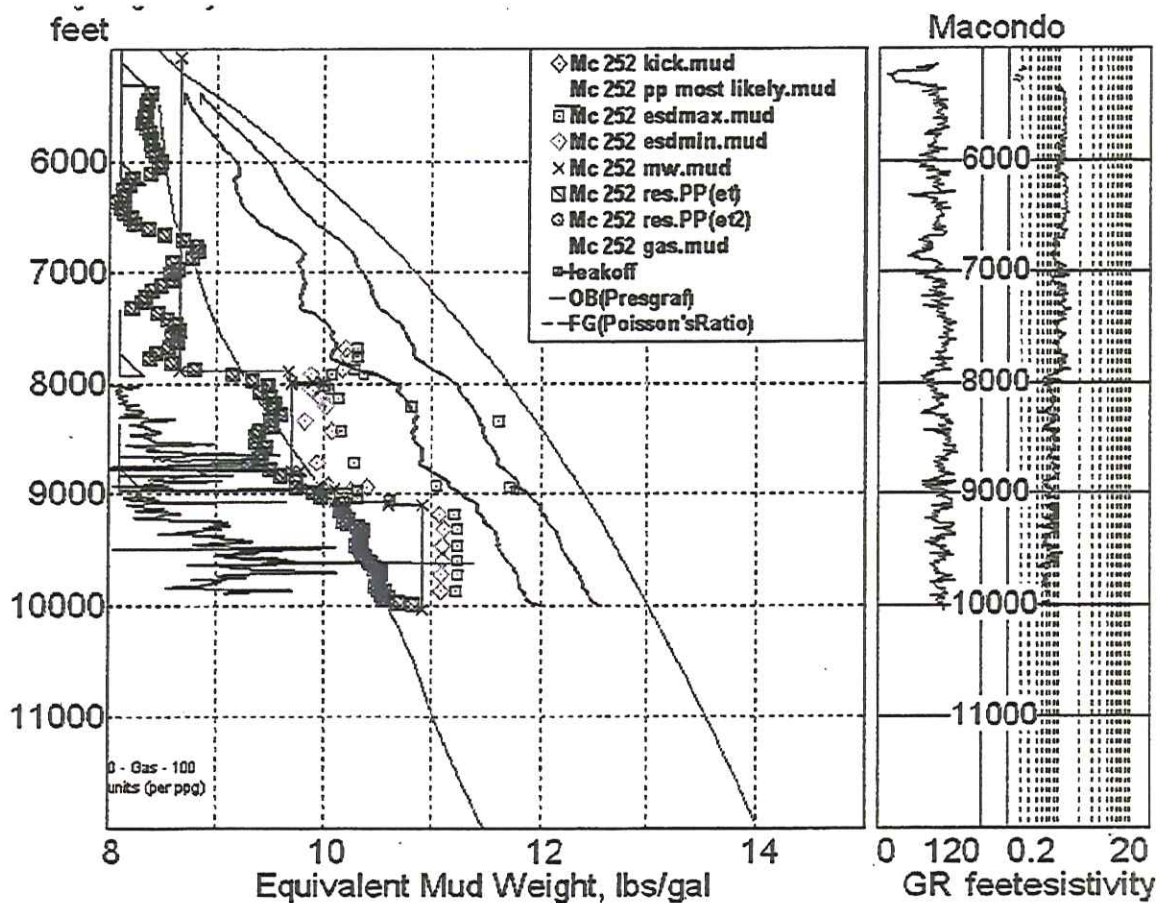


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## DAILY PRESSURE PLOT:





# DAILY PFFG REPORT

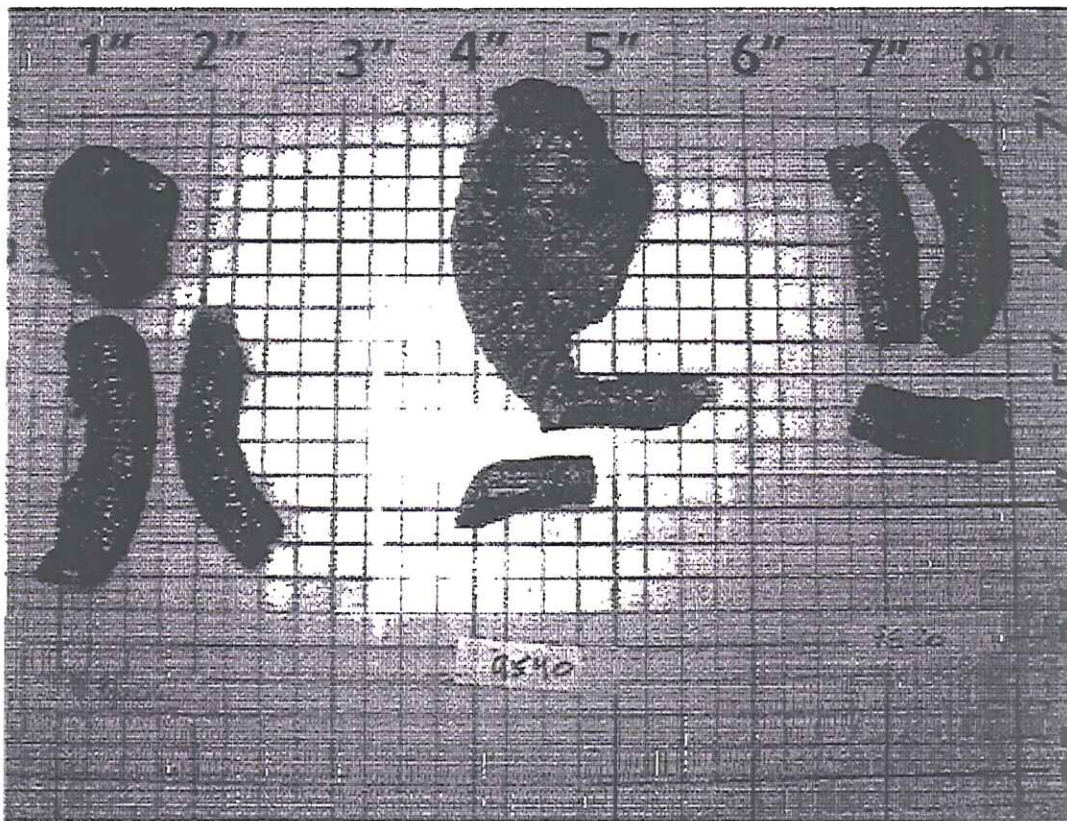
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## Cuttings/Cavings Analysis:

Big cuttings from a big bit and big underreamer. No cavings. Chunky pieces are either cement or stabilizer knockoff pieces with evidence of mechanical failure.

## Cuttings/Cavings Photograph :







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**WELL INFORMATION**

Rig : Horizon	RT - MSL : 75 ft	Water Depth : 4992 ft	RT - Mudline : 5067 ft
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**OPERATIONS SUMMARY**

Tripped in hole. Successful LOT. Drilling ahead

MD	TVD	Progress (24 hr)	Hole size	Current formation
11887'	10010'	1877'	16x20"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: NA	PWD: 34.71'	GR: 35.38'
				Res: 44.55'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (11090 ft MD)	11.1 ppg	PP Bottom hole	11.1 ppg	Last LOT: 8969 ft TVD	11.78 ppg (surf) 11.71 ppg (dh)
Surf MW:	11.1 ppg	ECD:	11.41 ppg	ESD min/ ESD max: (9867 MD)	11.08/11.22 ppg

**Resistivity Analysis:** Resistivity has decreased remained between 0.75 and 0.65 ohmm for the majority of the day yesterday. The corresponding pore pressure increased to 11.1 ppg at 11090 ft. The zone from 11090 to 11887 has been influenced by marl and siltstone with the resistivity increasing to 0.85 ohmm which gives a false regression response. Rather than suppress the response, it is being left in to identify when the resistivity returns to the baseline and pore pressure increases again.

**Sonic Analysis:** NA

**Additional Observations:** A connection gas was noted at 11081 after the mud increase from 10.0 to 11.1 ppg was begun but before it had circulated around to surface. It is being interpreted as a faux sweep response.

No additional connection gasses noted. No cavings noted. Pore pressure interpretation based primarily on resistivity response. Resistivity is differing from pre-drill pore pressure which was based on seismic. Expecting some point below the siltier/calcareous zone for resistivity to come back to the predrill estimate.

Model has been adjusted to incorporate the temperature gradient at the Macondo location. Vclay changed from 0.7 to 0.6. Phi(0) changed from 0.399 to 0.4.

Pressure Analyst: Paine

Date: Feb 17,2009

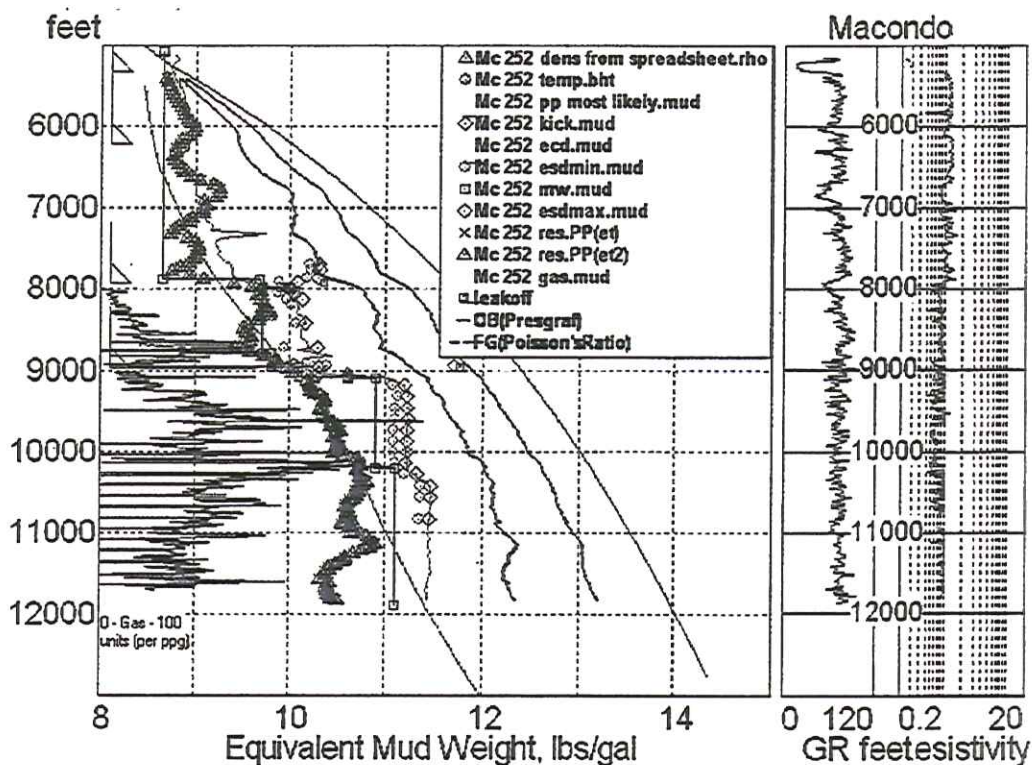




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DAILY PRESSURE PLOT:





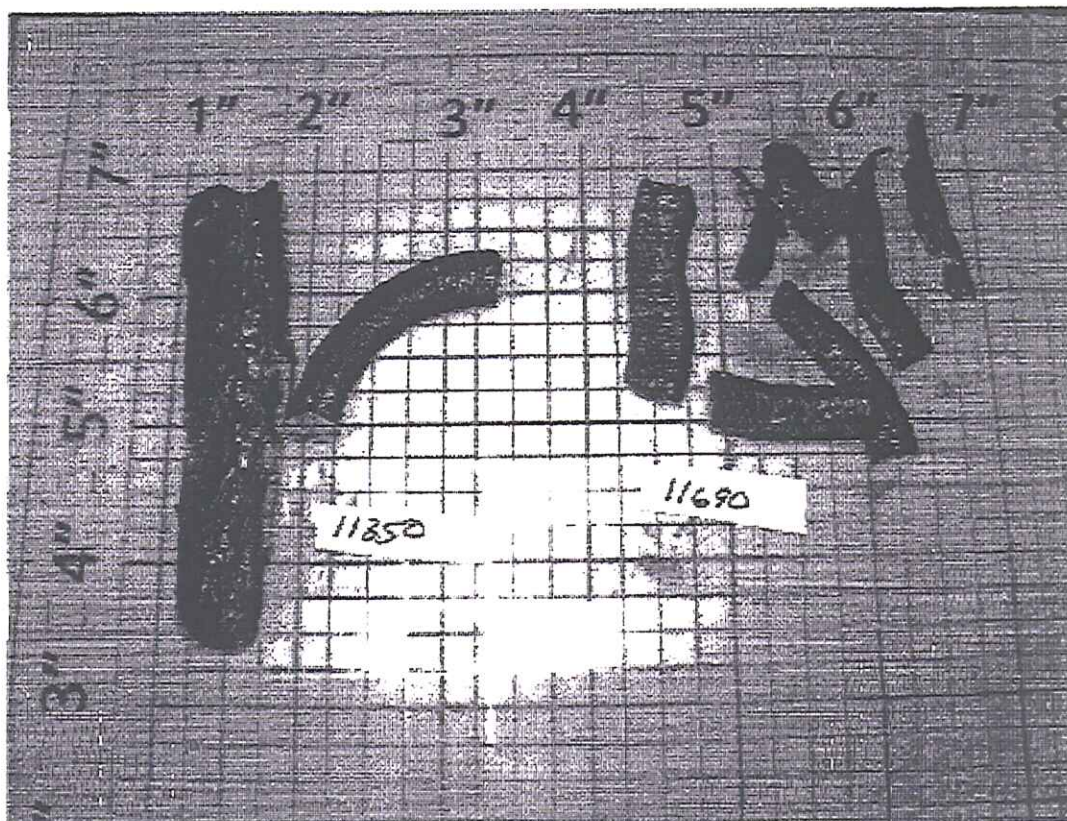
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Cuttings/Cavings Analysis:

All returns are cuttings. No cavings.

Cuttings/Cavings Photograph :







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**WELL INFORMATION**

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

**OPERATIONS SUMMARY**

Circulated high gas and raised MW to 11.4 surf. Drilled. Lost returns.

MD	TVD	Progress (24 hr)	Hole size	Current formation
12350'	12349'	463'	16x20"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: NA	PWD: 34.71'	GR: 35.38' Res: 44.55'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (11090 ft MD)	11.6 ppg	PP Bottom hole	11.6 ppg	Last LOT: 8969 ft TVD	11.78 ppg (surf) 11.71 ppg (dh)
Surf MW:	11.4 ppg	ECD:	11.73 ppg	ESD min/ ESD max: (9867 MD)	11.58/11.68 ppg

**Resistivity Analysis:** Resistivity continued in the 0.8 range throughout the section of high gas, not verifying the pressure increase. Resistivity PP is 11.0-11.1 ppg. One possibility is that the sands and shales are not in equilibrium which would require stratigraphic pressure connectivity of 500 ft to 1000 ft TVD. An alternative possibility is that the resistivity response is being masked by hydrocarbons throughout the shales masking the pressure response.

**Sonic Analysis:** NA

**Additional Observations:** High gas (Max of 2970 u) occurred corresponding to 12030 ft MD. Mud weight was cut from 11.1 to 10.6 ppg surface. Incrementally increased MW to 11.4 until gas returned to background levels of 150-200 units. Then proceeded to drill ahead to 12350 ft MD where losses were observed. The ECD was 11.73 when the losses occurred and the interpretation is that they are occurring at the shoe.

Resistivity response did not reflect the high pore pressure interpreted from the gas that did not decrease during circulation. Predrill reflected an estimated pore pressure of 11.6. Current pore pressure estimate 11.5-11.6 ppg based on the downhole mudweight required to knock out the gas.

No cavings noted in the high gas zone, but the cuttings were shorter than previously observed throughout the hole section.

**Pressure Analyst:** Paine

**Date:** Feb 18, 2009



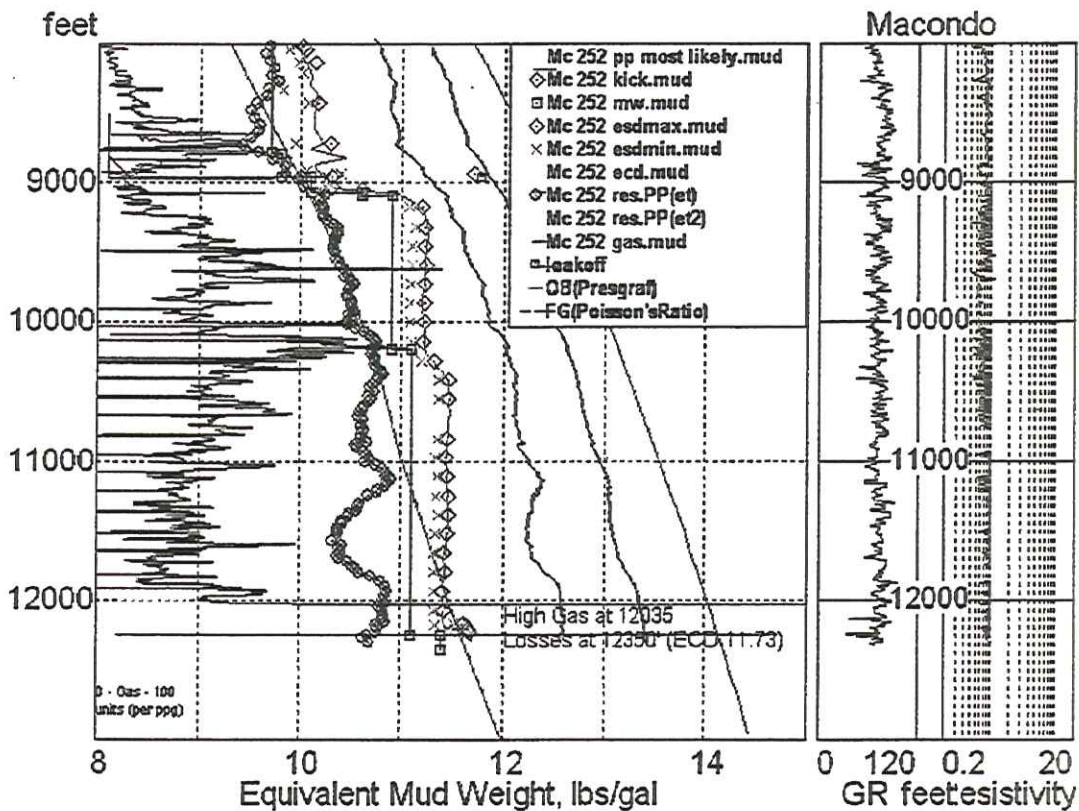


# DAILY PPFG REPORT

Mississippi Canyon Block 252 #1 ST00 BP00  
OCS-G-32306  
API-60-817-4116900  
Macondo Exploration Well



## DAILY PRESSURE PLOT:





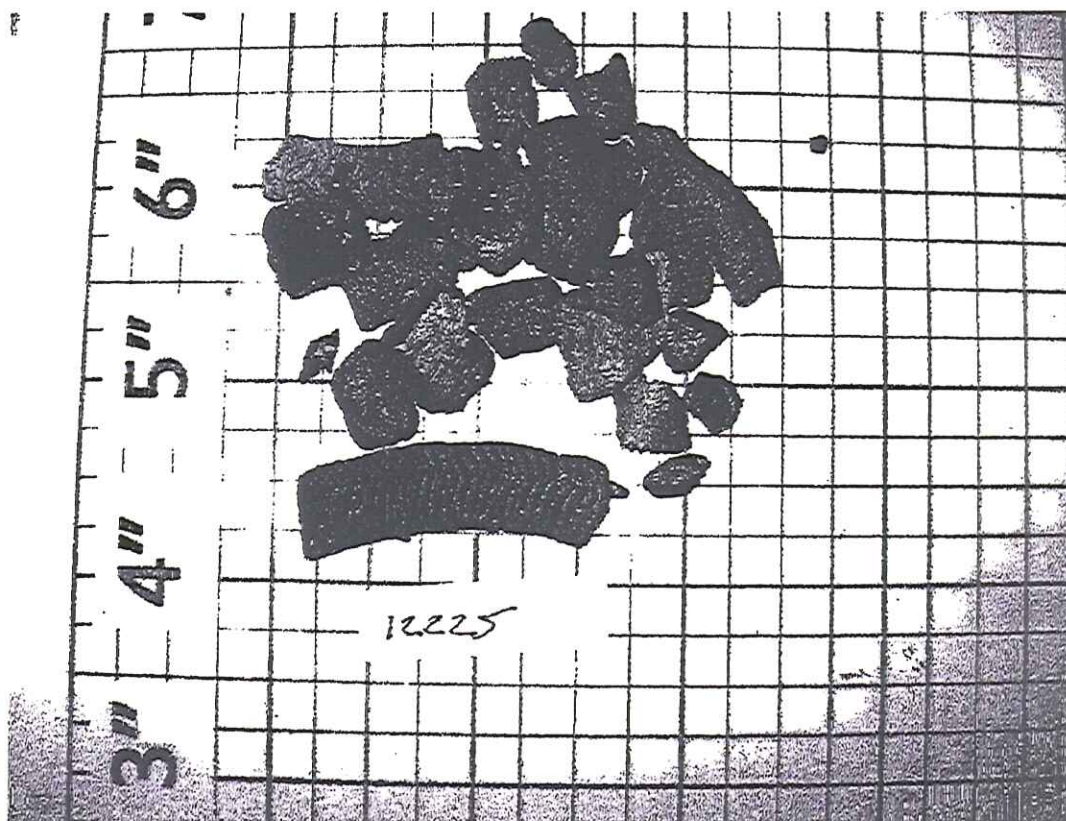
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Mississippi Canyon Block 252 #1 ST00 BP00  
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**Cuttings/Cavings Analysis:**

Sample gathered after the onset of the high gas. No pressured cavings noted. Cuttings smaller than previously observed throughout the hole section.

**Cuttings/Cavings Photograph :**







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Macondo Exploration Well



**WELL INFORMATION**

Rig : Horizon	RT – MSL : 75 ft	Water Depth : 4992 ft	RT – Mudline : 5067 ft
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**OPERATIONS SUMMARY**

FIT, Reamed, Open underreamer, re-reamed.

MD	TVD	Progress (24 hr)	Hole size	Current formation
12350'	12349'	0	14 3/4"x16 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 74.85'	PWD: 36.45'	GR: 37.16'
				Res: 46.33'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (10010 ft MD)	11.7 ppg	PP Bottom hole	11.7 ppg	Last FIT: 11585 ft TVD	12.55 ppg (surf) 12.67 ppg (dh)
Surf MW:	11.8 ppg	ECD:	12.10 ppg	ESD min/ ESD max: (11950 MD)	12.01/12.11 ppg

**Resistivity Analysis:** Resistivity analysis maintained from previous hole section and is under estimating pore pressure due to hydrocarbon influence. Adjustments will be made once resistivity again reflects pore pressure influences rather than lithologic influences.

**Sonic Analysis:** Added sonic analysis of reamed down hole. There was a lot of scatter in the sonic response due to the diameter of the rathole to coherent rock. No confidence exists in the initial sonic interpretation trend.

**Additional Observations:** During ream down operations all returns noted were angular cavings with trace splintery and blocky pieces. While staging in the hole, the cavings coincided with a high gas response. The blocky cavings may be a result of the hole being so big that parts of the hole collapse aren't apparently angular. The lack of splintery cavings and predominance of angular cavings may be that the hole instability is caused by a horizontal stress disequilibrium (the hole squeezing in). Another explanation is that the splintery cavings may not be how this particular calcareous shale characterizes its sub-pressured failure.

Multiple suggestions for the degree of gas and cavings have been proposed.

Hypothesis 1) As the gas from the 12035 zone migrated by the formation at each circulation point enough hydrostatic head was lost to allow the formation to collapse. The problem with this explanation is that at depth, the gas is in solution and negligible to the amount of hydrostatic head affecting the wellbore.

Hypothesis 2) The lower hydrostatic head due to the losses caused the calcareous shale to fall in. The





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collapsed wellbore released gas into the well so that as both were circulated out, both were noted. The gas would occur before the cavings as it was slightly more buoyant and the cavings encountered cuttings slip.

Hypothesis 3) The gas from the 12035 zone migrated throughout the open hole and was independent of the instability of the open hole. Given that the whole zone showed drill gas when originally drilled, the hole failure would lend some additional gas response as the cavings were circulated out.

FIT test: Pressured up to 631 psi on the surface which calculated to 12.55 ppg surface. The MWD pulsed up a maximum pressure of 12.67 ppg. This was performed after clearing the hole to 11633 TVD.

**Pressure Analyst:** Paine

**Date:** Mar 8, 2009

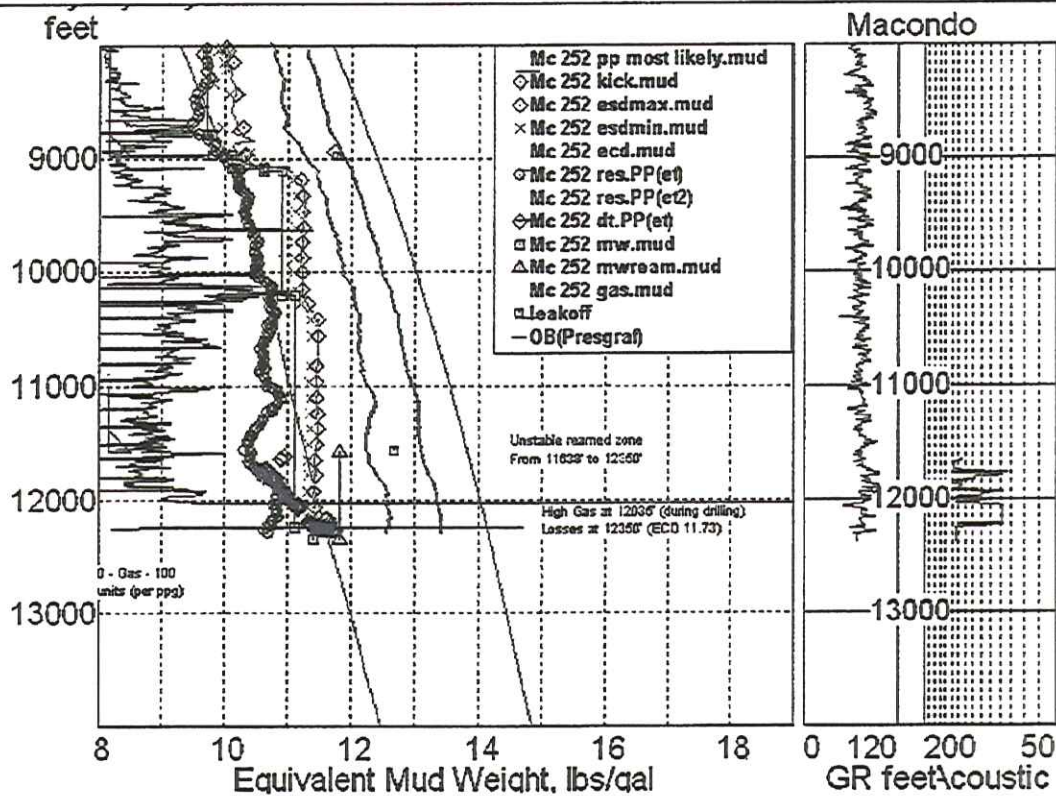


# DAILY PPFG REPORT

Mississippi Canyon Block 252 #1 ST00 BP00  
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## DAILY PRESSURE PLOT:





# DAILY PFIG REPORT

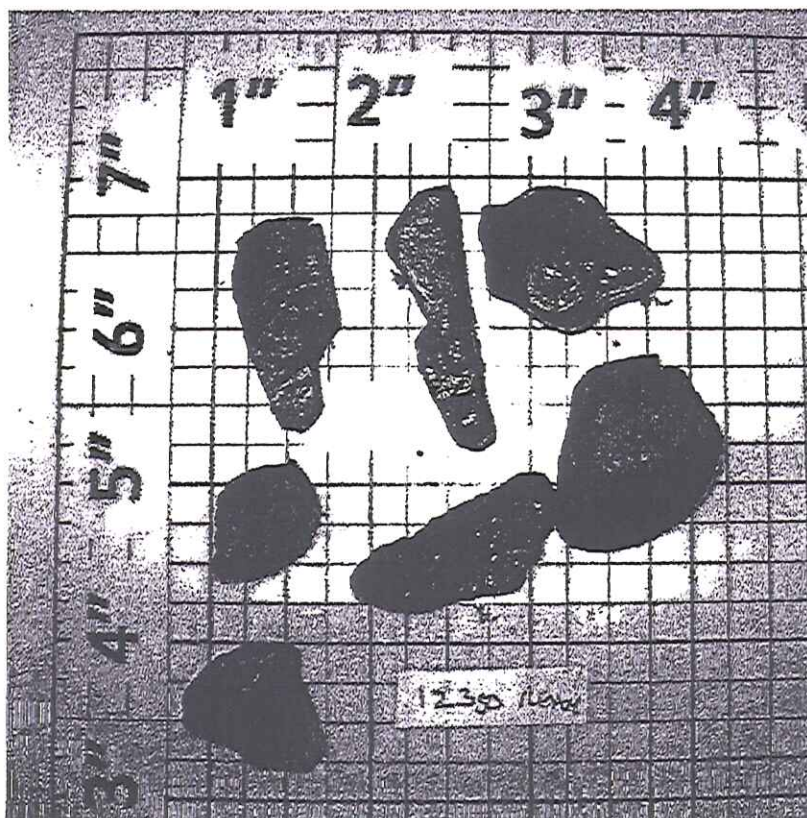
Mississippi Canyon Block 252 #1 ST00 BP00  
OCS-G-32306  
API-60-817-4116900  
Macondo Exploration Well



## Cuttings/Cavings Analysis:

During original ream of rathole, 100% of the returns were cavings. During the underreamed section to 11886 ft MD, the returns were 100% cavings. Primary morphology was angular in nature, though trace splintery and blocky were noted.

## Cuttings/Cavings Photograph :







# DAILY PPFPG REPORT

Mississippi Canyon Block 252 #1 ST00 BP00  
OCS-G-32306  
API-60-817-4116900  
Macondo Exploration Well



## WELL INFORMATION

Rig : Horizon	RT - MSL : 75 ft	Water Depth : 4992 ft	RT - Mudline : 5067 ft
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## OPERATIONS SUMMARY

Shut in and stuck

MD	TVD	Progress (24 hr)	Hole size	Current formation
13305'	13305'	955'	14 3/4"x16 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 74.85'	PWD: 36.45'	GR: 37.16'
				Res: 46.33'

## PORE PRESSURE SUMMARY

Max PP: Open hole (13250 ft MD)	12.8 ppg	PP Bottom hole	12.1 ppg	Last FIT: 11585 ft TVD	12.55 ppg (surf) 12.67 ppg (dh)
Surf MW:	11.9 ppg	ECD:	12.30 ppg	ESD min/ ESD max: (13207 MD)	12.22/12.47 ppg

**Resistivity Analysis:** Resistivity adjusted to most likely curve based on gas response. Continued following the trend to the kick. Resistivity PP 12.0 ppg.

**Sonic Analysis:** Sonic adjusted to most likely curve based on the gas response. Continued following trend to the kick. Sonic PP 12.0 ppg

**Additional Observations:** Angular cavings present during entire drilled section. Interpreted as falling in from the rathole of the previous section.

Kick zone identified to be at 13,250 MD. Shut in pressures ambiguous due to the inability to circulate once the drill string got stuck. Casing pressure 360 psi. That calculates to a 12.5 ppg surface or 12.8-12.9 ppg downhole pressure which was well over the interpreted 12.1 ppg from the sonic, resistivity and predrill estimates.

If the models are adjusted to calibrate to the kick, the PP at the high gas zone (12,035') would be 12.4 ppg and the gas would still be present in the form of connection gas throughout the hole section. Increased gas was noted at the last two connections, but corresponded with a siltier/sandier formation. Additionally, the pore pressure at the 8000 ft influx would have been 11.0 ppg instead of 10.0 ppg.

Pressure Analyst: Paine

Date: Mar 9, 2009

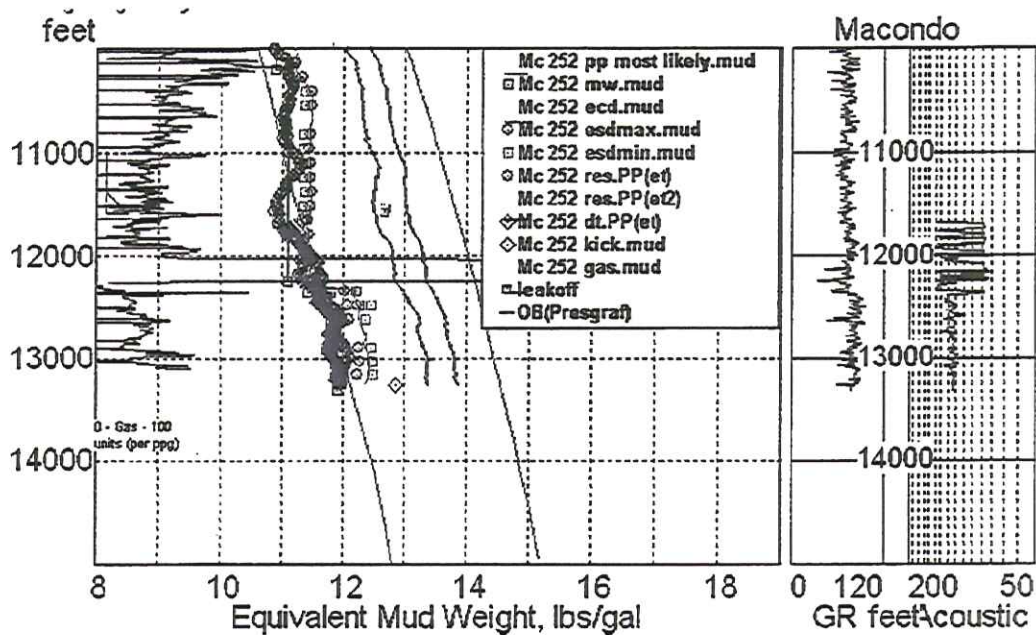


# DAILY PPFG REPORT

Mississippi Canyon Block 252 #1 ST00 BP00  
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## DAILY PRESSURE PLOT:





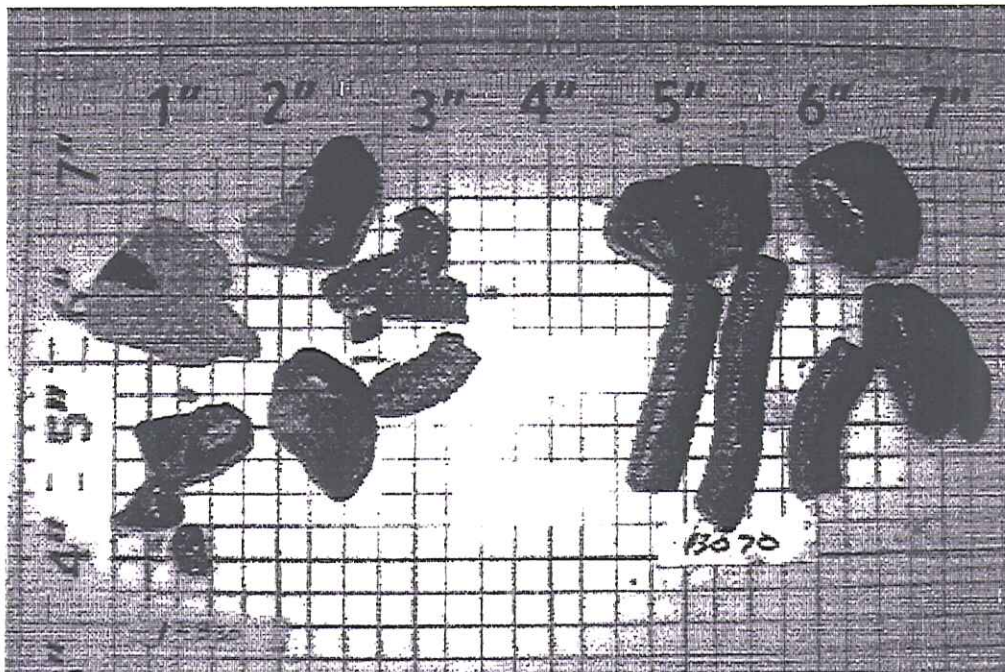
**DAILY PPFG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP00  
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Cuttings/Cavings Analysis:

Angular cuttings 10% of returns during drilled section.

Cuttings/Cavings Photograph :







**DAILY PFG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
API-60-817-4116901  
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**WELL INFORMATION**

Rig : Horizon	RT - MSL : 75 ft	Water Depth : 4992 ft	RT - Mudline : 5067 ft
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**OPERATIONS SUMMARY**

Kicked off. Drilling ahead

MD	TVD	Progress (24 hr)	Hole size	Current formation
11838'	11838'	138'	14 3/4"x16 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 75.64'	PWD: 36.55'	GR: 37.26' Res: 46.43'

**PORE PRESSURE SUMMARY**

<b>Max PP:</b> <b>Open hole</b> 11.8 ppg (13250 ft (11.5 shale MD))	<b>PP Bottom hole</b> 11.8 ppg	<b>Last FIT:</b> 12.55 ppg <b>11585 ft</b> (surf) <b>TVD</b> 12.67 ppg (dh)
<b>Surf MW:</b> 12.1 ppg	<b>ECD:</b> 12.43 ppg	<b>ESD min/</b> 12.35/12.42 <b>ESD max:</b> ppg <b>(13207 MD)</b>

**Resistivity Analysis:** No significant resistivity in new hole. Resistivity trending over 1.0 ohmm not indicating pressure.

**Sonic Analysis:** No significant sonic in new hole. Sonic ranging from 90 - 140 us and has yet to settle into a trend.

**Additional Observations:** Successfully kicked off. PP estimate based on adjusted seismic and sand centroid estimate.

**Pressure Analyst:** Paine

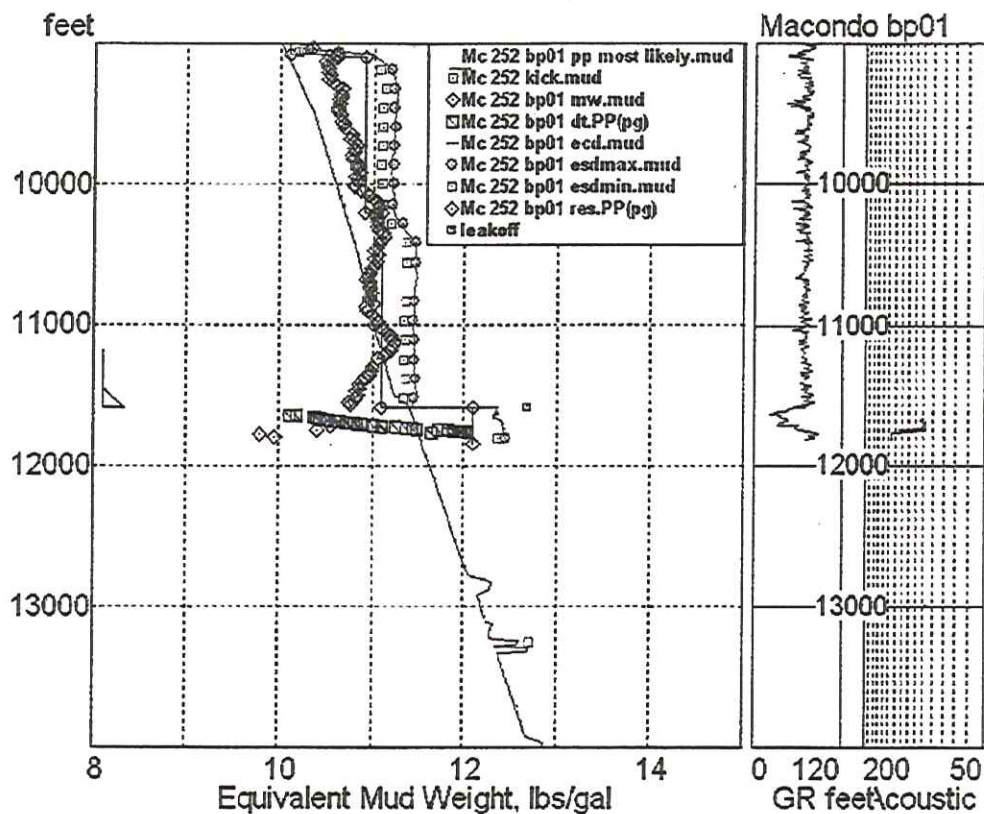
**Date:** Mar 18, 2009



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DAILY PRESSURE PLOT:





# DAILY PPFG REPORT

Mississippi Canyon Block 252 #1 ST00 BP01  
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Macondo Exploration Well



## WELL INFORMATION

Rig : Horizon	RT - MSL : 75 ft	Water Depth : 4992 ft	RT - Mudline : 5067 ft
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## OPERATIONS SUMMARY

MD	TVD	Progress (24 hr)	Hole size	Current formation	
13150'	13139'	1312'	14 3/4"x16 1/2"	Calcareous Shale/Siltstone	
Sensor Distances		Sonic: 75.64'	PWD: 36.55'	GR: 37.26'	Res: 46.43'

## PORE PRESSURE SUMMARY

<b>Max PP:</b> <b>Open hole</b> 12.5 ppg (13250 ft MD) (12.2 shale)	<b>PP Bottom</b> <b>hole</b> 12.5 ppg	<b>Last FIT:</b> 12.55 ppg <b>11585 ft</b> (surf) <b>TVD</b> 12.67 ppg (dh)
<b>Surf MW:</b> 12.3 ppg	<b>ECD:</b> 12.65 ppg	<b>ESD min/</b> 12.53/12.66 <b>ESD max:</b> ppg <b>(13207 MD)</b>

**Resistivity Analysis:** Resistivity response reflected updated best PP response. 12.1 ppg at TD

**Sonic Analysis:** Sonic response reflected updated best PP response. 12.3 ppg at TD

**Additional Observations:** Drilled. One connection gas noted at 12,655' MD with 63 u max over a background of 29 u. This was the last connection with 12.1 ppg surf MW. 12.2 ppg surf MW had already been started in the hole. No connection gas on subsequent connections.

Cuttings were all drilled cuttings. Trace angular cavings (1 caving after watching the shakers for 10 minutes) were attributed to remaining in the hole from the last hole section.

**Pressure Analyst:** Paine

**Date:** Mar 19,2009

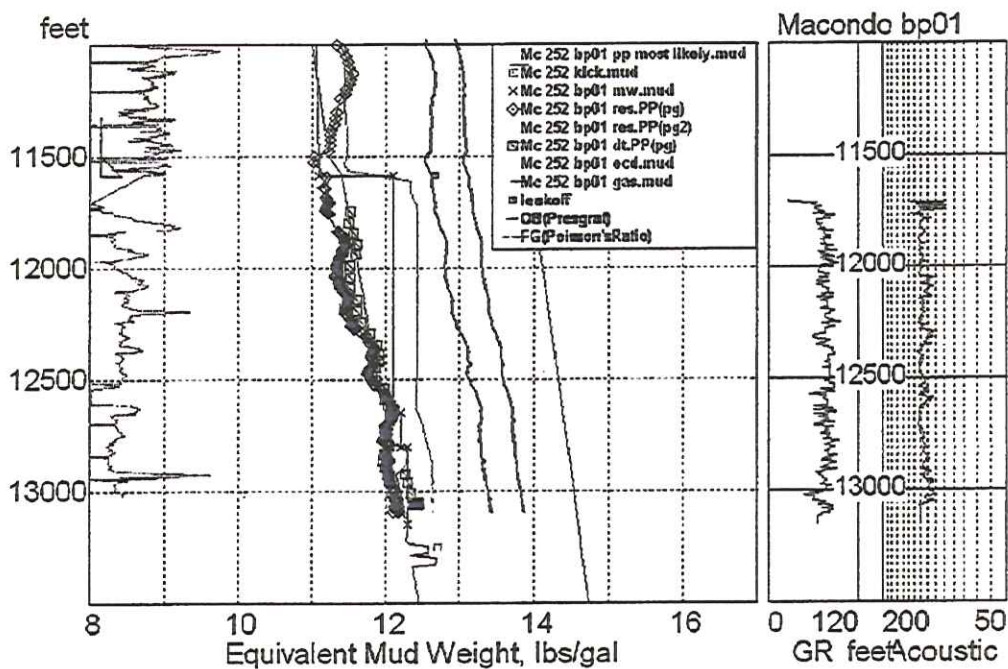




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DAILY PRESSURE PLOT:





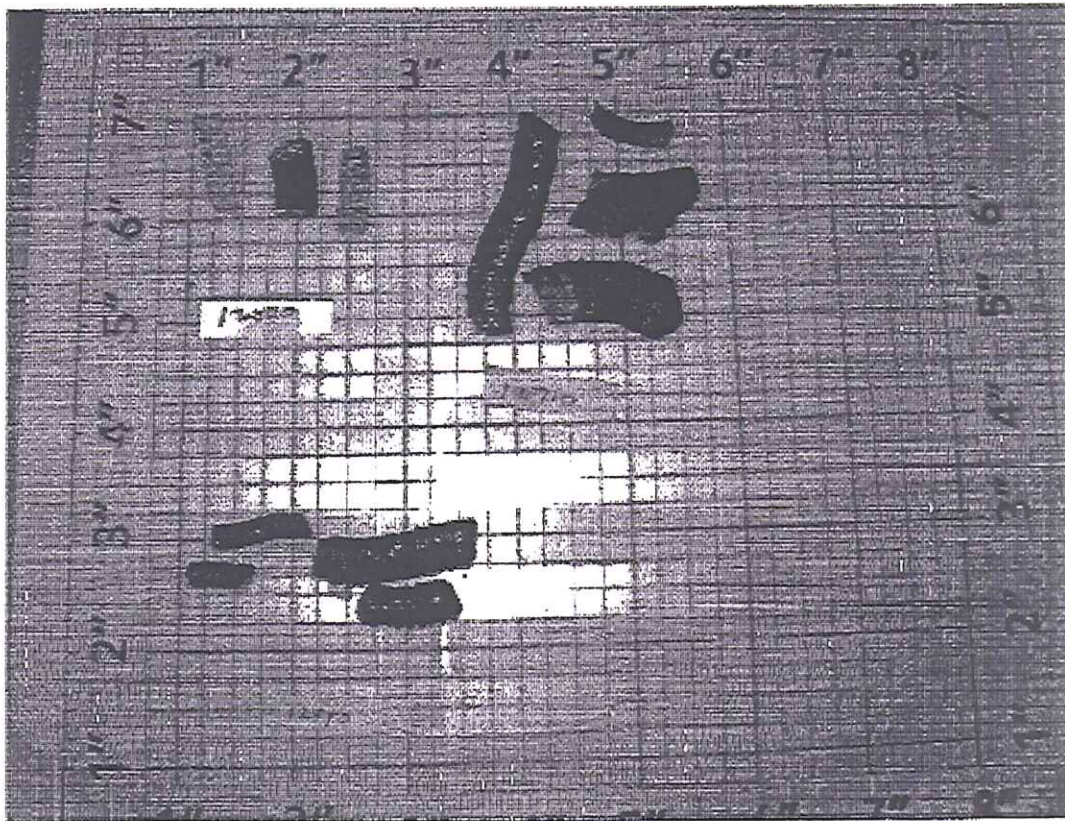
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Mississippi Canyon Block 252 #1 ST00 BP01  
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**Cuttings/Cavings Analysis:**

All returns are cuttings. 2 singular instances of angular cavings. Suspect they have been in the riser.

**Cuttings/Cavings Photograph :**







**DAILY PPFG REPORT**  
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**WELL INFORMATION**

Rig : Horizon	RT – MSL : 75 ft	Water Depth : 4992 ft	RT – Mudline : 5067 ft
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**OPERATIONS SUMMARY**

Tripped in. Performed LOT that gave no meaningful formation data. Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation
13784'	13773'	634'	12 1/4"x14 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 70.52'	PWD: 35.36'	GR: 36.07'
				Res: 45.24'

**PORE PRESSURE SUMMARY**

<b>Max PP:</b> <b>Open hole</b> 13.2 ppg (13768 ft MD) (12.9 shale)	<b>PP Bottom hole</b> 13.2 ppg	<b>Last FIT:</b> 14.60 ppg <b>13134 ft</b> (surf) <b>TVD</b> 14.71 ppg (dh)
<b>Surf MW:</b> 13.0 ppg	<b>ECD:</b> 13.38 ppg	<b>ESD min/</b> 13.28/13.39 <b>ESD max:</b> ppg <b>(13721 MD)</b>

**Resistivity Analysis:** Resistivity started at 12.3 shale/12.6 sand with a reading of 0.67-0.70 ohmm. As resistivity dropped below 0.65 to 0.55 pore pressure estimation was raised to 12.9 shale 13.2 sand. The resistivity trend began to deviate from the expected at 13200 TVD. By 13400 TVD, the increasing trend became more aggressive. At 13475 TVD, the trend had leveled off.

**Sonic Analysis:** Sonic did not appear to have any character after leaving the shoe – it ranged from 91.5 to 88.5 us. Not using for analysis.

**Additional Observations:** Dxc also showed an increasing trend at approximately the same time the resistivity indicated increasing pore pressure. Background gas also increased from 33 u to 70 units at around 13520 MD. Trace angular cavings noted at 13590 MD lag depth indicating minimal hole breakout, but not underbalanced conditions. A bit of C2 was noted at the connection of 13450 MD

LOT did not break over making it a FIT. The FIT value of 14.6 ppg was above overburden of 14.5 ppg causing uncertainty about its usefulness as a formation evaluation tool. Maximum ECD of 13.7 based on the possible sand frac at the 13250 sand seen on the original hole.

**Pressure Analyst:** Paine

**Date:** Mar 23,2009

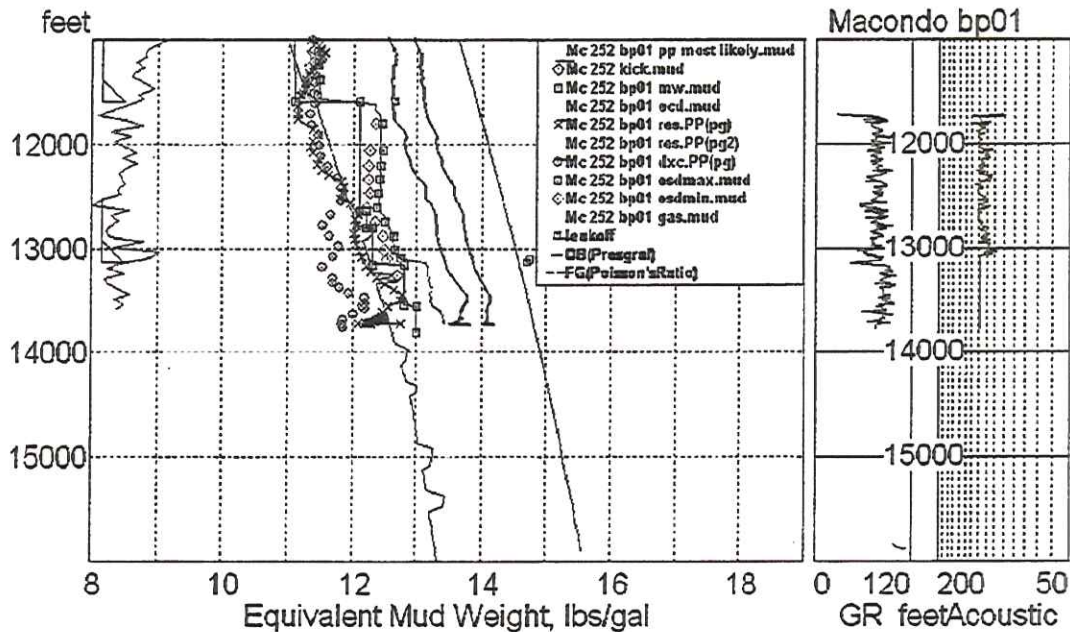




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DAILY PRESSURE PLOT:





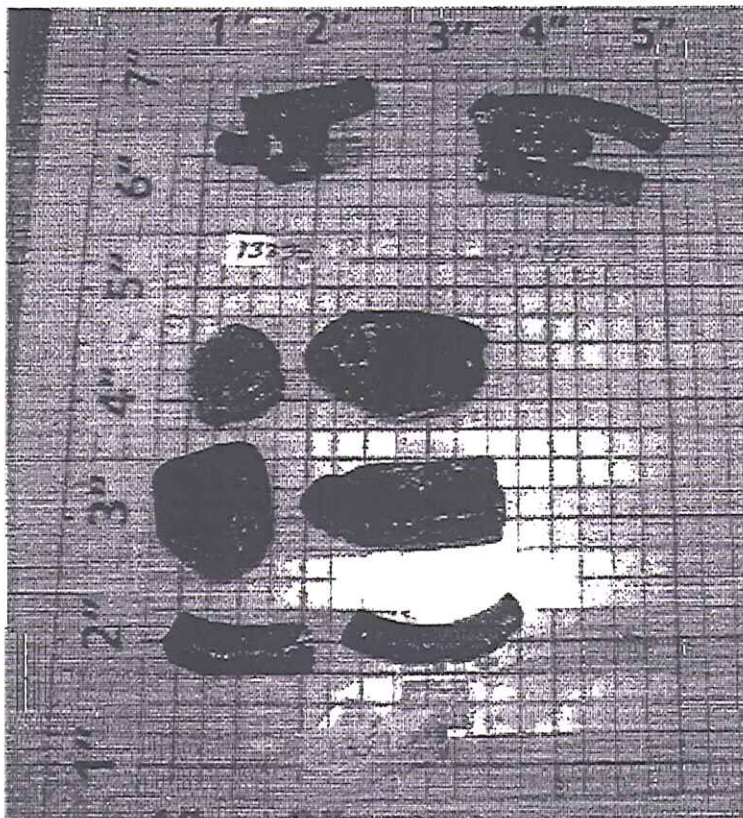
**DAILY PPFG REPORT**  
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API-60-817-4116901  
**Macondo Exploration Well**



**Cuttings/Cavings Analysis:**

Cuttings normal bit cut until last check. Then cavings – possibly knockoff – possibly angular appeared in trace amounts. They coincided with the increased pressure zone. Current interpretation is that they are angular cavings indicating minimal hole breakout. Not an underbalanced condition, but an approaching balance condition.

**Cuttings/Cavings Photograph :**





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**DAILY PPFG REPORT**  
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OCS-G-32306  
API-60-817-4116901  
Macondo Exploration Well



**WELL INFORMATION**

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

**OPERATIONS SUMMARY**

Tripped in. Performed LOT that gave no meaningful formation data. Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation
13784'	13773'	634'	12 1/4"x14 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 70.52'	PWD: 35.36'	GR: 36.07' Res: 45.24'

**PORE PRESSURE SUMMARY**

<b>Max PP:</b> <b>Open hole</b> 13.2 ppg (13768 ft MD) (12.9 shale)	<b>PP Bottom</b> 13.2 ppg <b>hole</b>	<b>Last FIT:</b> 14.60 ppg <b>13134 ft</b> (surf) <b>TVD</b> 14.71 ppg (dh)
<b>Surf MW:</b> 13.0 ppg	<b>ECD:</b> 13.38 ppg	<b>ESD min/</b> 13.28/13.39 <b>ESD max:</b> ppg <b>(13721 MD)</b>

**Resistivity Analysis:** Resistivity started at 12.3 shale/12.6 sand with a reading of 0.67-0.70 ohmm. As resistivity dropped below 0.65 to 0.55 pore pressure estimation was raised to 12.9 shale 13.2 sand. The resistivity trend began to deviate from the expected at 13200 TVD. By 13400 TVD, the increasing trend became more aggressive. At 13475 TVD, the trend had leveled off.

**Sonic Analysis:** Sonic did not appear to have any character after leaving the shoe - it ranged from 91.5 to 88.5 us. Not using for analysis.

**Additional Observations:** Dxc also showed an increasing trend at approximately the same time the resistivity indicated increasing pore pressure. Background gas also increased from 33 u to 70 units at around 13520 MD. Trace angular cavings noted at 13590 MD lag depth indicating minimal hole breakout, but not underbalanced conditions. A bit of C2 was noted at the connection of 13450 MD

LOT broke over at 1480 psi which was above overburden of 14.5 ppg causing uncertainty about its usefulness as a formation evaluation tool. Maximum ECD of 13.7 based on the possible sand frac at the 13250 sand seen on the original hole.

Pressure Analyst: Paine

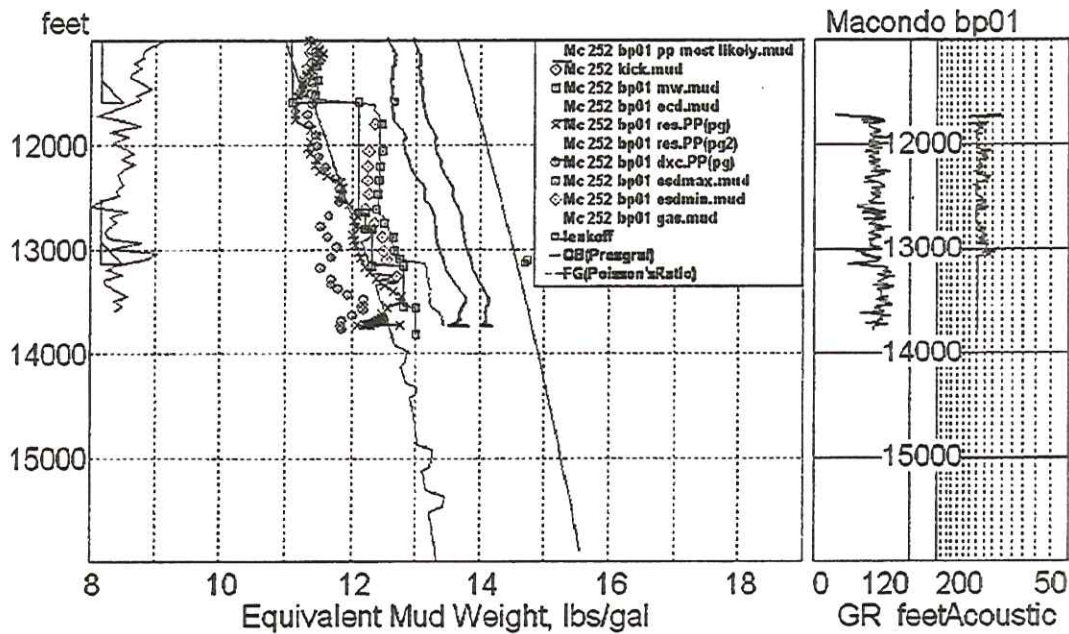
Date: Mar 23,2009



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DAILY PRESSURE PLOT:







# DAILY PPFG REPORT

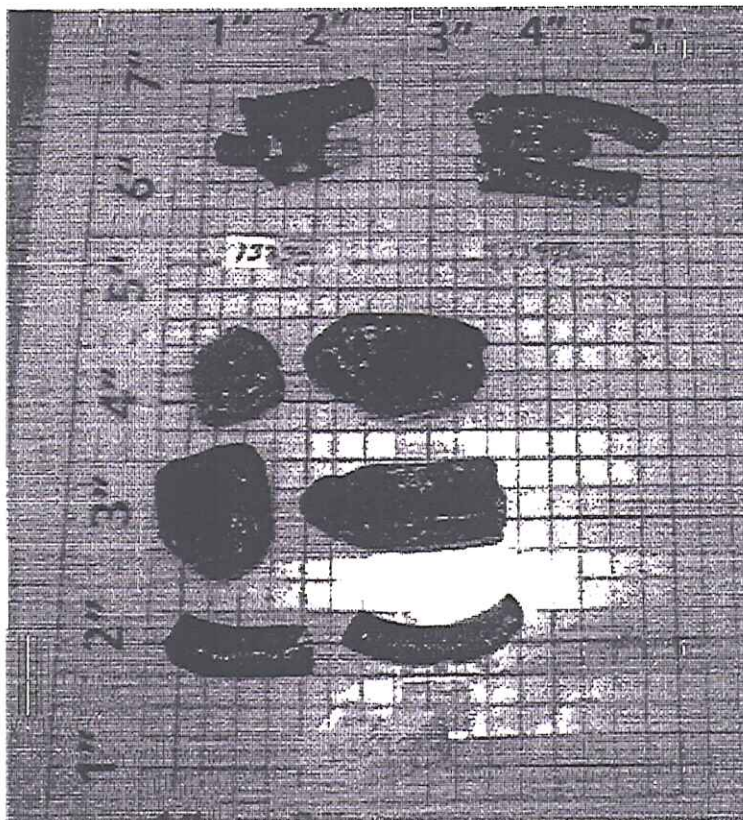
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API-60-817-4116901  
Macondo Exploration Well



## Cuttings/Cavings Analysis:

Cuttings normal bit cut until last check. Then cavings – possibly knockoff – possibly angular appeared in trace amounts. They coincided with the increased pressure zone. Current interpretation is that they are angular cavings indicating minimal hole breakout. Not an underbalanced condition, but an approaching balance condition.

## Cuttings/Cavings Photograph :







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**DAILY PFIG REPORT**  
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OCS-G-32306  
API-60-817-4116901  
Macondo Exploration Well



**WELL INFORMATION**

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

**OPERATIONS SUMMARY**

Drilled to casing point.

MD	TVD	Progress (24 hr)	Hole size	Current formation
15113'	15103'	1329'	12 1/4"x14 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 70.52'	PWD: 35.36'	GR: 36.07' Res: 45.24'

**PORE PRESSURE SUMMARY**

Max PP: Open hole (15113 ft MD)	13.5 ppg (13.2 shale)	PP Bottom hole	13.5 ppg	Last FIT: 13134 ft TVD	14.60 ppg (surf) 14.71 ppg (dh)
Surf MW:	13.3 ppg	ECD:	13.71 ppg	ESD min/ ESD max: (14932 MD)	13.47/13.71 ppg

**Resistivity Analysis:** Resistivity remained between 0.6 and 0.75 throughout the day. Slight change at 14430 ft TVD warranted the increase in pore pressure estimate from 13.1 to 13.2 ppg. (13.5 sand). With more data, that response was suppressed through data averaging/filtering.

**Sonic Analysis:** Sonic was supplied in bursts when reprocessed in town. It followed the resistivity response.

**Additional Observations:**

Background gas ran in the 30s most of the day. It increased a bit to the 50s-60s, but when the mudweight was increased from 13.2 to 13.3 ppg the background gas returned to the 30s. No connection gases noted. No cavings noted except for an isolated angular piece. Dxc remained flat throughout the day.

Pressure Analyst: Paine

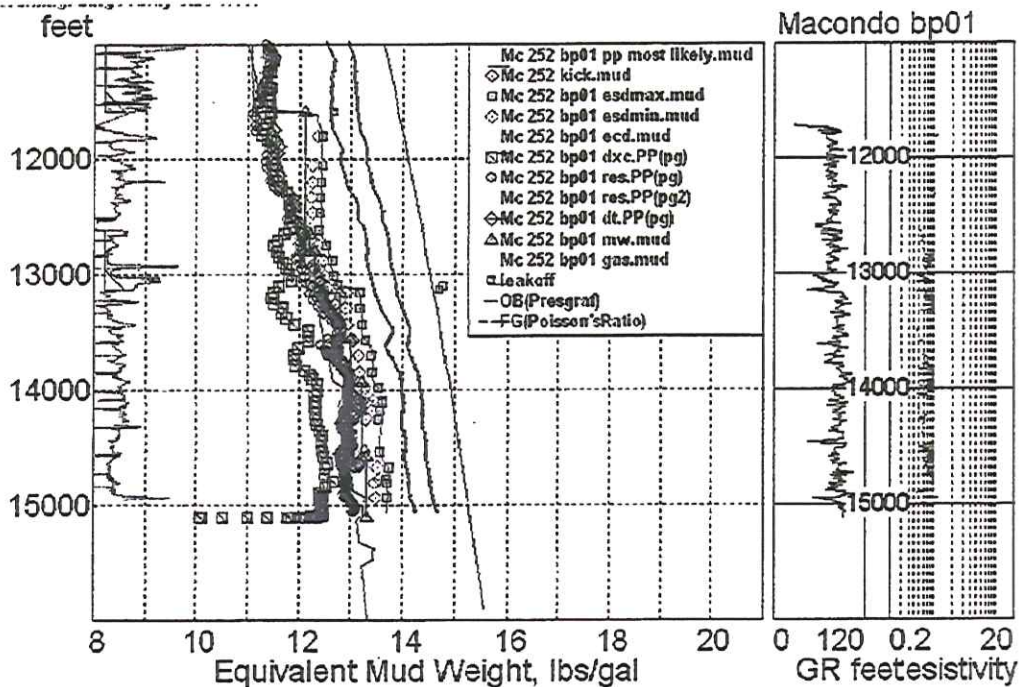
Date: Mar 24, 2009



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DAILY PRESSURE PLOT:







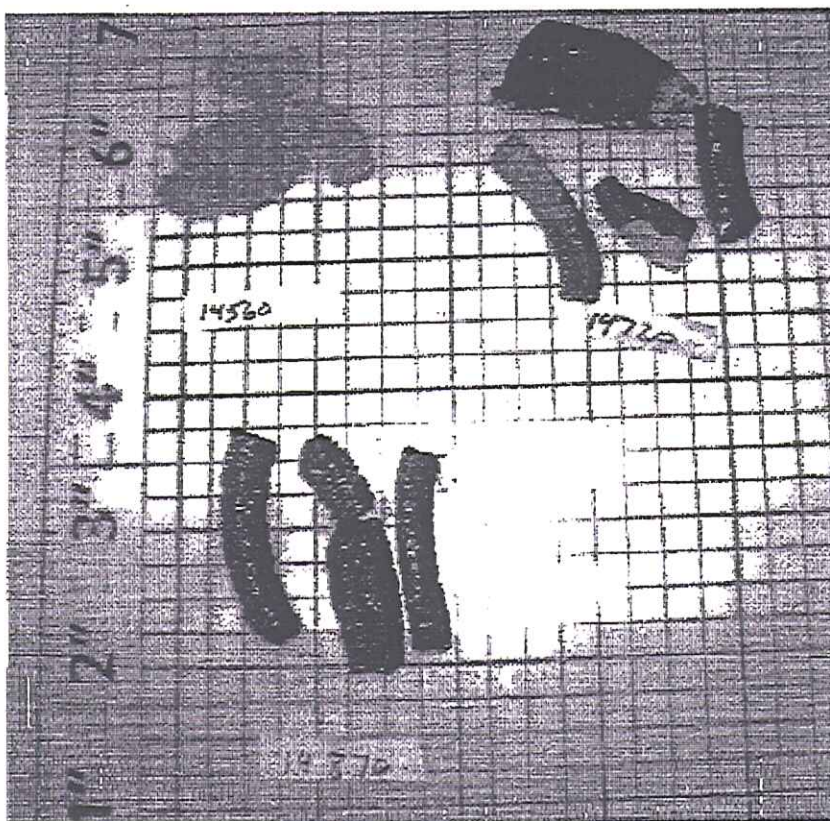
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Cuttings/Cavings Analysis:

Cuttings normal throughout the day. Isolated chunky angular caving. No real indicators of hole instability.

Cuttings/Cavings Photograph :





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**WELL INFORMATION**

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

**OPERATIONS SUMMARY**

Drilled to casing point.

MD	TVD	Progress (24 hr)	Hole size	Current formation
15113'	15103'	1329'	12 1/4"x14 1/2"	Calcareous Shale/Siltstone
Sensor Distances		Sonic: 70.52'	PWD: 35.36'	GR: 36.07' Res: 45.24'

**PORE PRESSURE SUMMARY**

<b>Max PP:</b> <b>Open hole</b> 13.5 ppg (15113 ft (13.2 shale) MD)	<b>PP Bottom</b> <b>hole</b> 13.5 ppg	<b>Last FIT:</b> 14.60 ppg <b>13134 ft</b> (surf) <b>TVD</b> 14.71 ppg (dh)
<b>Surf MW:</b> 13.3 ppg	<b>ECD:</b> 13.71 ppg	<b>ESD min/</b> 13.47/13.71 <b>ESD max:</b> ppg (14932 MD)

**Resistivity Analysis:** Resistivity remained between 0.6 and 0.75 throughout the day. Slight change at 14430 ft TVD warranted the increase in pore pressure estimate from 13.1 to 13.2 ppg. (13.5 sand). With more data, that response was suppressed through data averaging/filtering.

**Sonic Analysis:** Sonic was supplied in bursts when reprocessed in town. It followed the resistivity response.

**Additional Observations:**

Background gas ran in the 30s most of the day. It increased a bit to the 50s-60s, but when the mudweight was increased from 13.2 to 13.3 ppg the background gas returned to the 30s. No connection gases noted. No cavings noted except for an isolated angular piece. Dxc remained flat throughout the day.

Pressure Analyst: Paine

Date: Mar 24, 2009

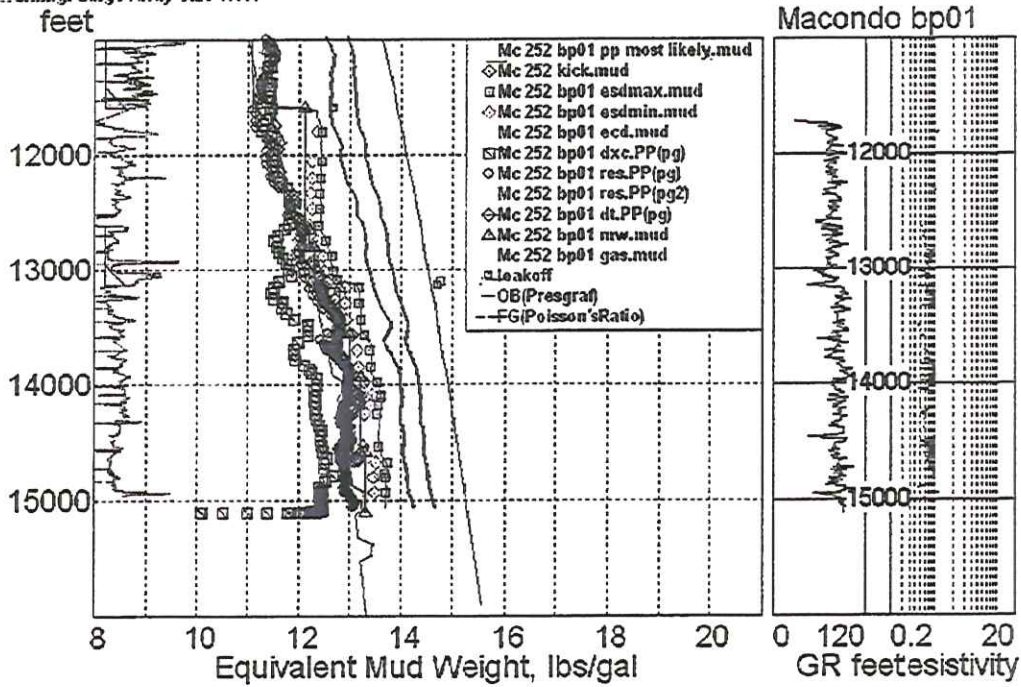


# DAILY PPFG REPORT

Mississippi Canyon Block 252 #1 ST00 BP01  
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## DAILY PRESSURE PLOT:







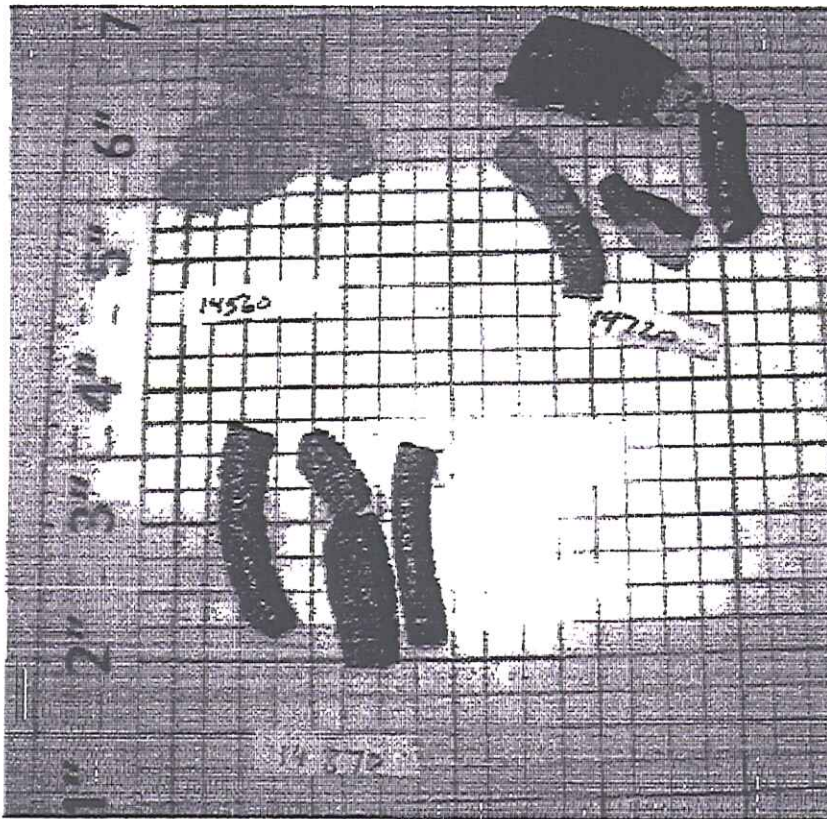
**DAILY PPFG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
API-60-817-4116901  
Macondo Exploration Well



**Cuttings/Cavings Analysis:**

Cuttings normal throughout the day. Isolated chunky angular caving. No real indicators of hole instability.

**Cuttings/Cavings Photograph :**





# DAILY PPF<sub>G</sub> REPORT

Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
API-60-817-4116901  
Macondo Exploration Well



## WELL INFORMATION

Rig : Horizon	RT - MSL : 75 ft	Water Depth : 4992 ft	RT - Mudline : 5067 ft
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## OPERATIONS SUMMARY

LOT, drilling.

MD	TVD	Progress (24 hr)	Hole size	Current formation	
15175'	15164'	72	10 5/8"x12 1/4"	Calcareous Shale/Siltstone	
Sensor Distances FPWD: 98.44'		Sonic: 80.29'	PWD: 41.12'	GR: 41.83'	Res: 51.00'

## PORE PRESSURE SUMMARY

<b>Max PP:</b> <b>Open hole</b> 13.5 ppg (15150 ft (13.2 shale) MD)	<b>PP Bottom</b> <b>hole</b> 13.5 ppg	<b>Last FIT:</b> <b>15092 ft</b> 14.7 ppg (surf) <b>TVD</b> 14.78 ppg (dh)
<b>Surf MW:</b> 13.6 ppg	<b>ECD:</b> 14.05 ppg	<b>ESD min/</b> 13.82/13.96 <b>ESD max:</b> ppg <b>(15081 MD)</b>

**Resistivity Analysis:** No new data. Tool still in casing.

**Sonic Analysis:** Updated data with recorded data. No new data this hole section as the tool is still in casing. Last hole section sonic trend followed resistivity trend.

**Additional Observations:** The LOT initial breakover coincided with the closure pressure and was 905 psi or 14.5 ppg surf. The maximum LOT pressure calculated to 14.67 ppg. surf and is being reported as a 14.7 ppg surf. The MWD pulsed up a 14.786 dh.

Max gas from the 10 ft of new formation at 15123 MD was 374 units and dropped back to 46 units background before the higher mudweight was circulated around. Background gas after the 13.6 surf mud weight was 30 units.

**Pressure Analyst:** Paine

**Date:** Mar 28, 2009

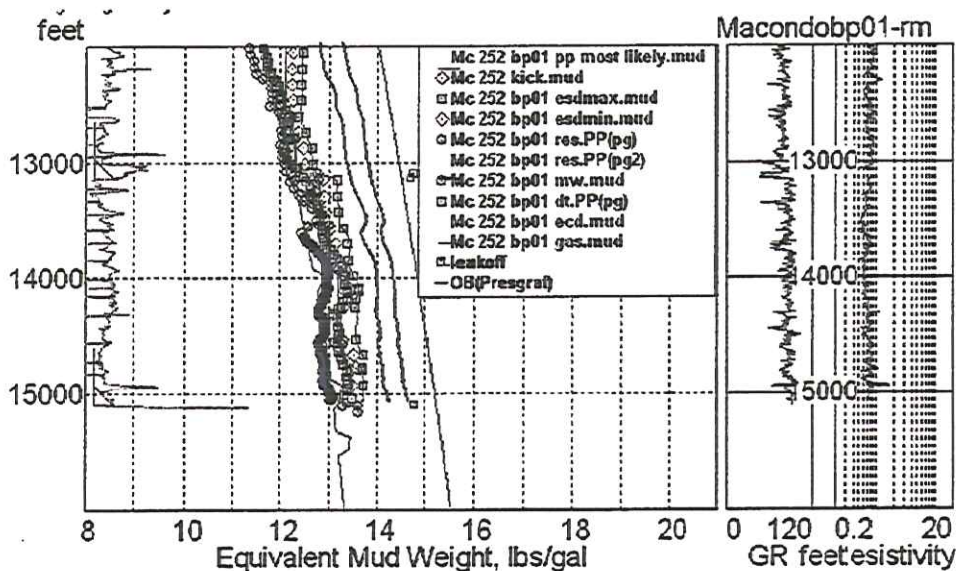


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Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
API-60-817-4116901  
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## DAILY PRESSURE PLOT:







# DAILY PPFPG REPORT

Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
API-60-817-4116901  
Macondo Exploration Well



## WELL INFORMATION

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

## OPERATIONS SUMMARY

Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation	
16460'	16449'	1285'	10 5/8"x12 1/4"	Calcareous Shale/Siltstone	
Sensor Distances FPWD: 98.44'		Sonic: 80.29'	PWD: 41.12'	GR: 41.83'	Res: 51.00'

## PORE PRESSURE SUMMARY

<b>Max PP:</b> <b>Open hole</b> 14.1 ppg (15150 ft (13.8 shale) MD)	<b>PP Bottom</b> <b>hole</b> 14.1 ppg	<b>Last FIT:</b> <b>15092 ft</b> <b>TVD</b> 14.7 ppg (surf) 14.78 ppg (dh)
<b>Surf MW:</b> 13.9 ppg	<b>ECD:</b> 14.32 ppg	<b>ESD min/</b> <b>ESD max:</b> 13.96/14.19 <b>(16252 MD)</b> ppg

**Resistivity Analysis:** Resistivity trended down from 0.71 to 0.58 ohmm throughout the day. This corresponded with a steady increase in pore pressure from 13.2 to 14.1 ppg.

**Sonic Analysis:** Sonic ranged from 109 to 124 us. This corresponded with an increase in pore pressure from 13.2 to 13.6 ppg.

### **Additional Observations:**

No connection gases noted. Background gas ranged from 30 to 40 to 15u. Trace angular cavings noted.

MWD temperature increased 1degF/100 ft steadily last run and this run indicating no change in pore pressure gradients.

Resistivity diverged from the sonic/seismic response. Pore pressure estimate is based on the sonic and seismic responses and then shaded high because of the resistivity response. Dxc was used for qualitative verification.

Pressure Analyst: Paine

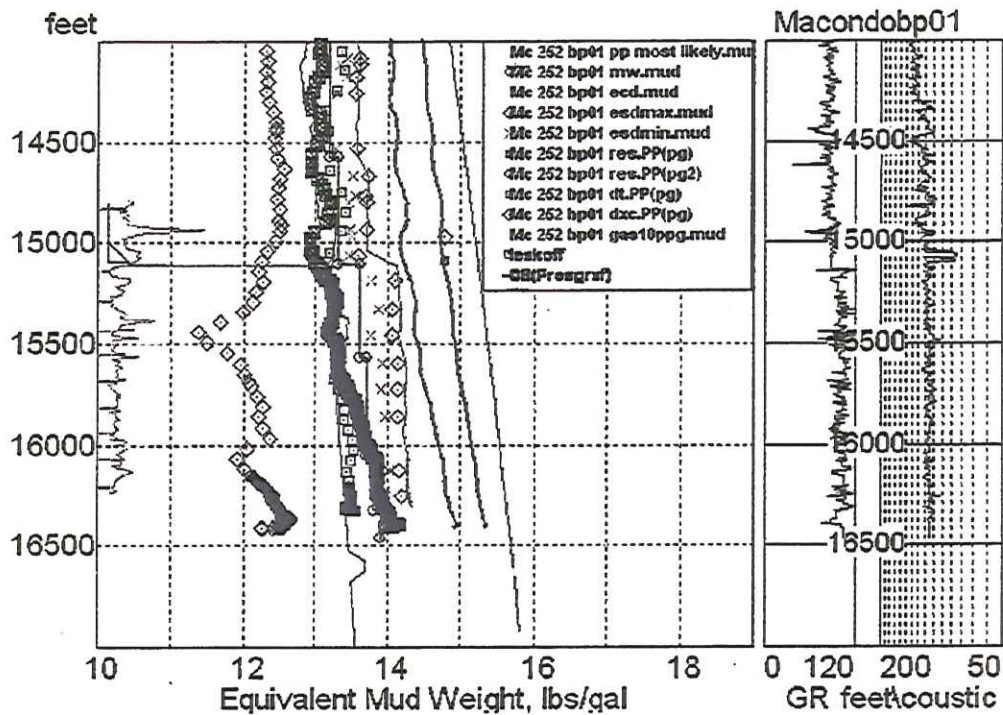
Date: Mar 28,2009



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DAILY PRESSURE PLOT:





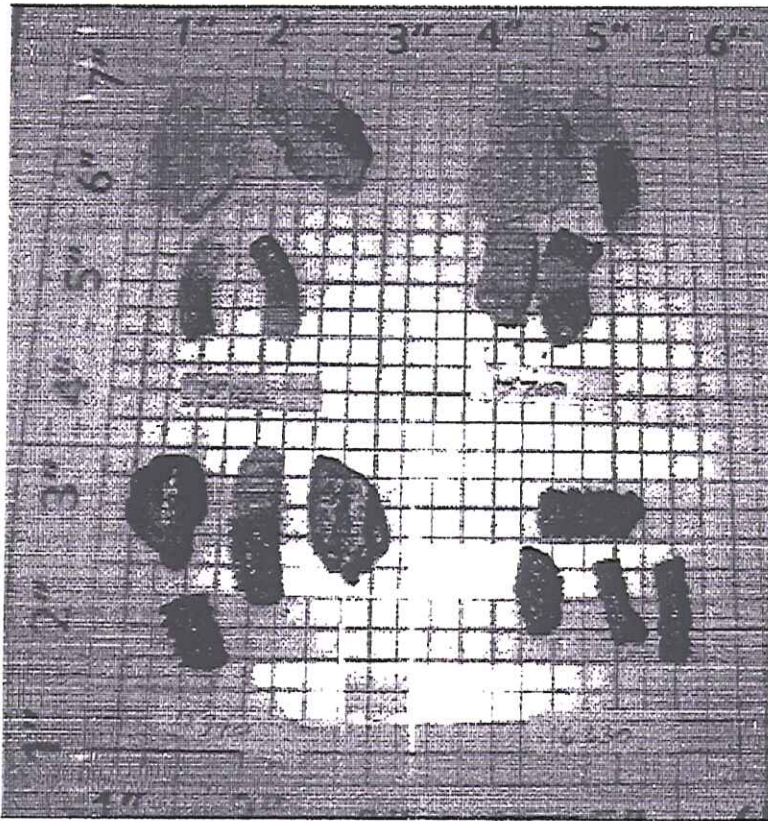
**DAILY PFIG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
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Cuttings/Cavings Analysis:

Cuttings normal throughout the day. Rare angular cavings. No significant indicators of hole instability.

Cuttings/Cavings Photograph :







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**WELL INFORMATION**

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

**OPERATIONS SUMMARY**

Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation	
17761	17750	588	8 1/2" X 9 7/8"	Calcareous Shale/Siltstone	
Sensor Distances FPWD: 85.07'		Sonic: 67.60'	PWD: 34.12'	GR: 34.76'	Res: 42.89'

**PORE PRESSURE SUMMARY**

<b>Max PP:</b> <b>Open hole</b> <b>(17750 ft</b> <b>MD)</b>	14.4 ppg (14.1 shale)	<b>PP Bottom</b> <b>hole</b>	14.4 ppg	<b>Last FIT:</b> <b>17,157 ft</b> <b>TVD</b>	15.98 ppg (surf) 16.22 ppg (dh)
<b>Surf MW:</b>	14.3 ppg	<b>ECD:</b>	15.08 ppg	<b>ESD min/</b> <b>ESD max:</b> <b>(17522MD)</b>	14.65/14.97 ppg

**Resistivity Analysis:** Resistivity ranged from 0.97 to 0.55 ohmm. Increased pore pressure estimate to 14.1 ppg (shale) based on resistivity approaching 0.6 ohmm at 17300 TVD.

**Sonic Analysis:** Sonic was erratic throughout the hole section and will be adjusted in batches in town. From the patterns available when cutting out values less than 94 us and greater than 135 us it appears an increasing pore pressure trend exists.

**Additional Observations:** FIT did not show signs of breakover. 16.22 ppg dh exceeded the OBG and is not useful for determining rock properties. Suspect there is localized additional horizontal pressure causing the high FIT/LOT responses observed in this well.

When a sand at 17720 was crossed, drilling slowed down and losses were noted. Sand FG at that depth calculated to approximately 15.2 ppg. Flow check at connection indicated ballooning. Shut in to monitor pressures to verify ballooning is occurring rather than an influx. A sand FG of 15.0 corresponds to a PP of 13.9-14.0 ppg assuming a PR of 0.35.

Returns appeared to be normal cuttings. Background gas increased from 10 units to 50 but was most often around 30 units once cuttings load evened out. No cavings noted. No connection gas noted.

**Pressure Analyst:** Paine

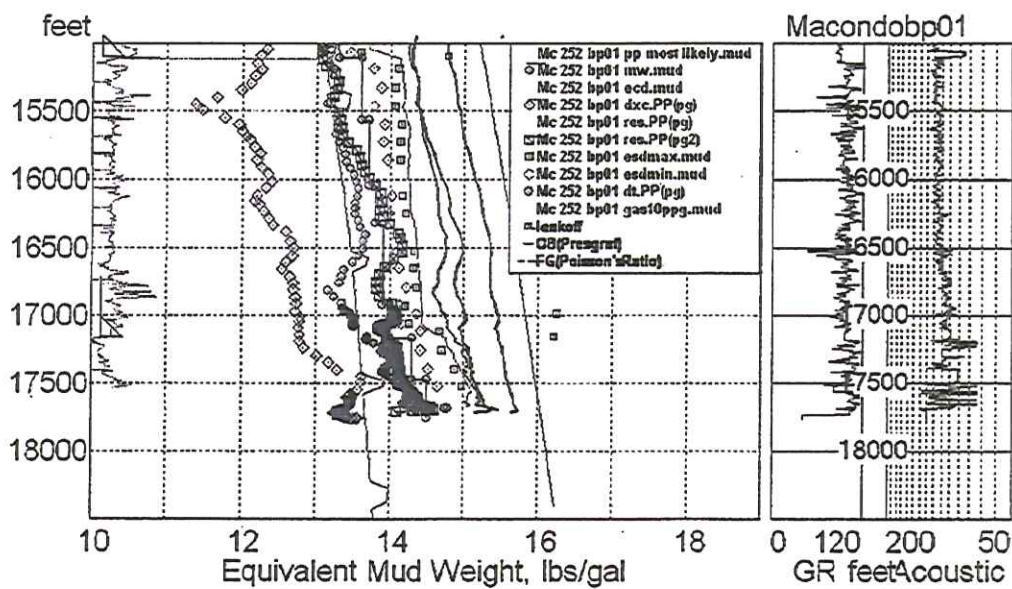
**Date:** Apr. 3, 2010



**DAILY PPFG REPORT**  
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API-60-817-4116901  
Macondo Exploration Well



**DAILY PRESSURE PLOT:**





**DAILY PFIG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP01  
OCS-G-32306  
API-60-817-4116901  
Macondo Exploration Well



**WELL INFORMATION**

Rig : Horizon RT - MSL : 75 ft Water Depth : 4992 ft RT - Mudline : 5067 ft

**OPERATIONS SUMMARY**

Drilled.

MD	TVD	Progress (24 hr)	Hole size	Current formation	
18088	18077	327	8 1/2" X 9 7/8"	Calcareous Shale/Siltstone	
Sensor Distances FPWD: 85.07'		Sonic: 67.60'	PWD: 34.12'	GR: 34.76'	Res: 42.89'

**PORE PRESSURE SUMMARY**

<b>Max PP:</b> <b>Open hole</b> <b>(18088ft MD)</b>	14.2 ppg (13.9 shale)	<b>PP Bottom</b> <b>hole</b>	14.2 ppg	<b>Last FIT:</b> <b>17,157 ft</b> <b>TVD</b>	15.98 ppg (surf) 16.22 ppg (dh)
<b>Surf MW:</b>	14.3 ppg	<b>ECD:</b>	14.89ppg	<b>ESD min/</b> <b>ESD max:</b> <b>(18036 MD)</b>	14.53/14.77 ppg

**Resistivity Analysis:** Resistivity model adjusted to 14.14 ppg GeoTap and 15.0 ppg sand FG. No increasing pore pressure trend noted after the zone from 17300-17500 ft TVD

**Sonic Analysis:** Sonic remained erratic and the adjustments from town were minimal. Sonic model adjusted to 14.14 ppg GeoTap and 15.0 ppg sand FG. No increasing pore pressure trend noted after the zone from 17300-17500 ft TVD

**Additional Observations:** High gas noted from zones where ballooning flow back occurred. No cavings noted.

GeoTap:	TVD	PPG
	17,712.5'	14.15
	17,713.0'	14.16
	17,712.5'	14.14

Expectation is that the pore pressure will increase to 14.0/14.4 at approximately 18500 TVD based on the most likely curve. Neither sonic nor resistivity currently indicate increasing pressure.

Assumption is that a 0.3 centroid remains between the sand and the shale pressures. The current 14.2 ppg is based on rounding up the GeoTap pressures. The current 13.9 ppg shale pressure is based on the pore pressure which would correspond to a sand/marl fracture gradient of 15.0 ppg using a PR of 0.33 - 0.35.

**Pressure Analyst:** Paine

**Date:** Apr. 4, 2010



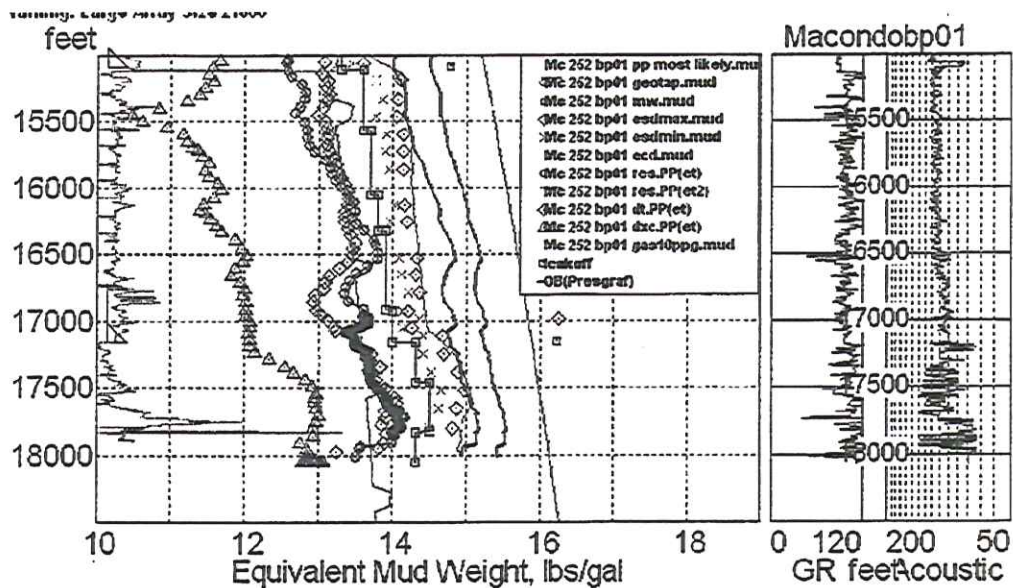


# DAILY PPFPG REPORT

Mississippi Canyon Block 252 #1 ST00 BP01  
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## DAILY PRESSURE PLOT:





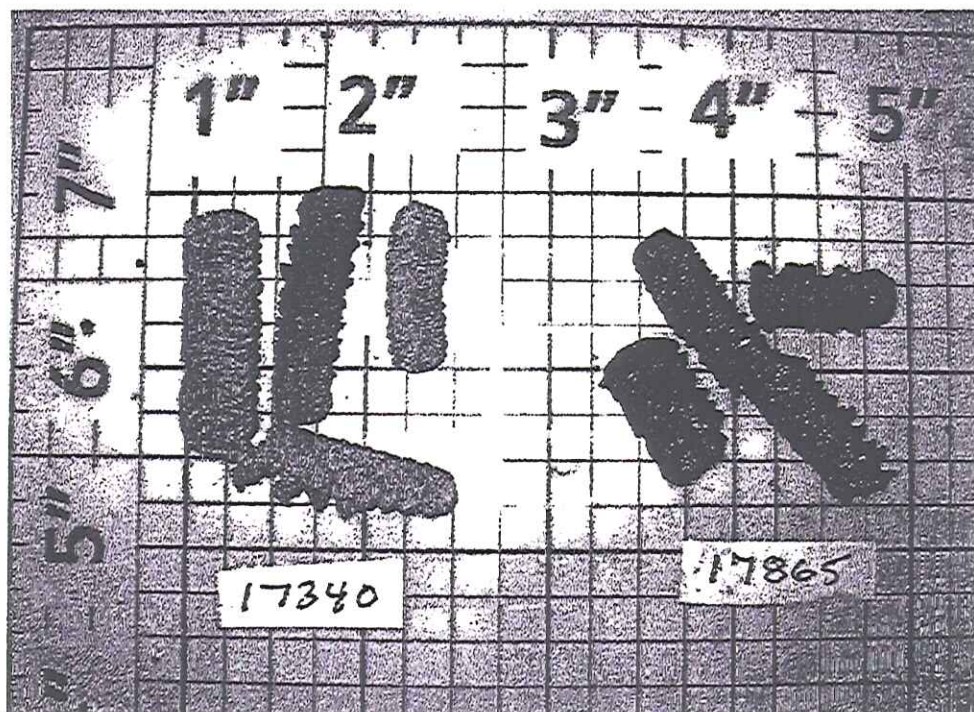
**DAILY PFIG REPORT**  
Mississippi Canyon Block 252 #1 ST00 BP01  
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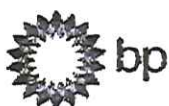
Cuttings/Cavings Analysis:

Cuttings and LCM on the shakers. No cavings.

Cuttings/Cavings Photograph :







## DAILY PFIG REPORT

Mississippi Canyon Block 252 #1 ST00 BP01

OCS-G-32306

API-60-817-4116901

Macondo Exploration Well



### WELL INFORMATION

Rig : Horizon	RT - MSL : 75 ft	Water Depth : 4992 ft	RT - Mudline : 5067 ft
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### OPERATIONS SUMMARY

Drilled. Lost returns.

MD	TVD	Progress (24 hr)	Hole size	Current formation
18,260'	18,249'	172	8 1/2" X 9 7/8"	Calcareous Shale/Siltstone
Sensor Distances FPWD: 85.07' Sonic: 67.60' PWD: 34.12' GR: 34.76' Res: 42.89'				

### PORE PRESSURE SUMMARY

Max PP: Open hole (18088ft MD)	14.2 ppg	PP Bottom hole	12.5 or 14.4 ppg	Last FIT: 17,157 ft TVD	15.98 ppg (surf) 16.22 ppg (dh)
Surf MW:	14.3 - 14.4 ppg	ECD:	14.13 ppg	ESD min/ ESD max: (17943 MD)	14.45/14.71 ppg

**Resistivity Analysis:** No indicators of pressure in resistivity. Most of the points were in a sand. Current resistivity pore pressure 13.9 ppg shale to account for the 15.0 ppg losses.

**Sonic Analysis:** No indicators of pressure in the sonic. Most of the points were out of range. Current sonic pore pressure 13.9 shale to account for the 15.0 ppg losses.

**Additional Observations:** No cavings noted.

GeoTap at 18079 TVD 12.58 ppg which has a corresponding sand FG of 14.4 ppg.

Drilled to 18260. Connection gasses noted at 18037 MD (156 u) and 18221 MD (786 u). Flowbacks all extended and not going to static since the losses at 17750 ft MD were solved. Decision was made to POOH due to the slow drilling rate and raise the MW from 14.3 ppg to 14.4 ppg based on 2 connection gasses. While circulating the 14.4 around, unsuccessfully attempted GeoTap measurement at 18147 MD. Continued to circulate and lost returns. The ECD while circulating was less than the ECD observed while drilling.

Alternative possibility: The sand from 18140 to 18210 was in pressure communication with the upper lobe pressure tested at 12.58. The observed connection gases were related to minimal ballooning and the second connection gas was high as it occurred after drilling the thick sand. The problem with this possibility was that no losses were noted during drilling which makes it hard for the formation to be ballooning.

Pressure Analyst: Paine

Date: Apr. 5, 2010





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DAILY PRESSURE PLOT:

