

CAPLINE SYSTEM

CRUDE OIL PROPERTIES AND QUALITY INDICATORS

Approved Crude List - 4th Quarter, 2005

Updated
March 3, 2006

Section I. Crudes Approved, Moved and Capline Assay Reported																						
MnMn	See Foot-notes	Crude Name	Product Code	Country	Assay Date	Density	RVP	Sulfur	a)Pour Point	Carbon Residue	Viscosity (SSU)			b) H2S	Metals (ppm)				TAN E	SALT	Organic Chlorides (ppm)	
						(API@60)	(psia)	(%)	(degF)	(%)	@60 F	@80 F	@100 F	(ppm)	Whole	Pitch	Whole	Pitch	(mg KOH/g)	(lb/MB)	Whole	Naphtha
Sweet - Low Metals Group																						
ABO		ABO	82909	Nigeria	07/05/05	39.5	6.2	0.14	<-27.4	1.1	38.9	36.5	34.3	<1	0.4	6.2	3.7	54.0	0.76	8	<1	1.2
AME	☑	AMENAM BLEND	82985	Nigeria	02/03/06	39.7	6.4	0.09	55.0	0.6	64.7	38.9	34.2	<1	4.1	7.6	25.0	31.0	0.30	7	<1	<1
AQB		ALBA CONDENSATE/QUA IBO 50/50 BLEND.	83014	New Guinea Nigeria	01/11/06	42.5	6.2	0.07	0.0	0.6	36.0	34.0	32.0	<1	0.2	41.8	2.0	6.3	0.20	3	-	-
BNL		BONNY LIGHT	82337	Nigeria	10/28/03	33.4	4.5	0.16	-5.8	1.2	52.7	43.9	39.7	<1	0.5	5.2	3.7	43.0	0.26	18	<1	<1
BSR		BRASS RIVER	82325	Nigeria	11/01/05	35.2	3.6	0.14	-0.4	0.8	43.8	39.7	36.6	<1	0.4	6.6	2.4	36.0	0.29	13	<1	<1
BRN	☑	BRENT	82288	U. K.	05/08/04	38.6	5.6	0.38	5.0	1.6	47.4	41.8	37.6	<1	5.5	39.0	1.1	7.6	<0.05	3	<1	1.1
CAB	☑	CABINDA	82345	Angola	03/03/03	32.4	2.7	0.13	59.0	3.5	-	-	73.5	<1	1.7	6.0	17.0	63.0	0.17	3	<1	<1
DRAUG	☑	DRAUGEN	82575	Norway	11/16/05	37.6	6.2	0.19	<-27.4	1.7	44.0	39.4	36.6	<1	1.4	8.9	1.1	7.1	0.32	2	<1	1.6
EAN	☑	EA CRUDE	82991	Nigeria	06/16/04	35.1	3.9	0.08	26.6	0.0	43.0	39.5	36.6	<1	<0.1	0.5	0.9	22.0	0.14	1	<1	<1
EKO		EKOFISK	82307	Norway	11/11/05	37.5	4.2	0.22	26.6	2.0	53.0	49.9	44.3	<1	1.7	9.2	2.3	13.0	0.10	11	<1	<1
ESC	☑	ESCRAVOS	82338	Nigeria	12/21/04	34.3	3.6	0.16	10.4	1.3	48.1	42.7	39.6	<1	0.6	8.2	4.5	71.0	0.57	3	<1	<1
FON	☑	FOINAVEN	82424	U. K.	06/12/00	26.6	0.6	0.40	42.8	2.0	478.5	188.6	110.6	<1	4.6	18.8	2.7	10.3	0.16	8	<1	2.0
FOR		FORCADOS	82331	Nigeria	01/21/06	29.1	3.3	0.19	-16.6	0.9	125.7	55.5	47.2	<1	1.2	-	2.9	-	0.43	87	<1	<1
FOT		FORTIES	82308	U.K.	07/02/05	43.6	6.5	0.21	10.4	1.0	36.9	35.2	32.8	<1	1.6	22.0	0.7	9.1	0.13	15	-	-
GAL	☑	GALEOTA	82314	Trinidad	08/24/03	37.8	6.0	0.19	53.6	0.2	-	37.7	35.1	<1	0.1	-	0.1	-	0.60	4	-	-
GIR		GIRASSOL	82583	Angola	10/24/05	30.5	2.2	0.35	-5.8	3.2	124.3	97.7	70.8	<1	4.9	19.0	11.0	43.0	0.36	11	<1	<1
HLS	☑	HEAVY LA SWEET	82720	USA	01/29/06	32.6	2.6	0.37	-16.6	2.3	70.7	56.2	47.8	<1	2.4	9.5	5.0	19.0	0.69	27	<1	2.4
HBA	☑	HIBERNIA	82139	Canada	08/16/03	34.4	3.2	0.41	42.8	2.3	-	52.0	49.9	<1	1.0	4.5	1.0	4.3	<0.05	12	<1	<1
HULL		HUNGO/LLS BLEND	82967	USA	12/11/04	33.4	3.2	0.46	-16.6	2.7	65.5	52.9	46.1	<1	6.4	34.0	7.7	44.0	0.54	70	<1	<1
KISS		KISSANJE	83007	Angola	01/20/06	30.2	3.3	0.37	<-27.4	3.7	125.7	88.8	60.3	<1	2.5	8.7	8.0	23.0	0.54	10	<1	<1
LMS	☑	LA MISSISSIPPI SWEET	82723	USA	01/30/06	38.3	4.8	0.38	21.2	2.4	48.1	41.7	38.2	<1	2.3	13.0	2.6	16.0	0.19	61	<1	<1
LLS		LIGHT LOUISIANA SWEET	82722	USA	12/18/04	37.4	3.0	0.31	-0.4	1.1	48.9	42.7	38.5	<1	1.3	13.0	1.3	13.0	0.51	142	<1	<1
LLSA		LLS/SAHARAN (30/70)	83008	USA	08/23/05	42.6	8.2	0.17	-34.0	1.1	39.0	37.0	35.0	<1	1.3	14.0	1.4	14.7	0.16	-	-	-
LION	☑	LION CRUDE	82604	Ivory Coast	03/01/04	39.6	7.2	0.18	10.4	1.6	44.2	39.9	36.8	<1	3.7	26.0	3.3	25.0	0.20	10	<1	<1
NBA	☑	NEMBA	82255	Angola	01/10/06	43.4	6.5	0.16	<-27.4	1.1	37.0	35.0	33.4	<1	1.8	14.0	1.7	12.0	<0.05	10	<1	<1
NKS	☑	N'KOSSA	82135	Congo	09/22/05	42.0	5.5	0.05	53.6	2.2	48.6	40.3	37.1	<1	0.2	1.1	1.7	14.0	0.04	2	<1	<1
NOR	☑	NORNE	82430	Norway	03/17/03	32.6	2.4	0.20	64.4	1.0	-	56.8	46.5	<1	<0.5	23.5	0.9	8.6	0.07	33	<1	<1
OSB		OSEBERG	82271	Norway	04/26/03	38.7	5.2	0.22	15.8	1.8	45.1	39.4	38.5	<1	1.1	8.6	1.1	8.9	0.11	7	<1	<1
OSO	☑	OSO CONDENSATE	82403	Nigeria	05/27/05	47.5	9.1	0.06	<-27.4	0.3	32.5	<32	<32	<1	0.4	15.0	0.3	17.0	0.08	2	<1	<1
PAL		PALANCA	82266	Angola	02/19/05	36.8	4.5	0.18	37.4	1.6	57.4	48.0	42.3	<1	1.4	7.8	1.2	9.5	<0.05	4	<1	<1
PHD		PORT HUDSON	82864	USA	03/03/05	41.6	3.1	0.15	-11.2	0.8	38.8	36.3	34.3	<1	1.3	21.0	1.6	26.0	0.22	31	<1	<1
SAH	☑	SAHARAN BLEND	82298	Middle East	09/14/04	45.0	7.6	0.09	<-27.4	0.9	36.4	34.6	33.0	<1	0.4	3.0	0.1	1.3	0.05	50	<1	<1
STB		SANTA BARBARA	82251	Venezuela	01/13/06	39.9	5.2	0.46	<-27.4	0.8	38.2	35.7	33.7	<1	4.6	64.0	1.2	15.0	<0.05	3	<1	<1
SCH	☑	SCHIEHALLION	82441	Scotland	04/23/05	25.6	1.1	0.46	37.4	3.0	372.2	186.6	110.9	2.0	7.2	30.2	4.4	18.2	0.31	22	<1	<1
SLS		SOUTH LOUISIANA SWEET	82586	USA	05/18/05	34.9	3.0	0.38	-5.6	2.0	63.7	50.9	44.9	<1	2.3	20.3	3.3	29.1	0.26	80	<1	<1
TROL	☑	TROLL EXPORT	82421	Norway	07/20/04	28.4	1.9	0.24	10.4	1.6	121.6	75.2	62.2	<1	0.8	3.9	0.8	3.5	1.00	<1	<1	<1
WHSW		WEST HACKBERRY SWEET	82267	USA	10/29/05	39.1	5.4	0.27	10.4	1.8	45.2	40.7	37.5	<1	3.9	20.0	4.0	20.0	0.11	<1	<1	<1
XIK	☑	XIKOMBA	82982	Angola	09/27/04	34.6	5.0	0.41	32.0	3.6	84.9	51.4	42.1	<1	5.3	13.0	28.0	65.0	0.15	18	<1	<1
YOHO	☑	YOHO CRUDE	82810	Nigeria	01/14/05	39.1	6.2	0.08	53.6	0.6	-	36.3	33.9	<1	0.3	5.7	1.6	36.0	0.26	23	<1	<1
ZFR		ZAFIRO	82252	Equatorial New Guinea	12/23/04	30.7	2.3	0.27	10.4	2.8	73.6	57.7	48.4	<1	2.5	16.0	13.0	82.0	0.73	6	<1	<1
ZUASW		ZUATA SWEET	82576	Angola	08/18/05	30.8	2.3	0.14	<-27.4	<0.1	63.1	50.2	44.3	<1	0.8	-	0.2	-	<0.05	2	<1	3.4
Sweet - High Metals Group																						
CUS	☑	CUSIANA	82419	Columbia	07/19/05	43.0	6.8	0.12	42.8	0.8	37.9	34.0	32.9	<1	3.1	64.0	1.0	19.0	<0.05	2	6.5	17.1
KWI	☑	QUA IBOE	82339	Nigeria	01/22/06	36.3	4.7	0.13	59.0	1.1	-	42.1	38.5	<1	0.5	3.6	4.5	43.0	0.36	4	<1	<1
Intermediate Group																						
CPC	☑	CPC BLEND	CAP00	Kazakstan	10/06/05	43.3	5.5	0.55	-22.0	0.9	37.9	35.3	33.5	<1	2.6	25.0	1.5	15.0	>0.05	<1	<1	<1
HUN		HUNGO	82965	Angola	12/09/04	28.8	2.9	0.70	-16.6	4.9	147.4	107.4	70.1	<1	14.0	49.0	17.0	59.0	0.52	53	<1	<1
OMA	☑	OLMECA	82385	Mexico	09/17/05	38.7	4.8	0.89	<-27.4	0.9	42.5	38.9	36.2	4.0	8.9	58.0	1.5	8.5	0.05	7	<1	1.9

CAPLINE SYSTEM

CRUDE OIL PROPERTIES AND QUALITY INDICATORS

Updated
March 3, 2006

Approved Crude List - 4th Quarter, 2005

Mnmn	See Foot- notes	Crude Name	Product Code	Country	Assay Date	Density	RVP	Sulfur	a)Pour	Carbon	Viscosity (SSU)			b) H2S	Metals (ppm)				TAN E	SALT	Organic Chlorides (ppm)	
						(API@60)	(psia)	(%)	(degF)	(%)	@60 F	@80 F	@100 F	(ppm)	Vanadium	Nickel	Whole	Pitch	Whole	Pitch	(mg KOH/g)	(lb/MB)
Sour Group																						
AXL		ARABIAN EXTRA LIGHT	82375	Saudi Arabia	10/17/05	38.3	5.0	1.23	<-27.4	2.4	45.4	40.5	37.6	1.0	5.8	33.0	2.0	12.0	<0.05	2	<1	<1
ABL		ARABIAN LIGHT	82376	Saudi Arabia	01/20/06	33.0	4.6	1.98	<-27.4	3.6	72.7	58.7	46.9	<1	14.0	67.0	4.1	17.0	<0.05	3	<1	<1
BS		BONITO SOUR	82743	USA	01/26/06	35.4	4.1	1.02	<-27.4	2.6	60.5	51.6	44.2	<1	7.5	36.0	3.1	15.0	0.76	73	<1	<1
EIC		EUGENE ISLAND	82725	USA	01/30/06	33.7	4.1	1.15	<-27.4	3.0	67.5	55.3	47.3	<1	12.0	57.0	4.8	24.0	0.81	87	<1	1.7
FUR		FURRIAL	82374	Venezuela	03/19/02	30.0	2.8	1.06	<-27.4	4.3	93.5	69.0	53.6	<1	38.0	179.0	8.2	35.0	0.09	3	<1	<1
ITM		ISTHMUS	82387	Mexico	10/19/05	32.7	3.4	1.57	<-27.4	4.9	68.3	55.7	50.2	23	74.0	300.0	14.0	57.0	0.10	6	<1	<1
MARS		MARS BLEND	82745	USA	02/03/06	29.7	3.5	1.82	<-27.4	5.3	120.5	85.6	64.6	<1	37.0	104.0	16.0	45.0	0.62	97	<1	<1
MMB		MARS/MESA BLEND (40/60)	82428	Loop	09/08/00	30.1	3.1	1.65	-22.0	5.1	100.0	70.9	57.6	<1	48.0	156.0	14.0	49.0	0.27	85	<1	<1
MSA		MESA 30	82369	Venezuela	05/01/05	30.1	3.3	1.09	<-27.4	4.6	93.8	82.3	61.9	<1	42.0	217.0	9.1	46.0	0.18	12	<1	<1
PSD		POSEIDON	82749	USA	01/29/06	29.8	3.4	1.64	<-27.4	4.9	121.6	85.6	66.6	<1	27.0	97.0	11.0	37.0	0.78	97	<1	<1
URA		URALS	82370	C.I.S. Euro	02/07/06	32.1	5.1	1.36	-10.0	3.6	79.1	62.5	50.4	<1	36.0	144.0	12.0	47.0	<0.05	6	<1	<1
VAS	<input checked="" type="checkbox"/>	VASCONIA	82237	Colombia	02/09/02	24.5	1.9	1.01	37.4	6.0	440.8	229.5	130.6	<1	144.0	349.0	67.0	171.0	0.78	6	<1	<1
ZMNB		ZUATA MEDIUM/NAPHTHA BLEND	83000	USA	04/05/05	27.0	1.7	0.97	<-27.4	4.3	144.3	95.3	71.7	<1	144.0	769.0	30.0	161.0	0.41	15	<1	<1
High Sulfur Sour Group																						
ABH		ARABIAN HEAVY	82378	Saudi Arabia	01/28/06	27.3	3.8	2.95	<-27.4	8.1	259.4	169.4	126.4	<1	62.0	144.0	20.0	45.0	0.25	2	<1	<1
ABL17		ARABIAN LIGHT / SEG 17 BLEND	82987	USA	04/21/04	32.1	3.4	2.19	<-27.4	5.2	78.8	59.8	50.1	<1	27.0	110.0	7.8	31.0	0.12	3	<1	<1
AHL		ARAB HEAVY/ARAB LIGHT (20/80)	83006	USA	06/01/05	32.6	4.3	2.06	-10.0	5.0	77.0	60.0	51.0	0.0	26.3	107.4	7.9	32.2	0.12	23	-	-
ABM		ARABIAN MEDIUM	82377	Saudi Arabia	01/19/06	31.0	3.9	2.56	-22.0	5.8	99.5	71.3	58.2	<1	36.0	114.0	11.0	37.0	0.20	2	<1	<1
BAS		BASRAH LIGHT	82383	Iraq	01/24/06	30.5	5.2	2.90	<-27.4	5.9	99.8	70.5	57.6	<1	47.0	151.0	13.0	42.0	0.17	58	<1	<1
EMX	<input checked="" type="checkbox"/>	EAST MS MIX	82521	USA	09/03/03	30.9	3.0	2.10	15.8	7.3	106.7	78.5	57.3	23	23.0	87.0	8.0	31.0	0.26	250	<1	<1
KIR		KIRKUK	82384	IRAQ	03/11/03	33.9	4.6	2.26	-0.4	4.9	62.9	52.3	45.6	<1	31.0	128.0	13.0	53.0	0.12	75	<1	<1
KUW		KUWAIT	82380	Kuwait	05/05/05	30.5	4.8	2.70	-22.0	6.3	110.2	83.5	60.0	<1	34.0	120.0	11.0	39.0	0.12	5	<1	<1
Section II. Crudes Approved, Moved, Pending Capline Assay																						
Sweet - Low Metals/ High Metals Groups																						
BCSW		BAYOU CHOCTAW - SWEET	82268	USA	09/08/05	36.0	4.3	0.40	32.0	1.1	54.7	45.5	41.2	<1	5.5	31.0	3.8	21.0	0.16	25	<1	<1
OKON	<input checked="" type="checkbox"/>	OKONO	82584	Nigeria	02/09/02	41.9	7.7	0.06	64.4	0.4	39.0	35.0	33.0	-	<2	4.0	2.0	57.0	0.34	13	-	-
PSOYO	<input checked="" type="checkbox"/>	PALANCA/SOYO	82460	Angola	01/01/99	37.8	7.8	0.16	45.0	1.5	48.7	42.7	40.5	<1	1.7	15.4	1.5	13.1	0.05	27	<1	<1
RABL	<input checked="" type="checkbox"/>	RABI LIGHT	82999	Gabon	07/15/04	37.7	3.8	0.15	71.6	-	88.0	65.0	54.0	<1	1.2	3.0	10.0	69.0	0.08	-	-	-
Sour / High Sulfur Sour Groups																						
BASM		BASRAH LIGHT/MARS BLN (75/25)	82554	USA	09/30/04	32.1	5.3	2.16	-38.2	4.7	118.0	74.0	56.7	<1	11.9		37.1		0.18	33	-	-
BCSR	<input checked="" type="checkbox"/>	BAYOU CHOCTAW - SOUR	82174	USA	05/01/98	32.2	3.6	1.43	11.0	4.0	76.8	57.0	47.3	100	40.3	240.0	11.1	66.0	0.13	<50	<0.1	-
KMB2		KUWAIT/MARS BLEND (33/67)	82187	USA	09/30/04	30.5	5.2	2.00	-40.0	5.3	106.0	76.0	59.0	1.0	37.0	74.0	14.0	28.0	0.40	175	-	-
MUB2		MARS/URALS BLEND (33/67)	82183	USA	09/27/04	31.2	4.9	1.53	-7.5	4.2	89.0	67.0	57.0	-	134.7	198.5	43.8	69.7	0.22	40	-	-
Section III. Crudes Approved, Not Moved																						
Sweet - Low Metals/ High Metals Groups																						
BONGA		BONGA	82396	Nigeria	01/24/06	29.4	5.3	0.24	-22.0	1.2	70.0	55.0	46.0	<1	0.4	4.5	3.3	40.6	0.59	-	-	-
FOB		FORCADOS/OSO COND BLEND	83003	Nigeria	02/28/05	39.3	10.0	0.10	18.0	-	38.0	36.0	34.0	<1	0.3	6.9	2.0	42.7	0.20	<1	-	-
Intermediate Group																						
Sour / High Sulfur Sour Groups																						
BMB		BASRAH/MAYA BLEND (20/80)	83011	USA	00/00/01	23.2	3.3	3.23	-19.0	9.4	815.0	444.0	265.0	0.0	226.8	558.3	46.0	114.8	0.09	-	-	-
HAM		HAMACA	83002	Venezuela	03/30/04	25.5	2.0	1.60	-40.0	7.4	430.0	260.0	160.0	<1	200.0	706.0	46.0	164.0	0.64	<1	-	-

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Approved Crude List - 4th Quarter, 2005

HYDROCARBON	FOOTNOTES
AMENAM	Must be monitored for pour point depression.
BAYOU CHOCTAW - SOUR	!! Due to Hydrogen Sulfide results- Take safety precautions !!
BRENT	Must be monitored for pour point depression.
CABINDA	Must be monitored for pour point depression. ! Viscosity at 60 and 80F not accurately measured - too close to pour point.
CPC BLEND	Due to RVP, must be shipped on a case by case basis and approved prior to each nomination.
CUSIANA	Must be monitored for pour point depression. . Note: Cusiana continues to have HIGH Metals. Cusiana will be moved as a Sweet/ High Metals batch unless metals return to previous low levels. Due to RVP, to move in summer months, must be shipped on a case by case basis and approved prior to each nomination.
EA CRUDE	Must be monitored for pour point depression.
EAST MS MIX	!! Due to Hydrogen Sulfide results- Take safety precautions !!
ESCRAVOS	Must be monitored for pour point depression.
FOINAVEN	Must be monitored for pour point depression.
GALEOTA	Must be monitored for pour point depression.
HIBERNIA	Must be monitored for pour point depression.
LION	Must be monitored for pour point depression.
NEMBA	Must be monitored for pour point depression.
N'KOSSA	Must be monitored for pour point depression.
NORNE	Must be monitored for pour point depression.
OKONO	Must be monitored for pour point depression.
OSO CONDENSATE	Due to RVP, must be shipped on a case by case basis and approved prior to each nomination.
PALANCA/SOYO BLEND	Must be monitored for pour point depression.
QUA IBOE	Must be monitored for pour point depression.
RABI LIGHT	Must be monitored for pour point depression.
SAHARAN BLEND	Due to RVP, must be shipped on a case by case basis and approved prior to each nomination.
SCHIEHALLION	Must be monitored for pour point depression.
TROLL EXPORT	Acid number on Troll Export continues to be higher than usual. Will continue to move with Sweet Low Metals group and will monitor.
VASCONIA	Must be monitored for pour point depression.
XIKOMBA	Must be monitored for pour point depression.
YOHO CRUDE	Must be monitored for pour point depression.

a) POUR POINT may have been depressed in the sample taken for this assay.

b) Due to loss of H₂S in sampling and shipping, H₂S is likely higher than stated in this assay. TAKE precautions with all crude oils - sour or sweet.

Updated
March 3, 2006

CAPLINE SYSTEM
CRUDE OIL PROPERTIES AND QUALITY INDICATORS
 Approved Crude List - 4th Quarter, 2005

NOTES

CRITERIA FOR GROUPING CRUDES ON CAPLINE

Group	Criteria		
	Sulfur %w	Ni + V(pitch) ppm	TAN mg KOH/g
Sweet - Low Metals	< 0.5	<= 100	<= 1.0
Sweet - High Metals	< 0.5	<= 250	<= 1.0
Intermediate	0.5 - 1.0	<= 550	<= 1.0
Sour	>1.0 - 2.0	<= 1200	<= 1.5
High Sulfur Sour	> 2.0	<= 1200	<= 2.0

POUR POINT REQUIREMENTS

Summer Start on or after April 1, Clear of System by September 30 <= 55f
Winter Start October 1 - March 31 <= 35F

RVP LIMITATIONS

Year-Round RVP of <= 8.6 psi accepted year-round
Winter Start on or after October 1, Clear of System by April 30 <= 9.6
 NOTE: RVP > 9.6 Subject to Management Approva

CRUDES REMOVED AS OF THIS LISTING:

Crude	Assay or Approval Date	Reason Removed
DJENO	7/5/1997	A
GULLFAKS	7/17/2003	A
KITINA	9/21/2002	A
ORIENTE	1/5/2001	A
SOUTHERN GREEN CANYON BLD	04/21/05	B
MARIB LIGHT (ALIF)	05/12/98	A
ODUDU	11/27/98	A
KUWAIT/MARS BLEND (50/50)	09/30/04	A
MARS/URALS BLEND (50/50)	07/09/04	A
ALBA CONDENSATE	6/1/2005	C
NAPHTHA - KOCH	7/6/2005	C

- A. Crudes not moved within three (3) years will be removed from the list.**
- B. Newly approved crudes that have not moved within six (6) months will be removed from the list.**
- C. Crudes with API Gravity greater than 50.0 have been removed from the list until further study.**