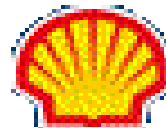


# ***Southern Green Canyon Blend***

***A New Medium Sulfur Crude from  
the Deepwater Gulf of Mexico***



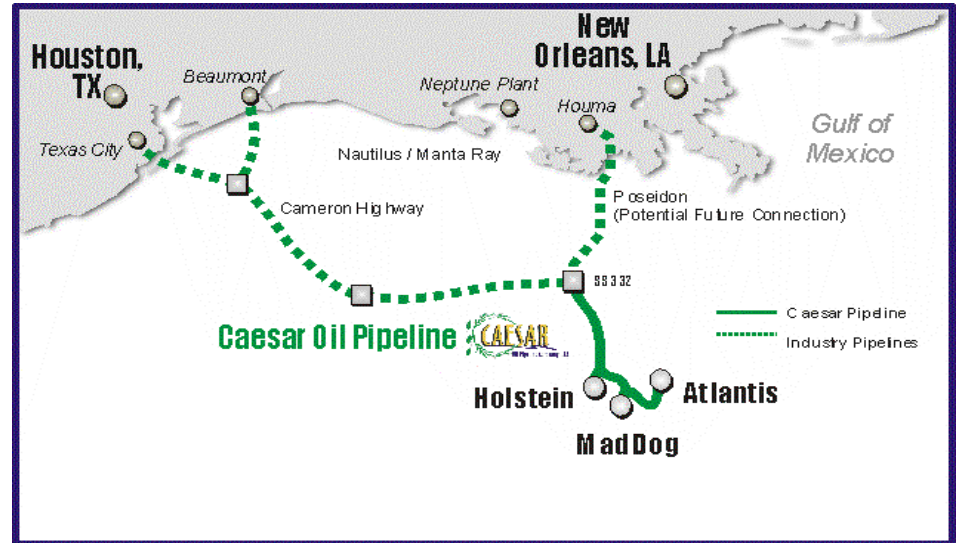
# The Southern Green Canyon Projects

- Southern Green Canyon (SGC) crude will be a blend of the production of three fields located in the southeastern section of the deepwater Green Canyon area, approximately 150 miles offshore
- BP is the operator of all three fields
- Production is projected to begin in 2004 when Holstein (BP 50%, Shell 50%) and Mad Dog (BP 60.5%, BHP 23.9%, Unocal 15.6%) come online
- Atlantis (BP 56%, BHP 44%) will follow to complete the production from these fields.
- Production from this area is eventually projected to plateau at several hundred thousand barrels per day



# Southern Green Canyon Logistics

- Caesar Oil Pipeline, operated by Mardi Gras Transportation System Inc., will link the Holstein, Mad Dog, and Atlantis fields with Ship Shoal Block 332
- There Caesar Oil Pipeline will connect to the new Cameron Highway Oil Pipeline System (CHOPS).
- CHOPS will run west along the Offshore Continental Shelf (OCS) to the High Island Addition area, where two lines, one extending north to Port Arthur, Texas and one northwest to Texas City, Texas, bring this new crude onshore.
- From primary delivery points in Texas City and Beaumont / Port Arthur, existing pipeline systems can deliver Southern Green Canyon to marketing and refining centers in Houston, Cushing, Wood River, Chicago and elsewhere in the Midwest.
- Future potential interconnects at Ship Shoal 332 will provide an alternative route to Louisiana oil markets.



# ***Disclaimer***

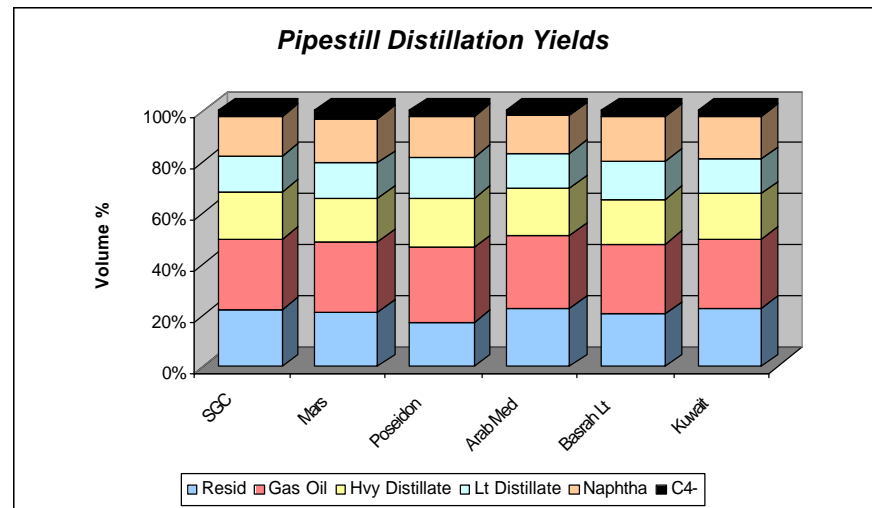
The following comparison of Southern Green Canyon Blend's projected yields and qualities is based on a provisional assay for the blend developed from analysis of multiple drill test samples from each of the three fields. Some values may have been influenced by manner of sampling or sampling handling, contamination by drilling fluids or limited analytical testing. The actual yields and qualities of production samples may vary.

# Southern Green Canyon Blend

## An Overview

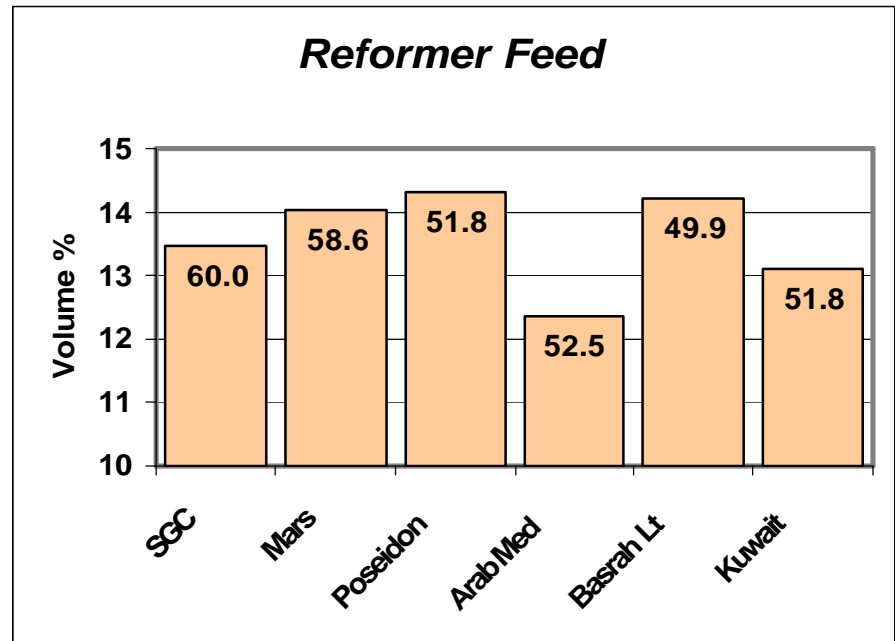
- Southern Green Canyon Blend (SGC) is a medium sour crude
- The crude's properties are roughly comparable to Mars,
- Its yields are similar to most other medium sour crudes available on the U. S. Gulf Coast.
- The accompanying table and figure compare SGC with a range of similar grades.

		COMPARATIVE ASSAY PROPERTIES					
		Southern Green Canyon	Mars	Poseidon	Arab Medium	Basrah Light	Kuwait
API		30.1	30.4	34.1	28.9	30.8	30.4
Sulfur	wt%	2.00	1.88	1.30	2.73	2.67	2.59
Pour Point	deg F	-17	-38	-22	-11	-76	-71
Acidity	mg KOH/gm	0.19	0.68	0.80	0.05	0.10	0.11
Nickel	ppm wt	19	15	7	12	12	11
Vanadium	ppm wt	60	38	17	23	40	35



# ***Southern Green Canyon Blend Reformer Feedstock***

- SGC produces a very useful contribution to the catalytic reforming feedstock pool
- SGC's yield of heavy naphtha is better than Arab Medium's and Kuwait's – see chart at right where the height of the columns indicates the yields in the 203-347°F temperature range
- In terms of quality, SGC produces a heavy naphtha with an N + 2A number higher than that of comparable medium sour crudes.



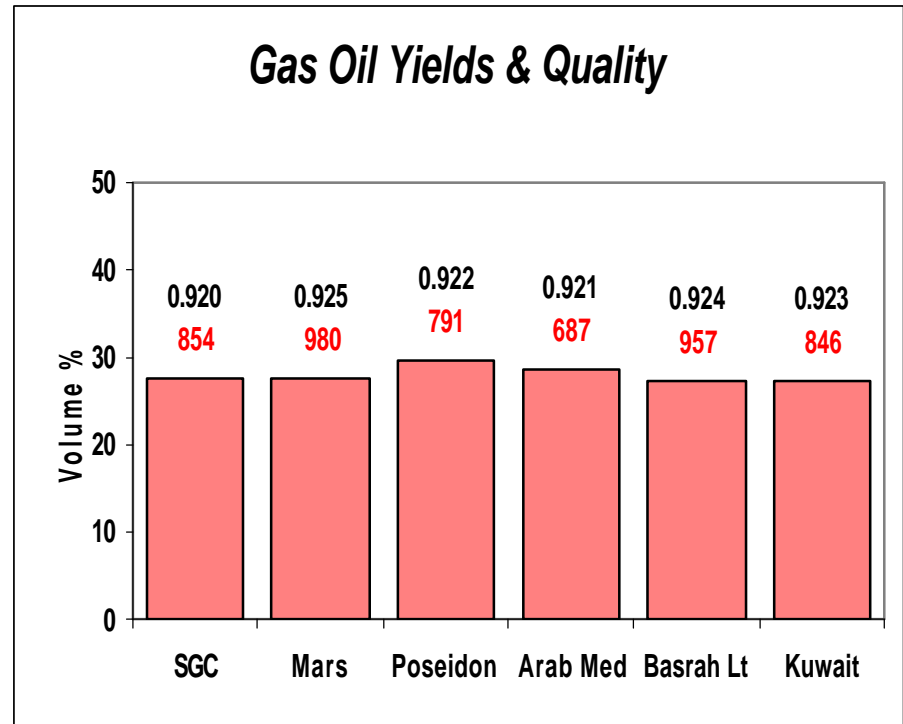
# ***Southern Green Canyon Blend Jet Fuel***

		ASTM D 1655 Specification	SGC
Density at 15 C	kg/l	Min 0.775 / Max 0.840	0.791
Sulfur	wt%	Max 0.30	0.206
Mercaptan Sulfur	wt%	Max 0.003	0.0048
Aromatics	vol%	Max 25	16.9
Acidity	mg KOH/gm	Max 0.10	0.04
Freezing Point	deg C	Max -40	-57
Smoke Point	mm	Min 25	25

- Properties of the kerosene cut for SGC are shown above and compared with the finished product specifications for Jet A as defined by ASTM D 1655.
- SGC produces a very good quality feedstock which will assist in meeting most of the jet fuel product specifications.

# ***Southern Green Canyon Blend Catalytic Cracking Feedstock***

- The chart displays the yields and properties of the vacuum gas oil from SGC and similar crudes
- The column heights indicate the volume% yield of the 647-1022°F fractions.
- Annotations give the densities (black), and nitrogen levels (red) for the gas oil from each crude.
- SGC offers a high yield of vacuum gas oil
- Its lower density suggests good cat naphtha and cat distillate yields



# ***Southern Green Canyon Blend Coking Feedstock***

		<b>SGC</b>	<b>Mars</b>	<b>Poseidon</b>	<b>Arab Med</b>	<b>Basrah Lt</b>	<b>Kuwait</b>
Density	kg/l	1.033	1.030	1.017	1.043	1.046	1.042
Sulfur	wt%	4.25	3.94	3.73	5.20	5.70	5.54
Carbon	wt%	19.1	18.5	16.5	23.7	23.8	23.5
Nitrogen	ppm wt	4320	5045	4170	3095	4430	4070
Nickel	ppm wt	74	62	42	39	48	40
Vanadium	ppm wt	230	152	107	84	161	132

- The properties of SGC's resid (1022°F+) are shown above
- SGC offers a good yield of vacuum residue which is fairly high in carbon level

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