



FORMATION EVALUATION LOG (MD) WELL - CYBH-055

DISTRITE: **SUCUMBIOS** TYPE: **DESARROLLO** FIELD: **CUYABENO**

UTM SURFACE N: 10'002.747,45 UTM SURFACE E: 358.439,15

UTM BOTTOM N: UTM BOTTOM E:

BOTTOM DEPHT: VERTICAL DEPTH:

COMPANY: PETROAMAZONAS E.P. DRILLING RIG: CCDC- 39

RKB ELEVATION: 806,46 ft 774,96 ft **GROUND ELEVATION:**

BORE HOLE RECORD:

OD: FROM: TO: 26" 42 ft 84 ft 16" 84 ft 4985 ft 12 1/4" 4985 ft 8 1/2"

CASING RECORD:

HOLE SIZE: FROM: TO: 4981 ft 84 ft 20" 4981 ft 13 3/8"

9 5/8" 7" Liner

MUD PROPERTIES:

PHASE 20" GEL PAC 8.5

MUD LOGGING SERVICE INTERVAL:

FROM: TO:

DEPTH: 42 ft DATE: 03-10-2013

LOG PRINT INTERVAL:

FROM: TO:

DEPTH: 42 ft DATE: 03-10-2013

CREW:

PETROAMAZONAS EP:

PETROKEM (J.U.): INGS. OMAR DUARTE, RAÚL DUARTE.

(M.L.): INGS. GUSTAVO AVILÉS, ROSANGEL COA.

LCLost Circulation PVPlastic Viscosity RRB Rerun Bit New Bit NB

DΒ Diamond Bit PP Pump Presure ΥP Yield Point ΤB *Turbine* CBCore Bit MWMud Weight

WOB Weight On Bit V Viscosity МС Mud Cake Diamond Core Bit DCB **RPM** Rotation Per Minute



Claystone



Coal Sahle







Claystone Anhy



Silstone



Limestone



Claystone Foss



Sandstone



Dolomite



Gray Shale



Kaolinitic Sands



Coal



Green Shale



Glauconitic Sands



Extrusive Rock



CalcareousShale



Conglomerate



Intrusive Rock

1:500

| Weight On Bit | | RE F | Rate Of Penetration | CL | Ξ. | 0 | Gas total | | | GEOLOGICAL DESCRIPCION |
|---------------|-------------|------|---------------------|----------|-----|----|-----------|-------|-----|------------------------|
| 0 | Klbs 50 | | 400 Ft/Hr 0 | <u> </u> | I | 우 | 1 PP | M 100 | 000 | |
| | RPM | ₹KS | | 1 60 | L0G | WO | C, | I | | |
| 0 | Rev/Min 200 | | | (%) | ~ | | 1 PP | M 100 | 000 | |
| | TORQUE | | | | | | C | 2 | | |

| 0 klbs/ft 50 | | | 1 PPM | 100000 | |
|---|--|------|-------------------------------|---------------|---|
| Presion de Bomba | | | C3 | | |
| 0 PSI 5000 | | Н | 1 PPM | 100000 | |
| GPM 0 gal/mir 1500 | | H | Ic4 1 PPM | 100000 | |
| | | | Nc4 | | |
| | | | 1 PPM | 100000 | |
| | | | lc5 | 400000 | |
| | | l | 1 PPM Nc5 | 100000 | |
| | | l | 1 PPM | 100000 | |
| | _ | | | | |
| BIT # 1 26" TRIC / T11 | | | | | PETROKEM L.S. INICIA OPERACIONES GEOLÓGICAS @ 42' PM / 42' PV, 03/10/2013 @ LAS 14:00 HRS. |
| TRIC / T11 JETS: 3 X 15, 1 X 16 IN: 42' MD OUT: 84' MD 1-1-WT-A-E-I-NO-TD WOB: 5-8 klbs DDM: 42 - 0 (4) | | | L | | ARENISCA: CUARZOSA, BLANCA, HIALINA, TRANSPARENTE, SUELTA, MODERADAMENTE DURA, |
| OUT: 84' MD 1-1-WT-A-E-I-NO-TD | | | | + | DE GRANO FINO, SUBREDONDEADA, MODERADO SORTEO, NO SE OBSERVA MATRIZ NI CEMENTO. |
| WOB: 5-8 klbs RPM: 40 + 0 (M) | | | L _ | | |
| TQ: 5 Klbs*ft` ´ | 4. Ft. | | | + | |
| FLW: 120 GPM | j j | | | | |
| 03-OCT-2013 MND: 84' MD / 84' TVD | <i>[</i>] | | + + + + - + + | | LODO: GEL PAC MW: 8.5ppg |
| 04-OCT-2013 | | | | + - + + + | FV: 28 sec/ qt PV: 2 cP PY: 6 lb/100 ft2 |
| | ≩ | | | | GEL: 2/3/3 lb/100 ft2 SOL: % |
| BIT # 2 16" TRIC / T11 JETS: 3 X 15, 1 X 16 IN: 84' MD | | | | + - + + + | PH: 9,5 CL: 100 ppm |
| IN: 84' MD OUT: 396' MD | | | | | MBT: ppb |
| OUT: 396' MD 0-1-WT-G-E-I-NO-BH A WOB: 5-10 klbs RPM: 50 + 0 (M) TQ: 1 Klbs*ft SPP: 28 psi FI W: 480 GPM | | | | | ARCILLOLITA: CAFÉ AMARILLENTA, PÚRPURA, CAFÉ ROJIZA MOTEADA CON CREMA, CAFÉ ROJIZA, |
| WOB: 5-10 klbs | { | | | + | MODERADAMENTE FIRME, IRREGULAR A SUBLOQUES, TEXTURA TERROSA. |
| RPM: 50 + 0 (M) TQ: 1 Klbs*ft | | | . | | |
| TO THE LAW. 100 OI WIN TO THE PROPERTY OF THE | | | | | |
| GYRO SURVEY @ | 8 | | | | |
| 200' MD 200' TVD | | : : | | | |
| INCL: 0.43° AZ: 202.12° | | : : | | | |
| NCL: 0.43° AZ: 202.12° WOB: 8-10 klbs | | | + + + - + | | |
| | | 1 1 | + + + + - + + | | LIMOLITA: GRIS VERDOSA, GRIS CLARA, CAFÉ, |
| TQ: 1 Klbs*ft SPP: 48 psi | | | | | SUAVE, EN SUBBLOQUES, TEXTURA TERROSA, NO CALCÁREA. |
| RPM: 65 + 0 (M) TQ: 1 Klbs*ft SPP: 48 psi FLW: 180 GPM 04-OCT-2013 MND: 310' MD / 310' TVD 05-OCT-2013 GYRO SURVEY @ 300' MD 299.99' TVD INCL: 0.71° AZ: 199.51° | | | ╏╶┤┼╟║╴┤┼╟║╴┼┼ | | |
| 04-OCT-2013 | | | ┠╶┤┼╟║╴┤┼╟║╴┼╿ | + -+ | |
| MND: 310' MD / 310' TVD 05-OCT-2013 | 2 | | + + + + - + | | LODO: GEL PAC |
| | | | + + + + + | | MW: 8.6 ppg FV: 30 sec/ qt |
| GYRO SURVEY @ | ## ## ## ## ## ## ## ## ## ## ## ## ## | | | | PV: 2 cP PY: 9 lb/100 ft2 |
| 300' MD 299.99' TVD | } | | ┠╶┤┼╟║╴┤┼╟║╴┼╿ | | GEL: 3/4/5 lb/100 ft2 SOL: 1.2 % |
| INCL: 0.71° AZ: 199.51° | | | ┠╶┤┼╟║╴┤┼╟║╴┼╿ | | PH: 7,5 CL: 100 ppm |
| WOB: 10-12 klbs RPM: 62 + 0 (M) TQ: 1 Klbs*ft | | | ┠╶┤┼╟║╴┤┼╟║╴┼╿ | | MBT: ppb |
| WOB: 10-12 klbs | } | | ┠╶┤┼╟║╴┤┼╟║╴┼╿ | | |
| | | | | | |
| FLW: 300 GPM | | | ┠╶┤┼╟║╴┤┼╟║╴┼┼ | | ARCILLOLITA: CAFÉ AMARILLENTA, PÚRPURA, CAFÉ ROJIZA MOTEADA CON CREMA, CAFÉ ROJIZA, |
| GYRO SURVEY @ | | | - | | MODERADAMENTE FIRME, IRREGULAR A SUBLOQUES, TEXTURA TERROSA. |
| 382' MD | | | ╏╶┤╏║║╴┤╏║║ ╏╶┤╂╟║╴┤╂╟║╴┼┞ | | |
| INCL: 0.43° AZ: 304.68° | | | ╏╶┤┟╟║╴┤┠╟║╴┼┞ | | |
| | ٠. ا | | | | |



























