CHEMEX Labs Alberta (1984) Ltd.

OIL ANALYSIS

CONTAINER IDENTITY: PLASTIC

LABORATORY NUMBER: 86-0201-1126

LICENCE NO:

OPERATOR NAME AND ADDRESS: GEOCRUDE ENERGY INC.-85 PARTNERSHIP

CPA NUMBER:

WELL NAME: CNW PIERSON 02-24-03-29-W1M BTY.

ELEVATIONS METERS: KB: GRD:

FIELD OR AREA: PIERSON

POOL OR ZONE:

NAME OF SAMPLER: J LUKASIEWICH

COMPANY: GEOCRUDE

TEST RECOVERY:

TEST TYPE: NO.:

MULTIPLE RECOVERY:

TEST INTERVAL FROM: m TO: m

PERFORATIONS FROM: m TO: m

SAMPLING POINT: HEADER

AMT & TYPE OF CUSHION:

MUD RESISTIVITY: @25° C

TYPE OF PRODUCTION: PUMPING: FLOWING: GAS LIFT: SWAB:

PRODUCTION RATES: WATER: m³/d OIL: m³/d GAS: 10³m³/d

GAUGE PRESSURE - KPa: SEPARATOR: TREATER: AS RECEIVED:

TEMPERATURES °C: SEPARATOR: TREATER: AS RECEIVED:

DATE SAMPLED (Y M D H:M)	DATE RECEIVED (Y M D)	DATE REPORTED (Y M D)	ANALYST
86 07 15	86 07 18	86 07 25	L.G. & D.H.

SAMPLE PROPERTIES

COLOR OF CLEAN OIL: BLACK

VOLUME FRACTION

WATER	BS	TOTAL BS & W
TR	TR	TR

DENSITY OF CLEAN OIL @ 15 °C

RELATIVE	API	ABSOLUTE
0.845	36.0	845

TOTAL SULPHUR MASS FRACTION	RVP	POUR POINT °C ASTM
0.0106		-11

VISCOSITY

TEMP °C	DYNAMIC mPa.s	KINEMATIC mm^2s^{-1}
30	6.58	7.88
40	4.18	5.04
50	3.30	4.02

REMARKS

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C
0.05	89.5
0.10	108.0
0.15	126.0
0.20	146.0
0.25	167.5
0.30	190.5
0.35	213.0
0.40	249.5
0.45	268.0
0.50	294.0
0.55	323.5
0.60	347.5
0.65	352.5
0.70	372.0
FBP	378.0
CRACKED	

METHOD: ASTM D-86

BAROM PRESS kPa: 101.3

ROOM TEMP °C: 26.0

INITIAL BOIL PT °C: 58.0

DISTILLATION SUMMARY VOLUME FRACTION

204 °C NAPTHA	274 °C KEROSENE
0.33	0.13

343 °C LIGHT GAS/OIL	RECOVERED
0.13	0.74

RESIDUE	DISTILLATION LOSS
0.25	0.01

RELATIVE DENSITY

DISTILLATE	RESIDUE

BASE TYPE

CHARACTERIZATION FACTOR

CHEMICAL & GEOLOGICAL LABORATO...ES LTD.

EDMONTON FORT ST. JOHN CALGARY

OIL ANALYSIS

LABORATORY NUMBER: C83-19236

OPERATOR NAME: CANADA NORTHWEST ENERGY LIMITED

LOCATION: 5-20-3-28 W1

WELL NAME: Oakland et al Pierson 5-20-3-28

FIELD OR AREA

POOL OR ZONE: Mississippian

NAME OF SAMPLER

COMPANY

TEST TYPE

TEST RECOVERY

MULTIPLE RECOVERY: Y N —

SAMPLING POINT

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ °C

Test Interval Inspected

TYPE OF PRODUCTION: PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m³/d OIL m³/d GAS 10³m³/d

Perforations Inspected: 980 - 983

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST	OTHER INFORMATION
	1983-02-02	1983-02-11	D. Barber	

SAMPLE PROPERTIES

COLOR OF CLEAN OIL	BS & W (VOLUME FRACTION) WATER	SEDIMENT	TOTAL
Brown	0.30	Trace	0.30

DENSITY

RELATIVE AS RECEIVED	RELATIVE AFTER CLEANING	ABSOLUTE g/cm³ AS RECEIVED	ABSOLUTE g/cm³ AFTER CLEANING
	0.846		845

TOTAL SULFUR (MASS FRACTION)	TOTAL SALT g/m³	POUR POINT °C U.S.B.M.	POUR POINT °C ASTM
0.0126		+10	

RVP kPa

CARBON RESIDUE (MASS FRACTION): CONRADSON 0.0368 RAMSBOTTOM

VISCOSITY

TEMP °C	ABSOLUTE mPa·s	KINEMATIC mm²/s
20	12.0	14.2
30	5.68	6.79
40	4.46	5.37

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP °C
I.B.P.	36
0.05	82
0.10	104
0.15	124
0.20	148
0.25	170
0.30	196
0.35	223
0.40	247
0.45	267
0.50	290
0.55	
0.60	
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
F.B.P.	
CRACKED	293

METHOD: Hempel ASTM (D-285)

BAROM. PRESS. kPa(abs)	ROOM TEMP. °C
88.6	28.0

DISTILLATION SUMMARY (VOLUME FRACTION)

200°C NAPHTHA	270°C KEROSENE	300°C LIGHT GAS OIL
0.305	0.16	

RECOVERED RESIDUE DISTILLATION LOSS

RELATIVE DENSITY

DISTILLATE RESIDUE

BASE TYPE: Mixed

CHARACTERIZATION FACTOR: 12.1

Total Sulfur: 12.6 g/kg

BS & W determined on sample as received. Remainder of analysis determined on sample after cleaning by centrifuging.

0743B

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

EDMONTON FORT ST. JOHN CALGARY

OIL ANALYSIS

CONTAINER IDENTITY

LABORATORY NUMBER: C84-3832

LICENCE NUMBER

OPERATOR NAME: A & B RESOURCES LTD.

LOCATION: 11-19-3-28 W1

WELL NAME: A & B et al Pierson 11-19-3-28

ELEVATIONS

FIELD OR AREA: Pierson

POOL OR ZONE: Mississippian

NAME OF SAMPLER: K. Shaw

COMPANY

TEST TYPE NO

TEST RECOVERY

MULTIPLE RECOVERY Y N

SAMPLING POINT

AMT & TYPE OF CUSHION

MUD RESISTIVITY @ 25°C

Test Interval (metres)

TYPE OF PRODUCTION

PUMPING FLOWING GAS LIFT SWAB

PRODUCTION RATES

WATER m^3/d OIL m^3/d GAS $10^3m^3/d$

Perforations (metres)

SEPARATOR TREATER RESERVOIR SOURCE

GAUGE PRESSURE kPa

SEPARATOR TREATER RESERVOIR SOURCE

TEMPERATURE °C

DATE SAMPLED (Y M D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y M D)	ANALYST	OTHER INFORMATION
1984-01-10	1984-01-19	1984-01-24	S. Sargious	

SAMPLE PROPERTIES

COLOR OF CLEAN OIL	BS & W (VOLUME FRACTION) WATER	SEDIMENT	TOTAL
Brown	0.036	Trace	0.036

DENSITY

RELATIVE AS RECEIVED	RELATIVE AFTER CLEANING	ABSOLUTE kg/m^3 AS RECEIVED	ABSOLUTE kg/m^3 AFTER CLEANING
	0.841		840

TOTAL SULFUR (MASS FRACTION)	TOTAL SALT g/m³	POUR POINT °C USBM	POUR POINT °C ASTM
0.0087			

RVP kPa

CARBON RESIDUE (MASS FRACTION) CONRADSON RAMSBOTTOM

VISCOSITY

TEMP °C	ABSOLUTE mPa·s	KINEMATIC mm^2/s

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP °C
IBP	
0.05	
0.10	
0.15	
0.20	
0.25	
0.30	
0.35	
0.40	
0.45	
0.50	
0.55	
0.60	
0.65	
0.70	
0.75	
0.80	
0.85	
0.90	
0.95	
1.00	
FBP	
CRACKED	

METHOD

BAROM PRESS kPa(abs) ROOM TEMP °C

DISTILLATION SUMMARY (VOLUME FRACTION)

200°C NAPHTHA 275°C KEROSENE 350°C LIGHT GAS OIL

RECOVERED RESIDUE DISTILLATION LOSS

RELATIVE DENSITY

DISTILLATE RESIDUE

BASE TYPE:

CHARACTERIZATION FACTOR:

Total Sulfur: 8.7 g/kg

BS & W determined on sample as received. Remainder of analysis determined on sample after cleaning by centrifuging.

CHEMEX Labs Alberta (1984) Ltd.

OIL ANALYSIS

CONTAINER IDENTITY: PLASTIC

LABORATORY NUMBER: 86-0201-1126

LICENCE NO.:

OPERATOR NAME AND ADDRESS: GEOCRUDE ENERGY INC.-85 PARTNERSHIP

CPA NUMBER:

WELL NAME: CNW PIERSON 04-22-03-28-W1M BTY.

ELEVATIONS METERS: KB: GRD:

FIELD OR AREA: PIERSON

POOL OR ZONE:

NAME OF SAMPLER: J LUKASIEWICH

COMPANY: GEOCRUDE

TEST RECOVERY:

TEST TYPE: NO:

MULTIPLE RECOVERY:

TEST INTERVAL FROM: m TO: m

PERFORATIONS FROM: m TO: m

SAMPLING POINT: HEADER

AMT & TYPE OF CUSHION:

MUD RESISTIVITY @25° C:

TYPE OF PRODUCTION: PUMPING: FLOWING: GAS LIFT: SWAB:

PRODUCTION RATES: WATER: m³/d OIL: m³/d GAS: 10³m³/d

GAUGE PRESSURE - KPa: SEPARATOR: TREATER: AS RECEIVED:

TEMPERATURES °C: SEPARATOR: TREATER: AS RECEIVED:

DATE SAMPLED Y M D H:M	DATE RECEIVED Y M D	DATE REPORTED Y M D	ANALYST
86 07 15	86 07 18	86 07 25	L.G. & D.H.

SAMPLE PROPERTIES

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VOLUME FRACTION

WATER	BS	TOTAL BS & W
TR	TR	TR

DENSITY OF CLEAN OIL @ 15 °C

RELATIVE	API	ABSOLUTE
0.845	36.0	845

TOTAL SULPHUR MASS FRACTION	RVP	POUR POINT °C ASTM
0.0115		-12

VISCOSITY

TEMP °C	DYNAMIC mPa.s	KINEMATIC mm^2s^{-1}
30	6.55	7.84
40	4.34	5.24
50	3.44	4.18

REMARKS

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C
0.05	89.5
0.10	107.5
0.15	126.5
0.20	145.5
0.25	165.5
0.30	185.5
0.35	213.5
0.40	253.5
0.45	268.0
0.50	291.5
0.55	318.5
0.60	338.5
0.65	350.5
0.70	366.5
0.75	374.0
FBP	378.0
CRACKED	

METHOD: ASTM D-86

BAROM PRESS kPa: 101.3

ROOM TEMP °C: 26.0

INITIAL BOIL PT °C: 58.0

DISTILLATION SUMMARY VOLUME FRACTION

204 °C NAPTHA	274 °C KEROSENE
0.33	0.13

343 °C LIGHT GAS/OIL	RECOVERED
0.16	0.78

RESIDUE	DISTILLATION LOSS
0.21	0.01

RELATIVE DENSITY

DISTILLATE	RESIDUE

BASE TYPE

CHARACTERIZATION FACTOR

May 31, 1984

Quest Energy Corporation
General Delivery
Melita, Manitoba
ROM 1L0

Attention: Mr. D. Wickstrom

Dear Sir:

Re: Quest Pierson A4-23-3-28 (WPM) - Crude Oil Quality

Enclosed is a copy of the Oil Quality Analysis Report for a sample which you recently submitted, taken from the subject well. The results of this sample confirm the currently assigned quality classification for the Pierson MCSa-S Pool (i.e.: D253).

Also enclosed is an invoice for $50.00 for analysis charges.

If you have any questions, please contact the undersigned.

Yours sincerely,

Original Signed By
L. R. DUBREUIL

L. R. Dubreuil
Chief Petroleum Engineer
Petroleum Branch

LRD/sb
Encls.

OIL QUALITY ANALYSES REPORT

MANITOBA
DEPARTMENT OF ENERGY AND MINES
MINERAL RESOURCES DIVISION
PETROLEUM BRANCH
975 Century Street
Winnipeg, Manitoba
R3H 0W4

Company: Quest Energy Corporation

Address: Melita, Man.

Date: May 17, 1984

Company Contact: Del Wickstrom

Phone No. 522-3281

Analysed by: NEMBHARD / LIPINSKY Methods: Density HYDROMETER Sulphur LECO

Sample No.	Field	Pool	Battery Location	Sample Point	Sample Date	Sampled by	Density kg/m^3	Sulphur g/kg	Quality Block	Remarks
189	Pierson	MC3a	A4-22-3-28	-	-	-	843	7.6	D353	840986

Analysis Charges: 1 samples @ ~~$50.00~~ .00/sample $ 50.00

Collection Charges: _____ samples @ $30.00/sample $ _____

Total Charges: (Invoice enclosed for this amount) $ 50.00

Analysis Certified by J. Gregorchuk

Prepared by [signature]