

INTERTEK PRESENTATION

Cushing, OK
Crude Oil & Residual Fuel
Laboratory Services

February 24, 2011

Bruce Carlile

Business Development Department

Intertek - Commodity Division



Our Heritage



1885

Caleb Brett founds a marine surveying business

“I will treat each cargo as if it were my own.”

- Caleb Brett, Founder, 1885



1896

Thomas Edison establishes what's later renamed as the Electrical Testing Laboratories (ETL)

Now recognized as the famous “ETL” mark



Intertek

A Global Network



More than

1,000

laboratories and offices

Over

25,000

people

More than





100

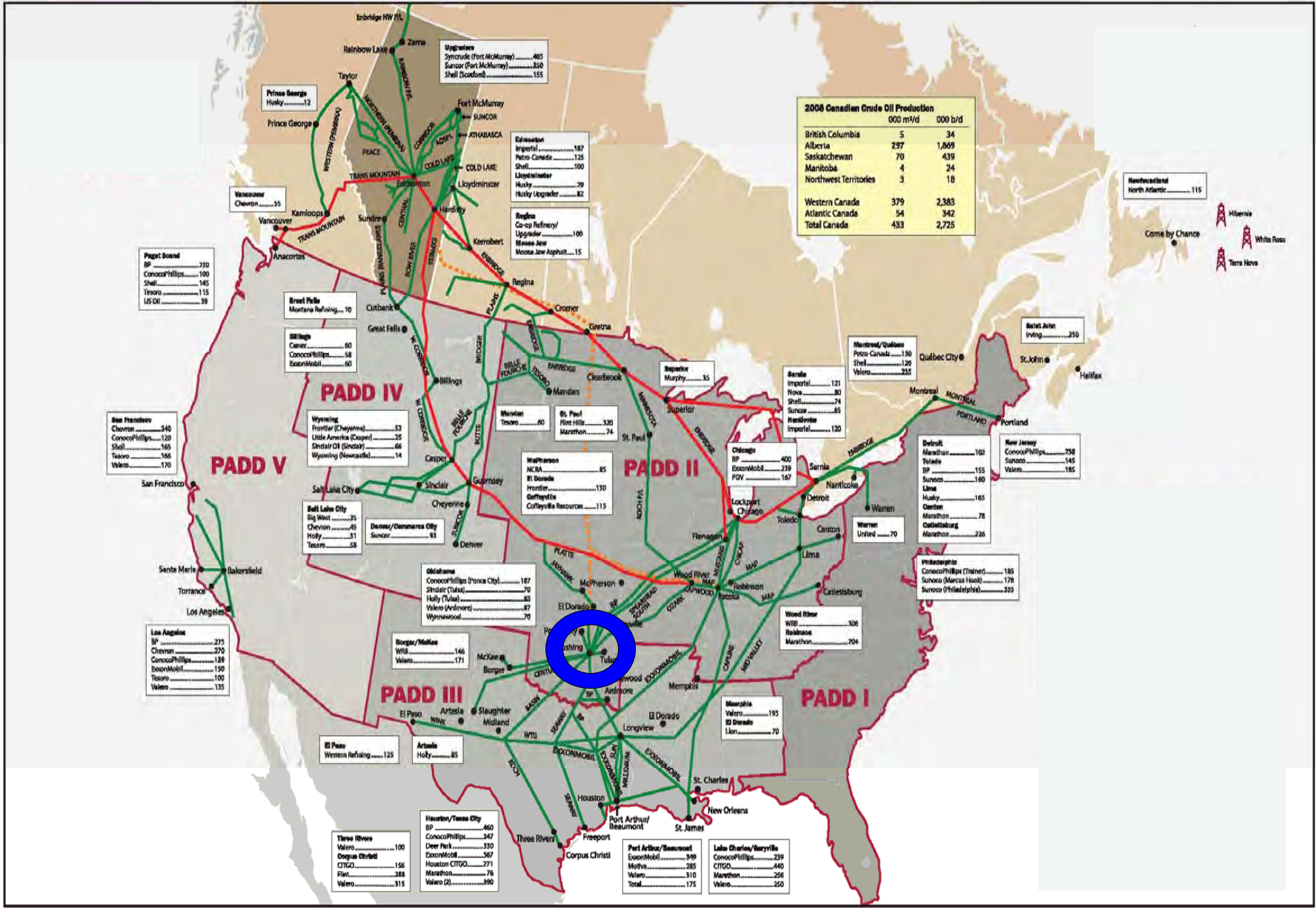
countries

- FTSE 100 company in the Support Services sector
- Market capitalization at £2.3 billion

Our Services



Operational Focus	Industries we service	What we do
<p>Consumer Goods</p> <p>Commercial & Electrical</p> <p>Commodity Division</p> <p>Analytical Services</p> <p>Industrial Services</p> <p>Minerals</p>	<p>Aerospace & Automotive</p> <p>Building Products</p> <p>Chemical</p> <p>Consumer Goods & Retailers</p> <p>Electrical & Electronic</p> <p>Energy</p> <p>Food & Agriculture</p> <p>Government & Institutions</p> <p>IT & Telecom</p> <p>Industrial & Manufacturing</p> <p>Medical & Pharmaceutical</p> <p>Minerals</p> <p>Toys, Games & Hardlines</p> <p>Textiles, Apparel & Footwear</p>	<p> Testing</p> <p> Inspection</p> <p> Certification</p> <p> Auditing</p> <p> Outsourcing</p> <p> Advisory</p> <p> Quality Assurance</p>



2008 Canadian Crude Oil Production
000 m/d 000 b/d

British Columbia	5	34
Alberta	297	1,869
Saskatchewan	70	439
Manitoba	4	24
Northwest Territories	3	18
Western Canada	379	2,383
Atlantic Canada	54	342
Total Canada	433	2,725

Pacific Coast

BP	270
ConocoPhillips	100
Shell	145
Tesoro	115
US Oil	59

San Francisco

Clontar	240
ConocoPhillips	120
Shell	165
Tesoro	186
Valero	170

Los Angeles

BP	275
Chevron	270
ConocoPhillips	189
ExxonMobil	190
Tesoro	100
Valero	135

Great Falls

Billings	60
Carter	60
ConocoPhillips	58
ExxonMobil	60

Bell Lake City

Big West	35
Chevron	45
Holly	31
Tesoro	58

Borger/Midland

WRS	146
Valero	171

El Paso

Western Refining	125
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Three Rivers

Valero	100
Chevron	156
CTGO	271
Marathon	76
Valero (2)	315

Upgraders

Suncor (Fort McMurray)	465
Suncor (Fort McMurray)	350
Shell (Scudford)	155

Edmonton

Edmonton	197
Imperial	125
Shell	100
Lloydminster	79
Husky Upgrader	82

Regina

Co-op Refinery/Upgrader	100
Renova Ase	15
Moosa Jaw Asphalt	15

Winnipeg

Frontier (Cheyenne)	53
Little America (Cooper)	25
Sindair Oil (Sindair)	66
Wyoming (Owensville)	14

Wichita

Marathon	85
NCA	85
St. Louis	130
Frontier	130
Goodyear	115
Colleyville Resources	115

El Dorado

ConocoPhillips (Ponca City)	187
Sindair (Tulsa)	70
Holly (Tulsa)	85
Valero (Andromed)	87
Wynnewood	70

Port Arthur/Beaumont

ExxonMobil	349
Marathon	285
Valero	310
Total	175

Louisiana

ConocoPhillips	239
CTGO	440
Marathon	256
Valero	250

St. Paul

Flint Hills	320
Marathon	74

Chicago

BP	400
ExxonMobil	239
PDV	167

Wood River

WRS	308
Balmain	204
Marathon	204

Warren

United	70
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Castletown

ConocoPhillips (Trinidad)	185
Suncor (Marcus Hook)	178
Suncor (Philadelphia)	235

St. Louis

Imperial	121
Flow	80
Shell	74
Suncor	85
Warrior	120

St. James

Marathon	195
Valero	70

North Atlantic

North Atlantic	115
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Offshore

Hibernia	115
White Rose	115
Terra Nova	115

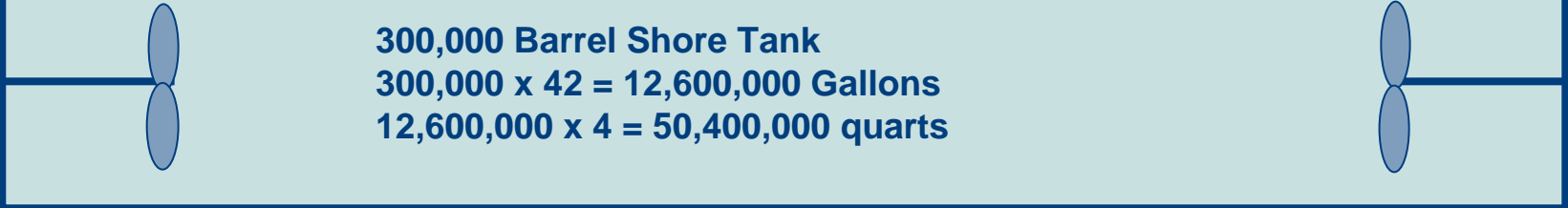


Terminals (Inventory 56 mmb)



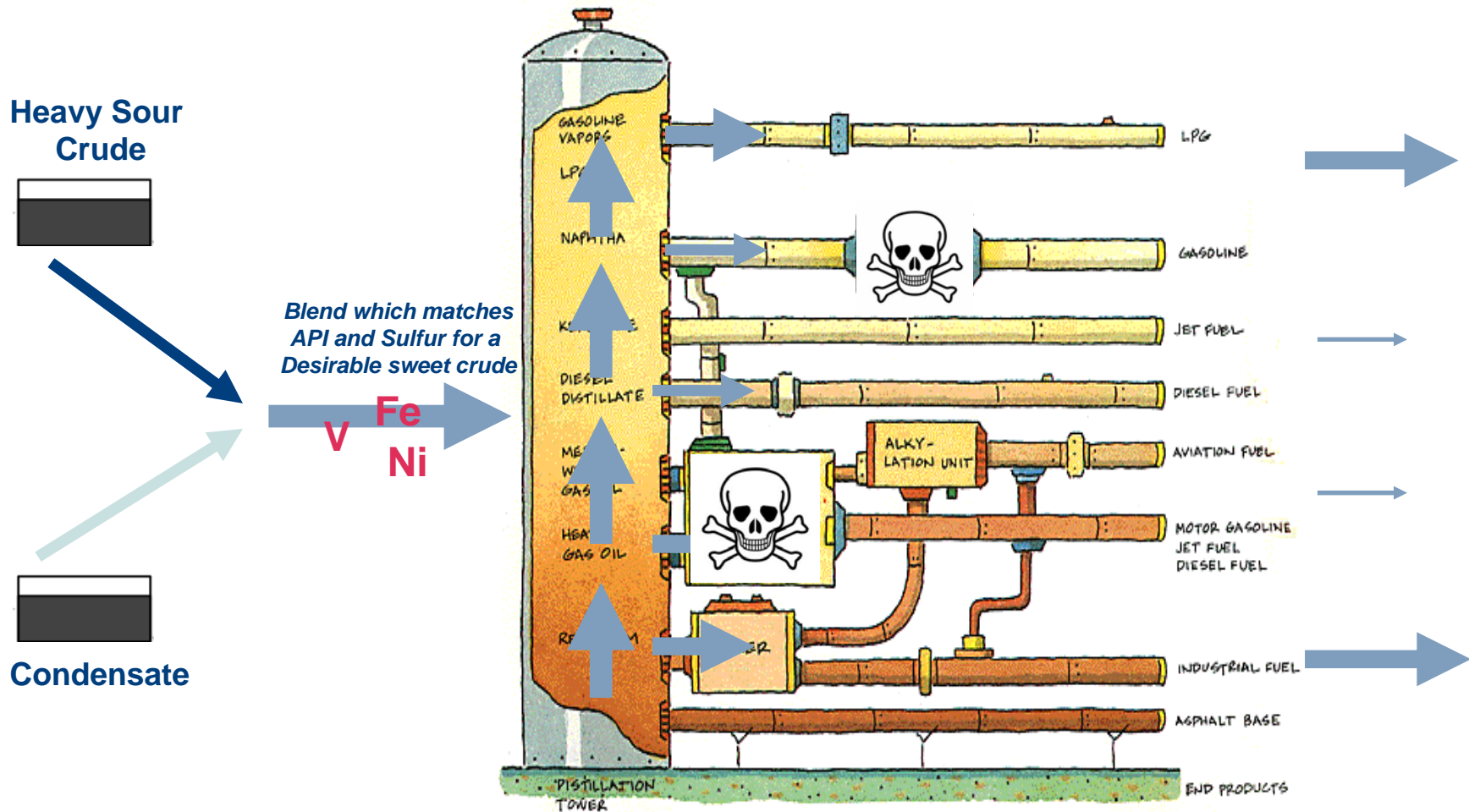
1. Blue Knight Energy
2. BP Oil (now Magellan)
3. Centurion Pipeline LP (heritage Occidental)
4. Conoco Phillips
5. Enbridge Energy (on-site Laboratory)
6. Enterprise Products Partners (heritage TEPPCO)
7. Gavilon LLC (formerly Con-Agri)
8. Plains Marketing LP
9. Semcrude LP
10. Sunoco Logistics

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Historical and Controversial Dumb Bell Crude Blending



Crude Oil & Residual Fuel Laboratory

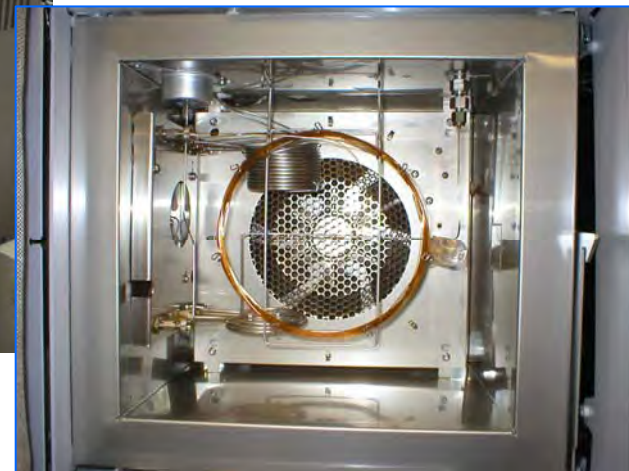


Broke Ground Dec. 2010



3,200 Square Feet

Flash Assay (*Inspection Assay*)



Domestic Light Sweet Crude (WTI) Domestic Sweet



	TEST	METHOD	SPEC MIN	SPEC MAX	UNITS	SAMPLE SIZE
A	Current - CME/NMEX Grade & Quality Specifications					
1	API Gravity	ASTM D 287	37 API	42 API	deg	300 ml
2	Total Sulfur	ASTM D 4294		0.04%	Wt%	30 ml
3	Viscosity, SSU at 100 deg °F	ASTM D445		60 SUS	cSt	20 mL
4	Reid Vapor Pressure (RVP)	ASTM D 5191		9.5 psi	psi@100 F	10 ml
5	S & W (centrifuge)	ASTM D96 or D4007		<1%	Wt%	100 ml
6	Pour Point	ASTM D97		50 Deg Max	°F	50 mL
B	Future/Additional Recommended Specifications					
7	Micro Carbon Residue (MCRT)	ASTM D4530		2.40%	Wt%	5 mL
8	Total Acid Number (TAN)	ASTM D 664		0.28 or less	mg KOH/g	50 mL
9	Metals by ICB (set up/prep) incl 2 metals	ICP D 5708-B (dry ash, acid digestion)				50 ml
	Nickel			8 ppm	ppm	
	Vanadium			15 ppm	ppm	
10	High Temperature Simulated Dist. (HTSD)	ASTM D 7169			Wt%	2 mL
	light ends <220°F, no more than 19% by weight		<220 Deg F	19% by Wt%		
	50 % Point by HTSD: 470 F - 570 F		470 Deg F	570 Deg F		
	Vacuum resid >1020 F , not more than 16% by weight		not more	16%		

CUSHING, OK Laboratory Capabilities	
Analysis	Test Method
Acid number (TAN)	ASTM D664
API (Hydrometer)	ASTM D287
API/Density/Specific Gravity (Densitometer)	ASTM D4052
API/Density/Specific Gravity (Densitometer)	ASTM D5002
Ash content	ASTM D482
Asphaltene content	ASTM D6560
Chloride – Organic	UOP 779
Chlorides – Total	ASTM D4929
Cloud point	ASTM D2500
Distillation (HTSD), high temperature simulated dist. by GC	ASTM D7169
Distillation, Atmospheric	ASTM D86
Flash point	ASTM D93
H ₂ S/Mercaptain sulfur	UOP 163
Light ends analysis by GC	ITM 6008
Metal analysis by ICP (Ni, Fe, V)	ASTM D5708 A & B
Metals by ICP (fuel oils only)	IP 501
Micro carbon residue (MCRT)	ASTM D4530
Nitrogen Content (Boat Inlet Chemiluminescence)	ASTM D5762
Pour point	ASTM D97
Reid Vapor Pressure	ASTM D323
S & W (Centrifuge)	ASTM D4007
Salt in crude oil	ASTM D3230
Saybolt viscosity by way of Kinematic viscosity conversion	ASTM D2161
Sediment by extraction	ASTM D473
Sulfur Content	ASTM D4294
Vapor Pressure (crude oil only)	ASTM D6377
Vapor Pressure	ASTM D5191
Viscosity - Kinematic (temperatures to be selected)	ASTM D445
Water by distillation (for residual fuels)	ASTM D95
Water by distillation	ASTM D4006
Water Content by Karl Fisher (Potentiometric)	ASTM D4377
Water Content by Karl Fisher (Coulometric)	ASTM D4928

Range of Services

Intertek

A comprehensive range of expert technical services to the oil and gas industry. These include:

- Testing & certification of crude oil and residual fuels locally.
- Third party sampling of tanks & pipelines
- Monthly tank inventories
- Tank calibration/strapping
- Metering, measurement, calibration
- API 653 tank condition inspection
- CPW (certified public weld) inspection
- Sample expediting & shipping (DOT, IATA Regulations)
- Chicago, Deer Park & New Orleans laboratories



Why Intertek?



Strong experience and support team

- Chicago, Deer Park and New Orleans
- Cushing staff of (3) three
- Local presence for rapid turn around
- Cost savings

Size and commitment of the organization

- Financial stability with all new state of the art equipment
- Support and manage large projects
- Quick moving

Global presence

- Global reach to support global projects
- Accelerate time to market

Facility Outsourcing with Intertek

Intertek



International market leader for secure transition of corporate facilities

- Experience in management & efficient operation of R&D, QC and product support services
- Breadth of technical competence
- Cost savings
- Alignment with parent company culture
- Added value and innovation
- Zero conflict of interest
- Track record

Contact Information



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Strong Globally. Strong Locally.

Intertek

