

FORMATION INTERVAL TESTS

Test Data

Eleven tests were run in the Natomas of India BB-A-1R and the results are summarized as follows:

<u>FIT NO.</u>	<u>DEPTH</u>	<u>RECOVERY</u>	<u>REMARKS</u>
✓ 1	13002 openhole 4055.5 m	Recovered 0.4 cu. ft. gas and trace of water ISIP = - IFP = 0 (5 mins) FSIP = 0 (15 mins) HP = 12500 psi	0.2 cu. ft. free gas and 0.2 cu.ft. shot gas, tight test, RMF: 0.408, ohm/m @ 76° NaCl : 13500 ppm
2	12400 openhole		Misrun
3 ✓	12400 openhole 3780	Recovered 0.2 cu.ft. shot gas ISIP : - FP : 0 psi FSI : 11300 psi HP : 11570 psi	Lost seal in 2 minutes after second shot
4	12400 openhole		misrun - "O" ring failure
5 ✓	12401 openhole 3780	Recovered 10200 cc mud, 0 free gas and 0.1 cu. ft. shot gas ISIP: - Sampling = 11350 psi (4 mins) FSI = 11350 psi HP - 11570 psi	Lost seal when second shot fired Rmf - 0.408 ohm/m @ 76° NaCl = 13500 ppm
6	12402 openhole 3781	Recovered 8500 cc mud ISIP : - Sampling = 11400 psi (3.7 mins) FSI = - HP = 11750 psi	Lost seal when flowline opened Rmf = 0.408 ohm/m @ 76° NaCl = 13,500 ppm
7	12208 Openhole 3740 m FSI 767.6 kg/cm² HP 808.72	Recovered 7800 cc water and 800 cc mud Sampling = 1000 psi (10 mins) FSI = 11200 psi (10.4 mins) HP = 11550 psi	Rmf (filtered) = 0.49 ohm/m @ 78° NaCl = 10500 ppm Rmf = 0.408 @ 76° = 13500 ppm

8 11815 Recovered 0.1 cu.ft. shot gas, 0.9 cu.ft. free gas ✓ Rrf (filtered) = 0.497 ohm/m @ 76 °, NaCl =
Through casing and 9600 cc water Sampling = 10700 psi (4 mins, est) 12000 ppm
FSI = 10700 psi (10 mins, est) Rmf = 0.408 ohm/m @ 76 °
HP = 11000 psi NaCl = 13500 ppm
C - 1 = 27800 ppm
C - 2 = 18576 ppm
C - 3 = 429 ppm
IC-4 = 357 ppm

9 11087 Recovered 1.4 cu. ft. gas and 10000 cc water Rrf = 0.49 ohm/m @ 76 ° NaCl =
Through casing (Free gas = 1.3 cu. ft) ✓ 12,000 ppm
Sampling = 9850 psi (4 mins) Rmf = 0.408 ohm/m @ 76 °
FSI = 9850 (10 mins) NaCl = 13500 ppm
HP = 10750 psi C-1 = 39000 ppm
C-2 = 3750 ppm
C-3 = 462 ppm
IC-4 = 330 ppm
NC-4 = 93 ppm

✓ 10 10125 Recovered 24.9 cu.ft. gas and 4250 cc water (24.8 cu. ft. free gas) ✓ Rrf = 0.49 ohm/m @ 72 °, NaCl = 13000 ppm
Through casing Sampling = 2700 psi (15 mins) Rmf = 0.408 ohm/m @ 76 °
FSI = 5600 psi (30 mins) NaCl = 13500 ppm
HP = 9700 psi Test aborted after 15 mins sampling and 30 mins shut-in.
C-1 = 709443 ppm
C-2 = 41925 ppm
C-3 = 9324 ppm
IC-4 = 4540 ppm
NC-4 = 2170 ppm
C-5 = 1032 ppm

✓ 11 9787 Recovered 0.8 cu.ft. gas and 2000 cc mud Annulus fluid - plugged perforation
Through Casing (0.6 cu.ft. free gas) ✓ lack of cement
Sampling = 0 (5 mins)
FSI = 2000 psi (31.5 mins)
HP = 9200 psi

DALLAS, TEXAS

CORE ANALYSIS RESULTS

Company NATOMAS OF INDIA Formation _____ File SP-2760-CA
 Well BB-A-1R Core Type SIDEWALL Date Report 12 JAN. 1976
 Field BAY OF BENGAL Drilling Fluid _____ Analysts BDZ/MA
 County _____ State _____ Elev. _____ Location _____

Lithological Abbreviations

SAND - SD SHALE - SH LIME - LM DOLOMITE - DOL CHERT - CH GYPSUM - GYP ANHYDRITE - ANHY CONGLOMERATE - CONG FOSSILIFEROUS - FOSS SANDY - SDY SHALY - SHY LIMY - LMY FINE - FN MEDIUM - MED COARSE - CSE CRYSTALLINE - XLN GRAIN - GRN GRANULAR - GRUL BROWN - BRN GRAY - GRV VUGGY - VGY FRACTURED - FRAC LAMINATION - LAM STYLOLITIC - STY SLIGHTLY - SLT ATRY - ATRY WOL - WOL

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PERCENT	RESIDUAL SATURATION PERCENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
1.	8518	0.23	17.4			Sd, lt gy, v/fn grn, hd, well srt'd, sm clay mtrx, v/calc, subrnd-rnd, mica, no show
2.	8546	4.3	24.4			Sd, gy, v/fn grn, sft, well srt'd, sm clay mtrx, v/calc, subrnd-rnd, mica, no show
3.	9754	INSUFFICIENT SAMPLE				Sd, gy, v/fn-v/cse grn, hd, v/calc, subrnd-subang, qtz pebble, mica, uncons, no show
4.	9759	0.46	21.9	0.0	62.2	Sd, gy, v/fn-v/cse grn, hd, v/calc, subrnd-subang, int lam w/clay, qtz pebble, mica, uncons, no show
5.	9765	1.5	22.6			Sd, gy, v/fn-fn grn, fm, mod srt'd, sm clay mtrx, v/calc, subrnd-subang, tr of carb and mica, no show
6.	9794	*	27.6	0.0	58.8	Sd, gy, v/fn-fn grn, sft-fm, mod srt'd, clay mtrx, calc, subrnd-subang, black minerals? qtz, mica, no show
7.	9811	1.7	23.6	0.0	55.9	Sd, gy, v/fn-fn grn, sft-fm, fair srt'd, sm clay mtrx, sl calc, subrnd-subang, black minerals? qtz, mica, no show
8.	9832	1.2	21.2	0.0	49.0	Sd, gy, v/fn-v/cse grn, fm, v/calc, subrnd-subang, int lam w/clay, black minerals? qtz pebble, mica, uncons, no show
9.	9834	FRACTURED	18.0	0.0	66.7	Silt, lt brn, fm-hd, calc, sm v/fn grn, no show

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SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PERCENT	RESIDUAL SATURATION PERCENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
10.	9844	44	26.3	0.0	47.3	Sd, gy, v/fn-cse grn, sft, poor srt'd, sm clay mtrx, v/calc, subbrnd-subang, black minerals? mica, no show
11.	9855	47	22.9	0.0	49.0	Same as above

NOTE: UNSEALED SAMPLE

* DENOTES TOO FRIABLE FOR ANALYSIS
OR INSUFFICIENT SAMPLE.

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