

M E M O R A N D U M

TEC. 85-407

May 23rd, 1985

TO : CHIEF RESERVOIR ENGINEER *Julio*  
 FROM : JULIO MEGO C.  
 REF. : STATIC PRESSURE GRADIENTS AT WELLS: A3-14, L02-22,  
 L06-16, L07-19, L010-12A, L010-13X, L010-16 and  
 L010-17.

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Attached please find a summary of the results and comments of the static pressure gradients ran in above mentioned wells. The L010 platform wells were shut-down the first days of the month when well L010-9 began to produce. Advantage was taken of this situation in order to record these SBHP, which given the long SI time are significant for reservoir analysis and understanding of well performance.

Please observe that our concern with well L02-22 has been resolved with this BHP, that well L010-12A is possibly draining a small block and that well L06-16 has a water column that confirms log suggestion of a high water saturated region. Since there is the suggestion of plugging this well a good test at maximum drawdown is advisable prior to taking that decision.

Well A3-14 This well is within CC-A3 R.Bravo Reservoir project. Recorded pressure can be considered as representative of the reservoir because of the long shut-in time. Current pressure is 61 psi lower than a previous one recorded in Jan. 10/84, which is indicating that the pressure at CC-A3 R.Bravo Reservoir is still decreasing.

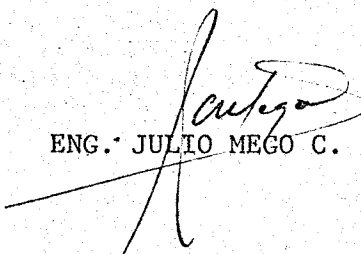
Well L06-22 Well was shut-in 4 days before this survey, therefore, the pressure here recorded can be considered as representative of the reservoir. In order to investigate possibilities of well-bore damage a build-up pressure survey was requested in Apr. 5/82 (TEC. 82-165); however, this one was not run. This SBHP is the first after the initial pressure record. The formation gradient calculated does not indicate a good production potential and suggests that the reservoir volume contacted by this well is very small given the low cumulative production and poor performance of the well. Therefore, it only remains to insure proper lifting of the well even at its reduced capacity. The last service job was carried out in March 1981.

Well L010-12A Initial pressure after its completion was not recorded, current survey is the first BHP of the well. Pressure increased in 4 psi during 10 hours that the bomb was in the well; therefore, recorded pressure can be considered representative of the reservoir pressure. Well is flowing through casing, however, last tests are showing a strong drop production. This well is in the plans for artificial lift assistance.



Well L07-19 There is not information about shut-in time, the record ed pressure is not stabilized, a pressure increase of 2 psi was observed during 30 min. that the bomb was in the well, likewise the WHP when the bomb POH is 12 psi higher than the initial. Presently pressure can be used only for reference.

ENG. JULIO MEGO C.

A large, stylized handwritten signature in dark ink, written over the typed name "ENG. JULIO MEGO C.".

JMC/rmr.

cc: Tech. Supt.  
Prod. Supt.  
Well Files  
GE-2201.61  
GE-2201.69  
GE-2201.87  
GE-2201.89  
GE-2201.96

# RESULTS OF BHP SURVEYS

Well	<u>A3-14</u>	<u>L02-22</u>	<u>L010-12A</u>	<u>L010-13X</u>	<u>L010-16</u>	<u>L010-17</u>	<u>L06-16</u>	<u>L07-19</u>
Date	Apr. 17/85	Apr. 9/85	Apr. 18/85	Apr. 19/85	Apr. 16/86	Apr. 16/85	Apr. 17/85	Apr. 11/85
Interval	2403'-3604'	3981'-5097'	4245'-4399'	4224'-4571'	4008'-3749' 3119'-3456'	3756'-4060'	4980'-6370'	2015'-2151'
Formation	R. Bravo	R. Bravo	Pariñas	Terebrátula	Terebrátula	Pariñas	R. Bravo	Terebrátula
Wellhead pressure, psig	340	219	997	205	327	402	741	288
Pressure at bomb depth, psig(VD ft)	361(2864)	325 (3584)	1127 (3791)	1181(3894)	350 (2361)	880(3285)	1524(5512)	318+ (1852)
Pressure at MPP, psig	361	325	1122 (3750)	1229(4028)	351?(2520)	882(3290)	1266(4911)	318+
Fluid level, VD ft	Gas at bomb depth.	below 3600'	below 3650'	Gas at surface Liquid at 1560'	Gas at bomb depth	Gas at surface Liquid at 1940'	Gas at surface Liquid at 3825'	Gas at surface Liquid below 1900'
Avg. fluid gradient, psi/ft	0.01	0.01	0.03	0.355	0.03	0.03	0.429	0.01
Formation press. gradient, psi/ft	0.13	0.09	0.300	0.305	0.139	0.387	0.258	0.172
Shut-in time,	16 days	4 days	6 days	7 days	4 days	4 days	5 days	N.R.

JMC/rmr.