

FIG. 1A

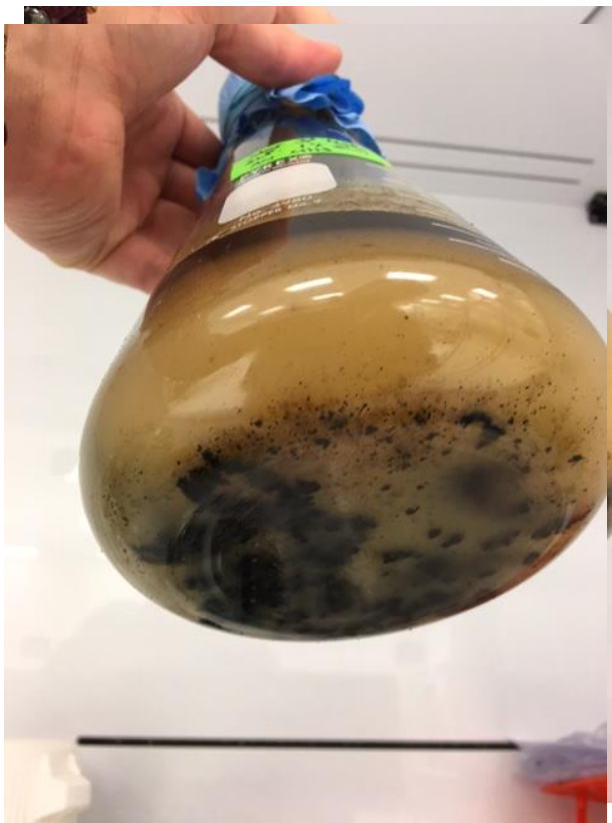


FIG. 1B

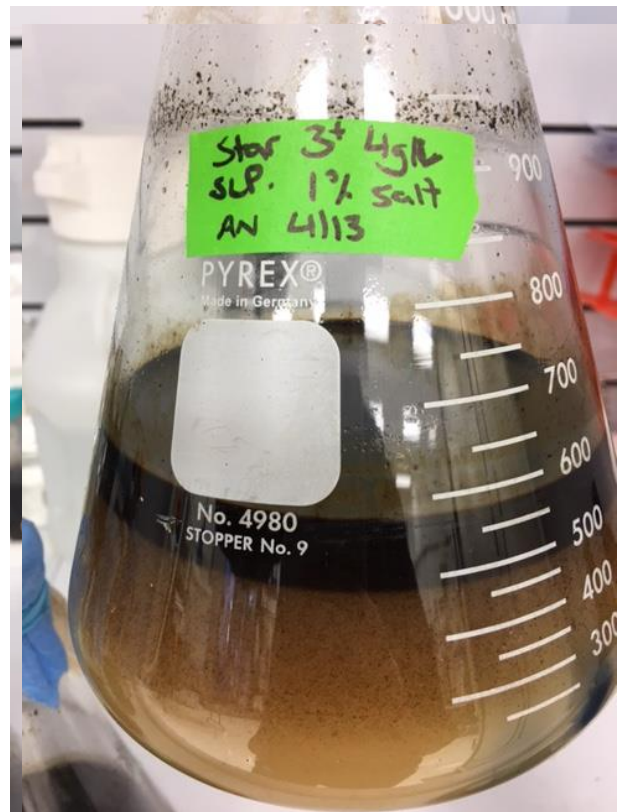


FIG. 2A



FIG. 2B

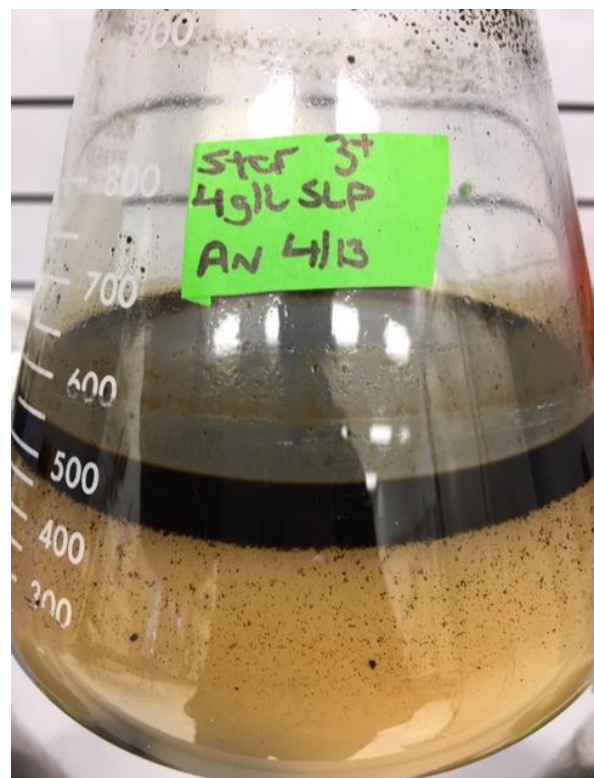


FIG. 3A



FIG. 3B



FIG. 4A

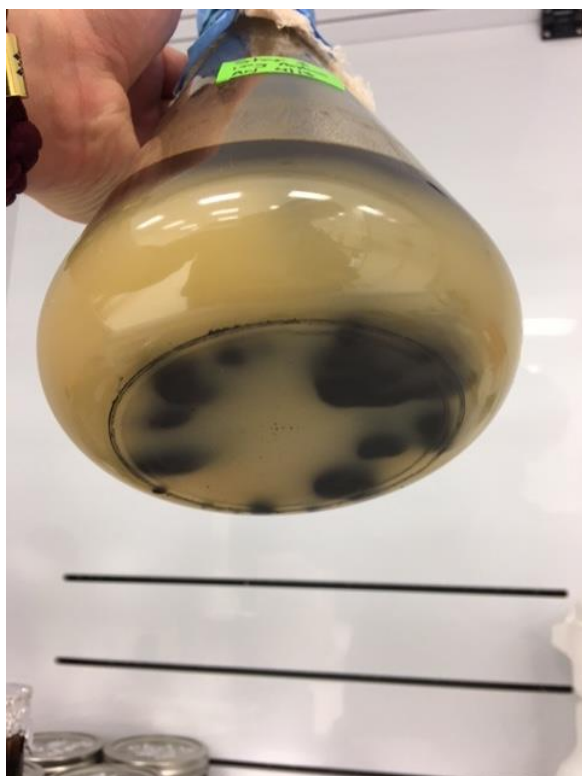


FIG. 4B

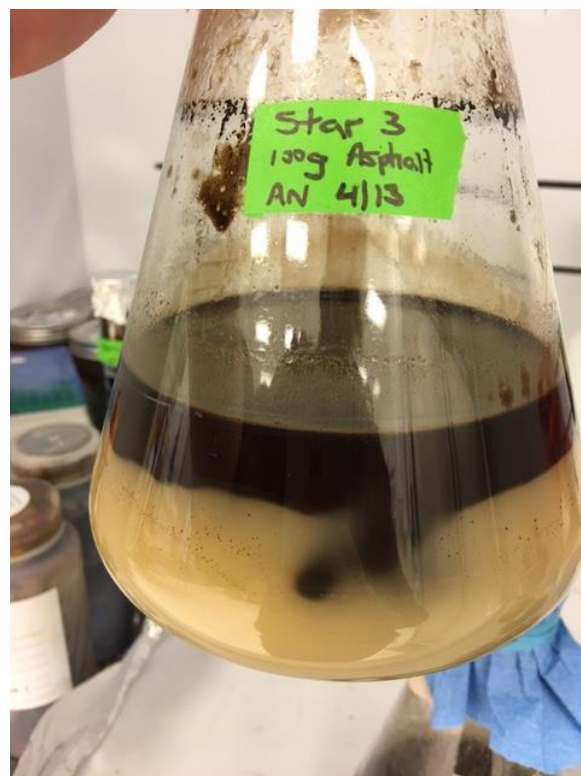


FIG. 5A

FIG. 5B

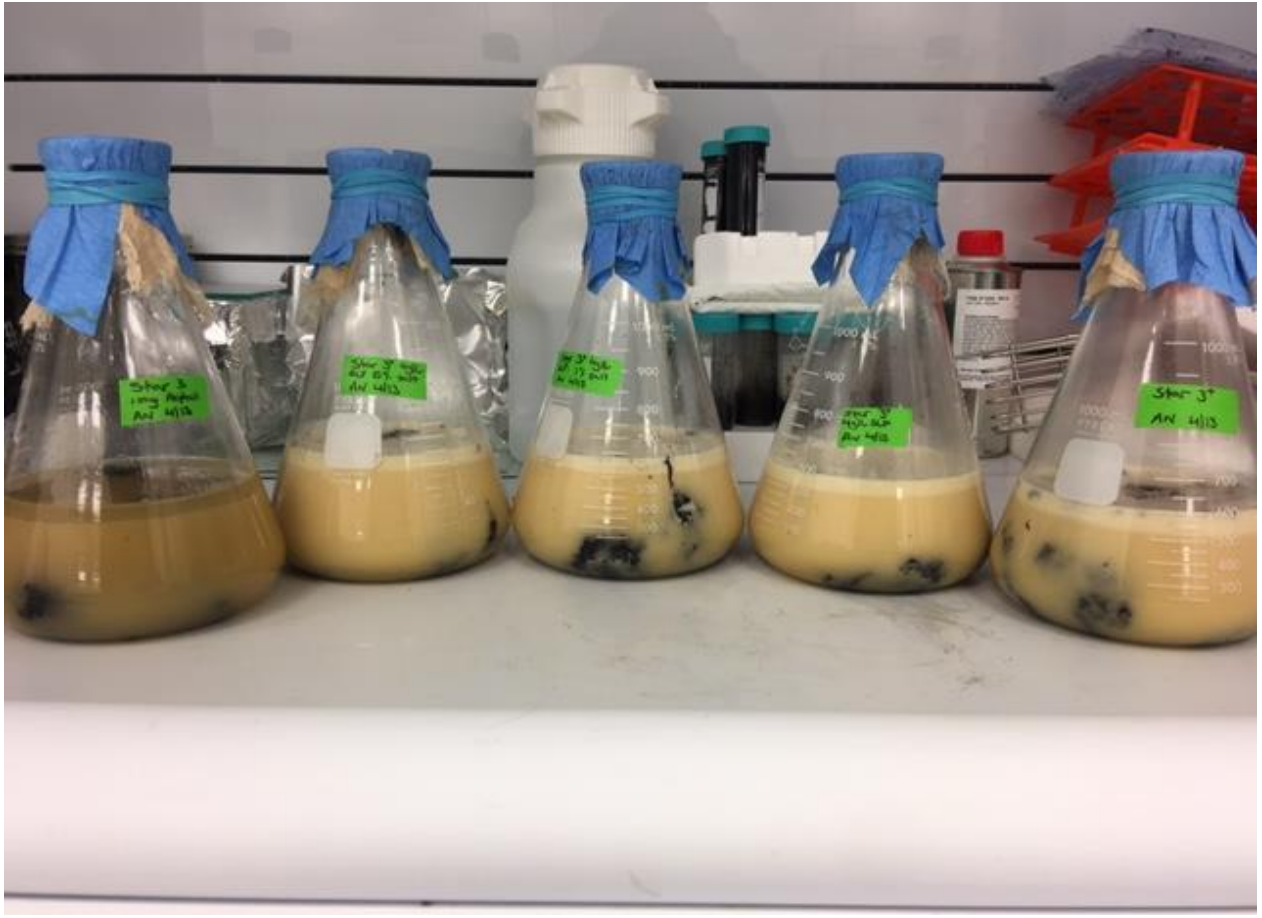


FIG. 6

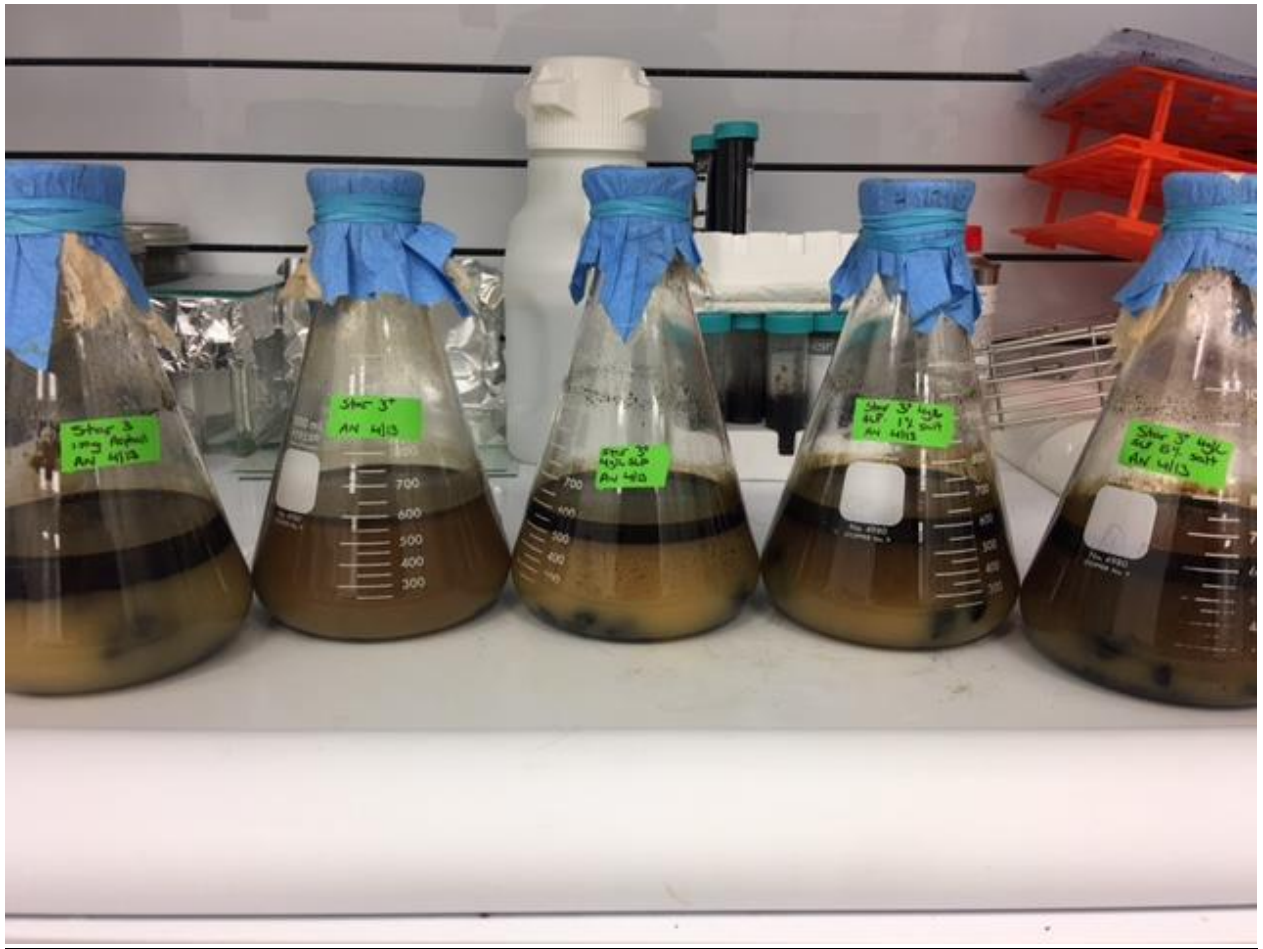


FIG. 7

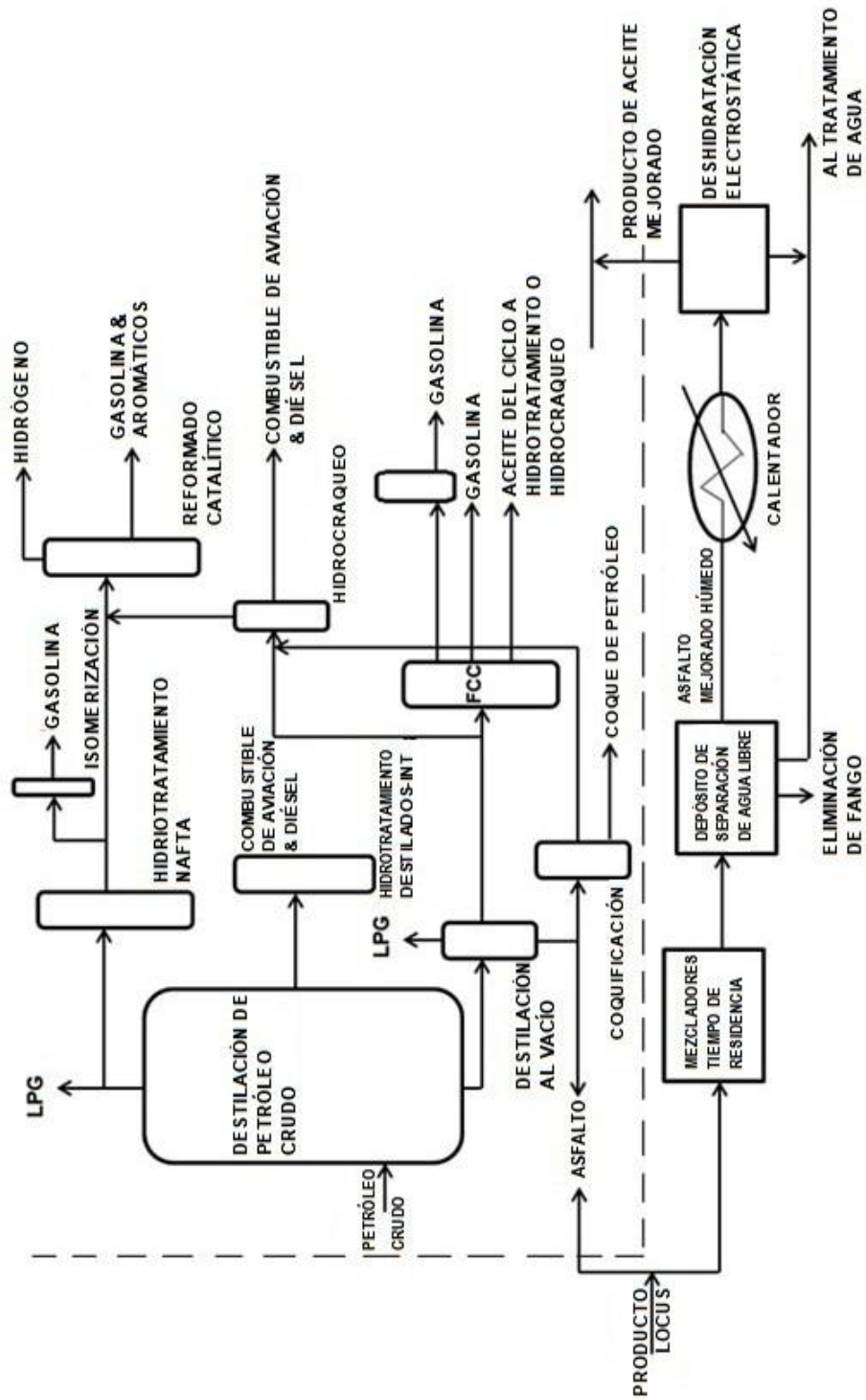


FIG. 8A



FIG. 8B

DIAGRAMA DE FLUJO TÍPICO DE UN PROCESO DE REFINACIÓN



Sin Pérdidas de Hidrocarburos (valor preservado)

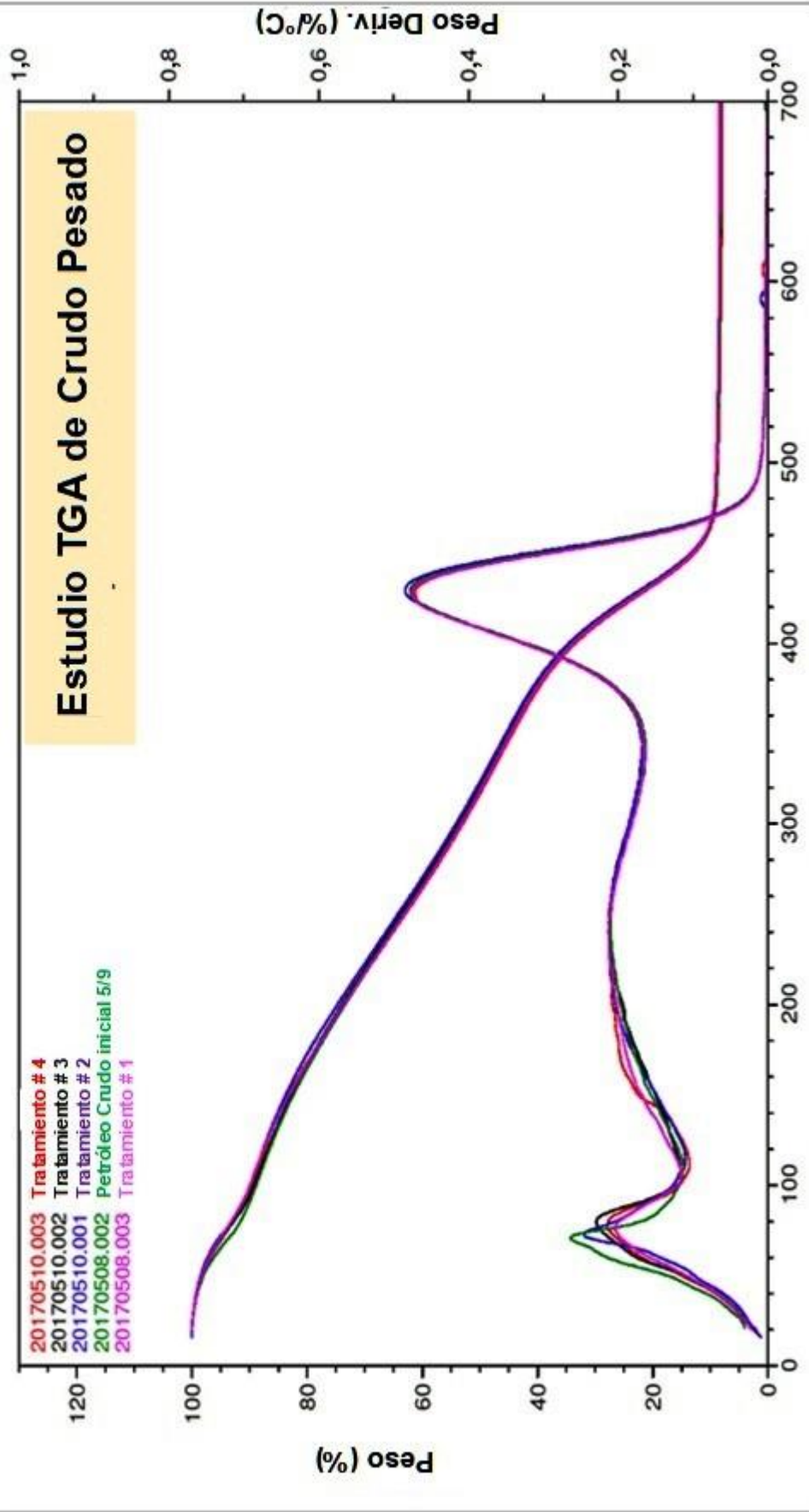


FIG. 10A

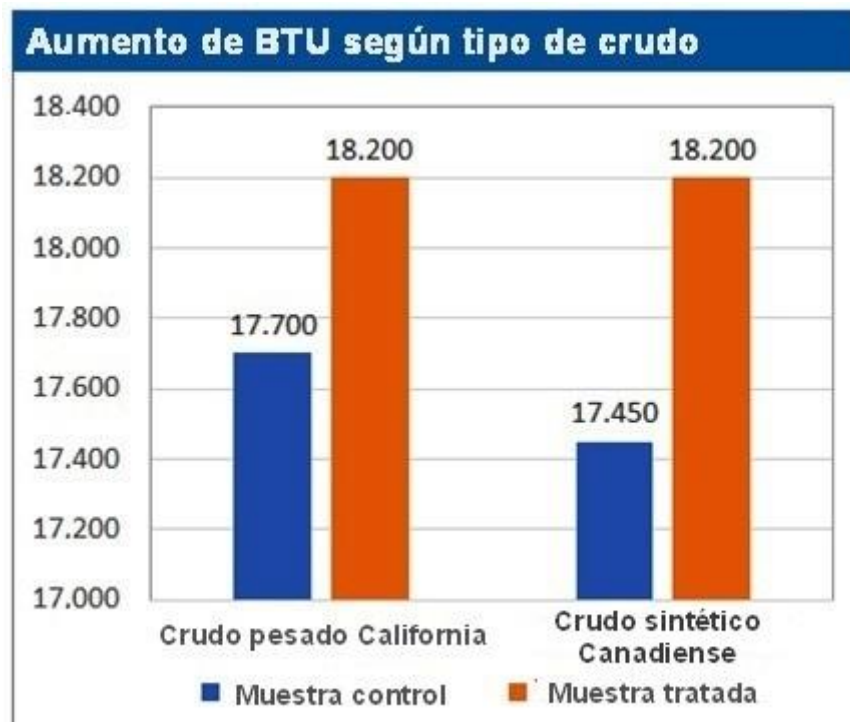


FIG. 10B

fondos de crudo pesado de California		Original	Tratado	% aumento
API		-3,7	7,2	295% aumento
Viscosidad		2,4 Pa. s	0,12 Pa. s	95% disminución
Crudo sintético canadiense		Original	Tratado	% cambio
API		16,2	32,08	100% aumento
Viscosidad		0,455 Pa. s	0,43 Pa.s	91% disminución
Gasolina Mexicana envejecida		Original	Tratado	% cambio
API		7,57	16,7	121% aumento
Viscosidad		2,728 Pa.s	0.0887 Pa.s	68% disminución

FIG. 11

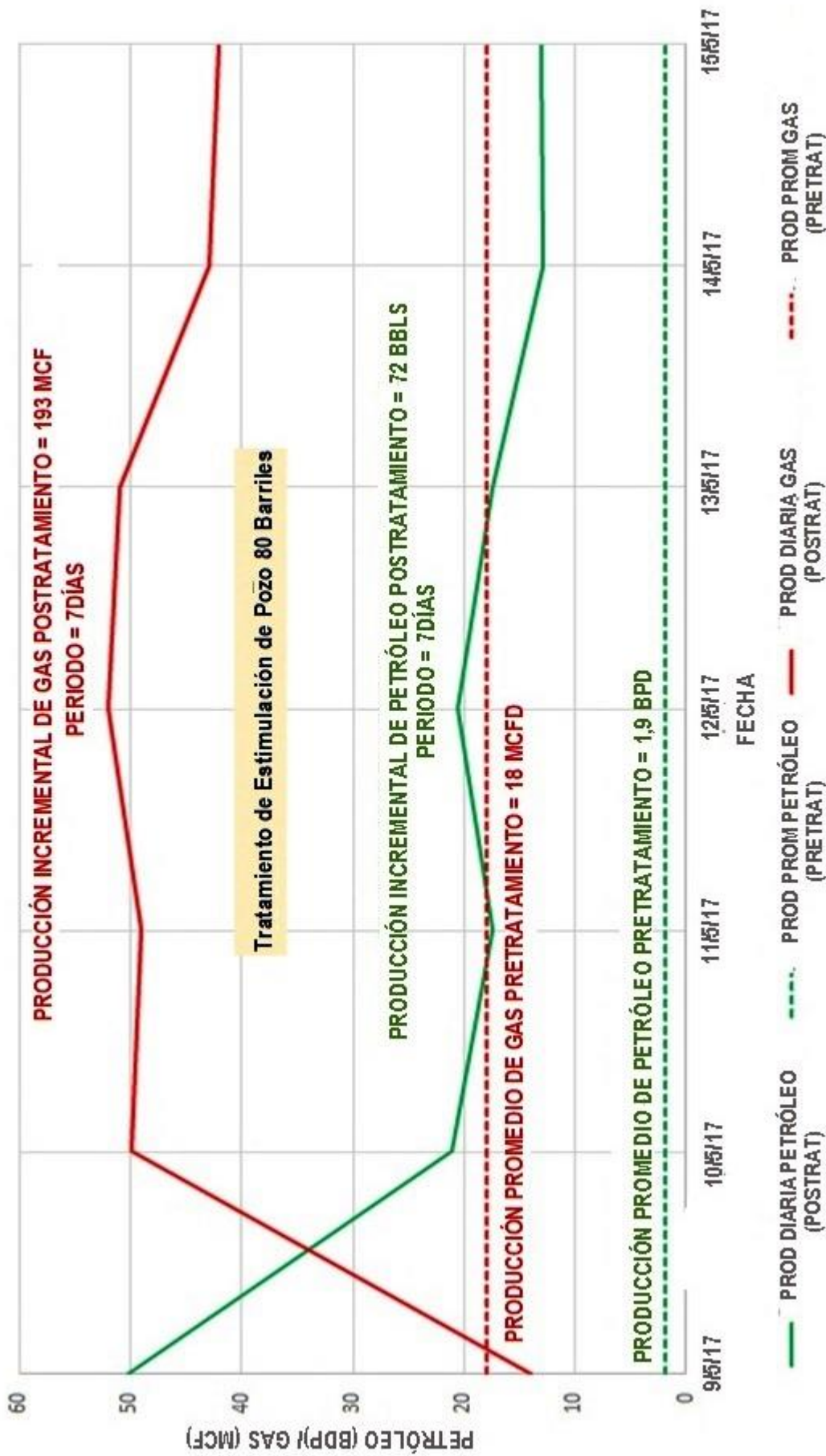


FIG. 12

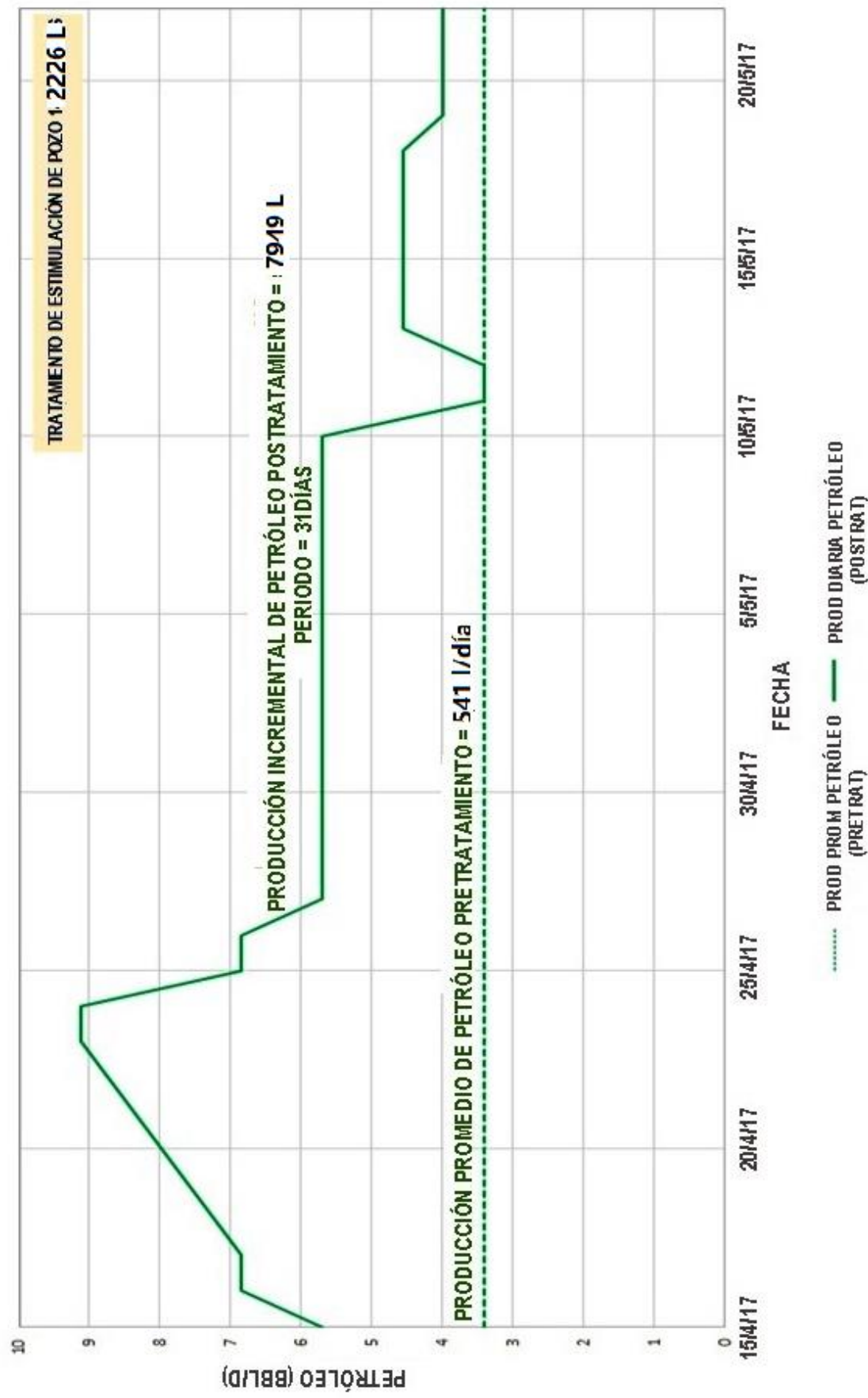


FIG. 13

	Sistema Locus	Agua caliente	Aceite caliente	Solvente
Remueve Parafinas	✓	✓	✓	✓
Remueve Biopelículas Corrosivas	✓	✗	✗	✗
Aumento potencial del ingreso por producción de Gas y Petróleo	✓	✗	✗	✗
Reducción de LOE a través de trabajos de rectificación y tratamientos menos frecuentes	✓	✗	✗	✗
Limpia las líneas de flujo y los fondos de los tanques de almacenamiento como parte del tratamiento	✓	✗	✗	✗
Ambientalmente amigable - No se requiere de una manipulación especial	✓	✓	✗	✗

FIG. 14

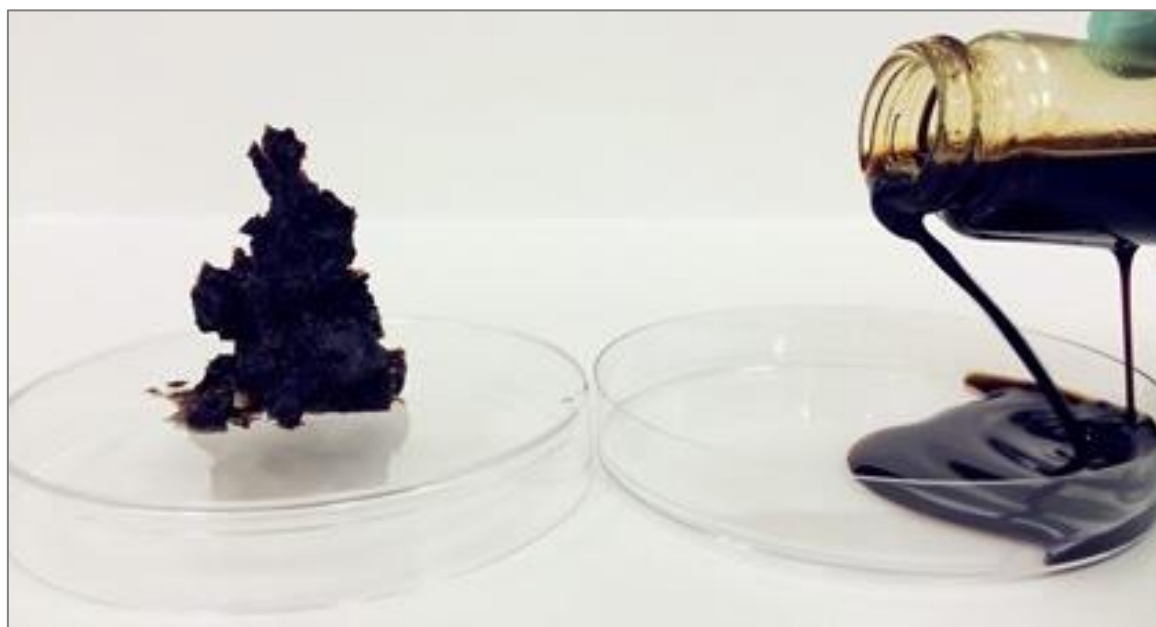


FIG. 15

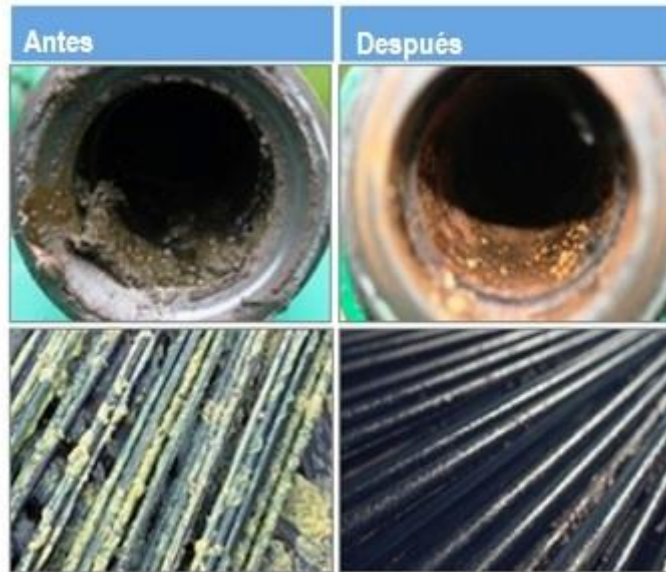


FIG. 16

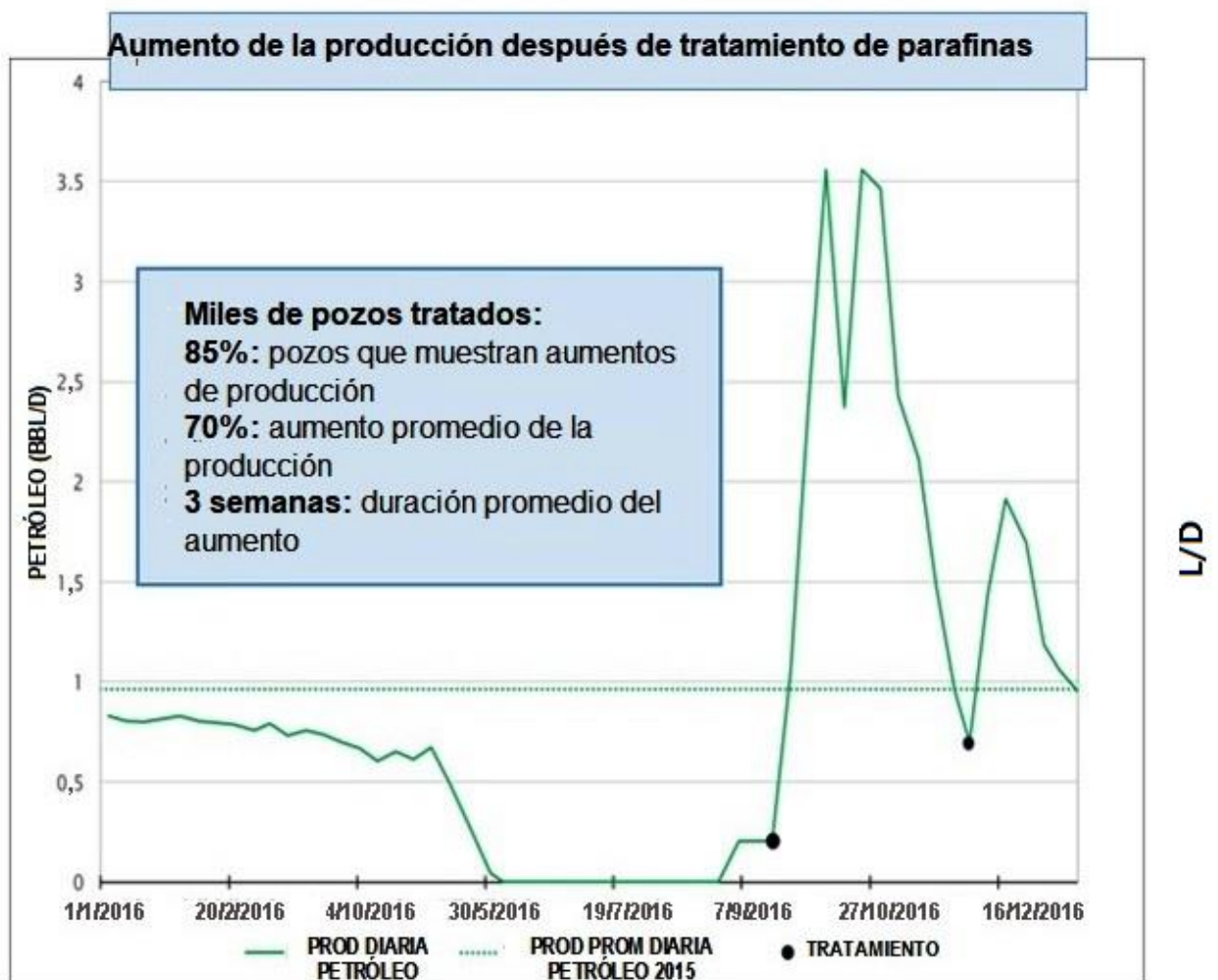


FIG. 17

Resultados; Pozo vertical, Ninveh Sand, PA

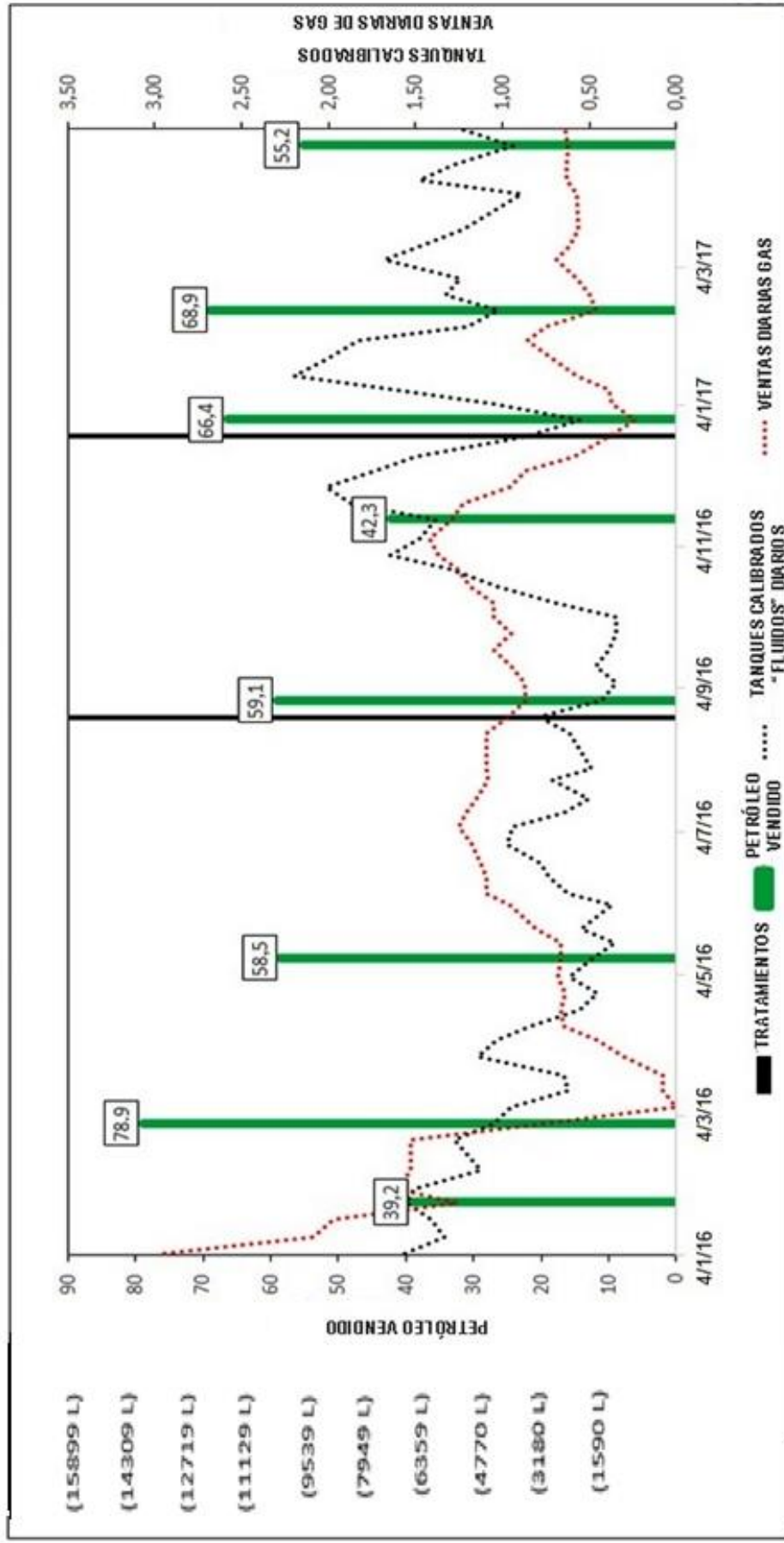


FIG. 18

Resultados; Pozo vertical, Ninveh Sand, PA

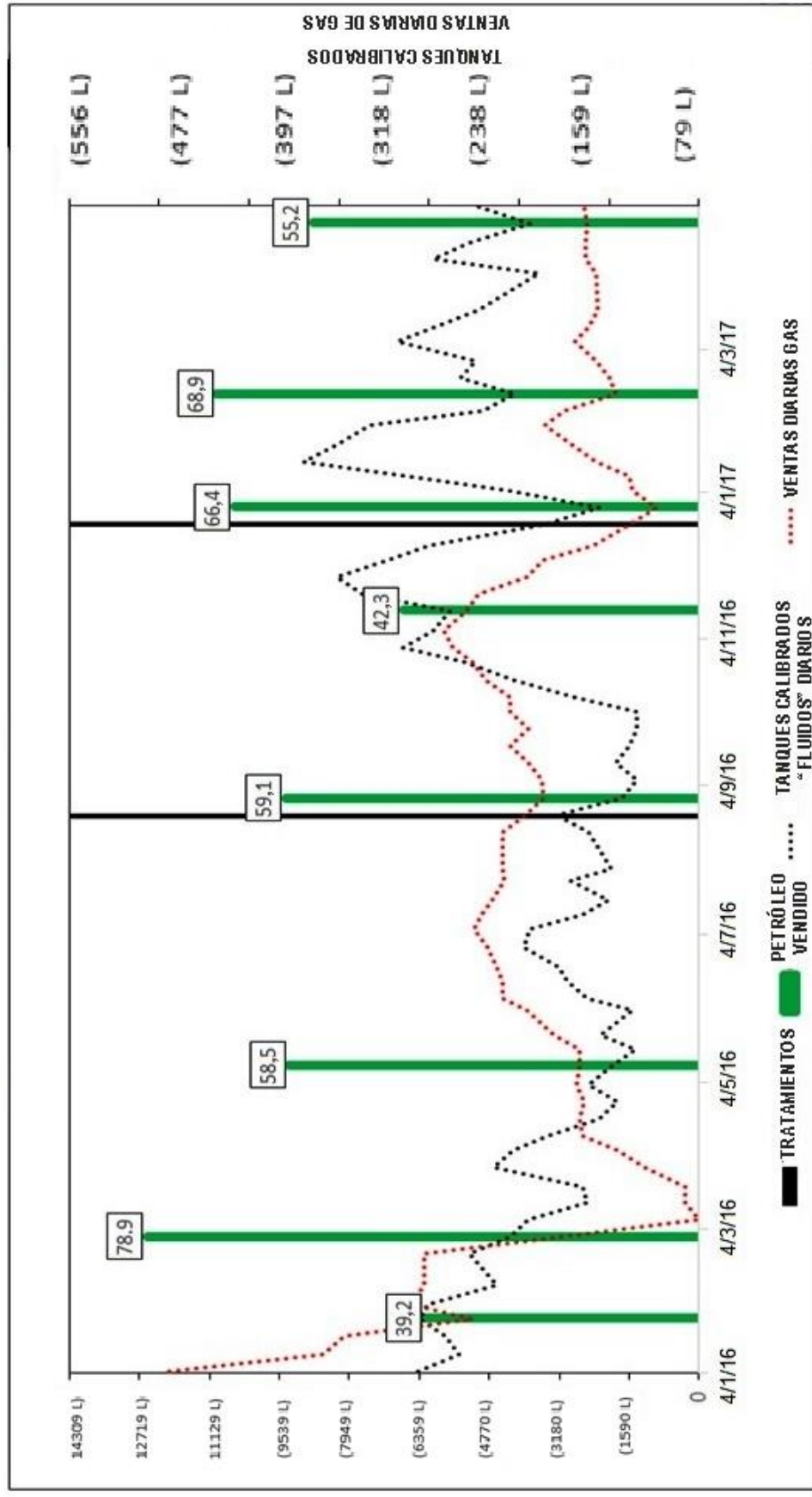


FIG. 19

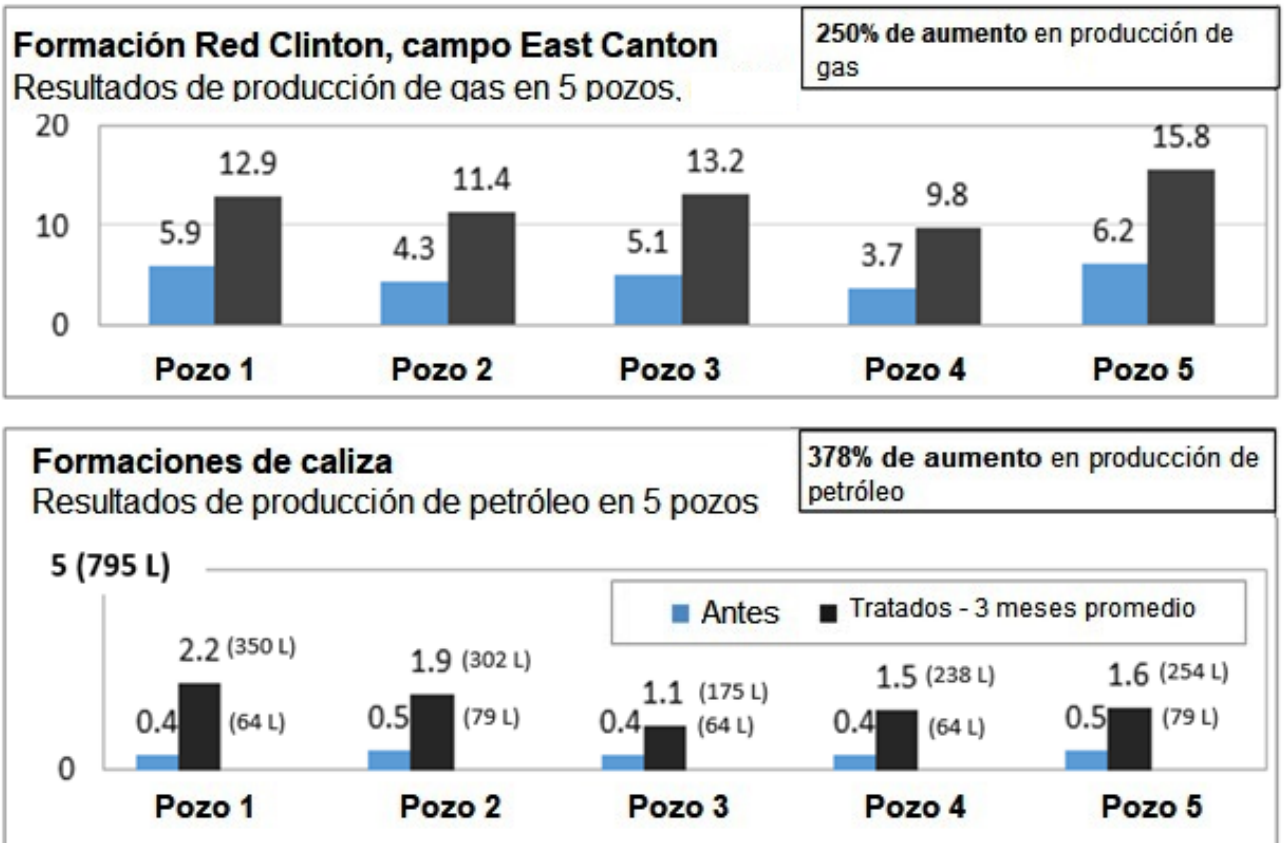


FIG. 20

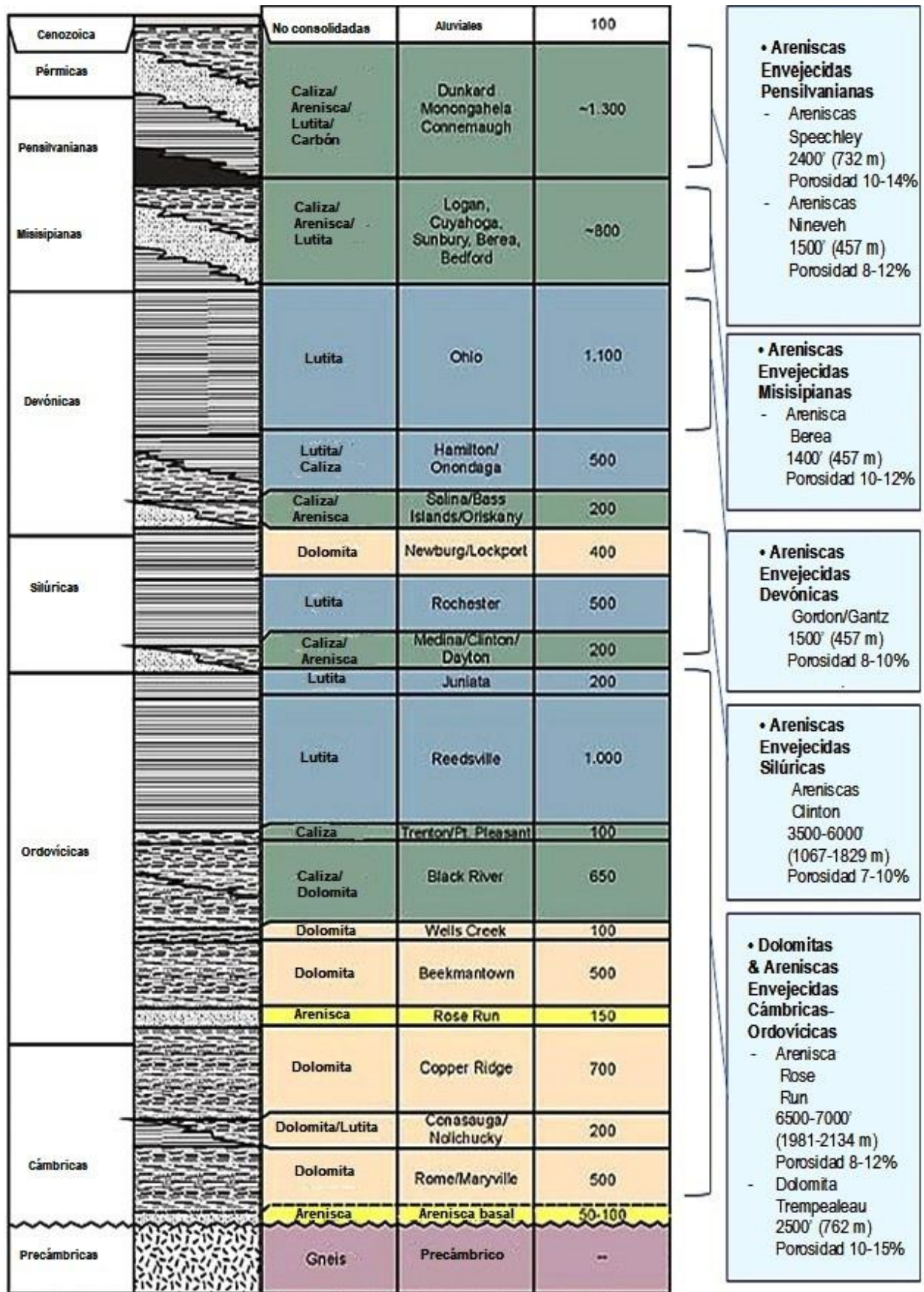


FIG. 21