



Water Analysis Report

Date Sampled : 19-Nov-09
 Date Received : 19-Aug-09
 Date Reported : 26-Aug-09
 03-Sep-09

Nonsuch Natural Gas

Field : Logan Wash
 Lease : Logan Wash

Parachute CO

Location : Logan Wash #12

Attention :
 cc1 :
 cc2 :
 cc3 :

Sample Point : wellhead
 Salesman : Dan Leithauser
 Analyst : Lab

Comments : No metal sample

C A T I O N S

Calcium : 459 mg/l
 Magnesium : 36 mg/l
 Barium : 0 mg/l
 Strontium : 0 mg/l
 Iron : mg/l
 Manganese : mg/l
 Sodium : 6660 mg/l

A N I O N S

Chloride : 10,680 mg/l
 Carbonate : 0 mg/l
 Bicarbonate : 560 mg/l
 Sulfate : 245 mg/l

pH (field) : 6.50
 Temperature : 85 degrees F
 Ionic Strength : 0.32
 Dissolved Solids : ppm
 Resistivity : ohm-meters
 Ammonia : ppm

Specific Gravity : 1.015 grams/ml
 CO2 in Water : 98 mg/l
 Mole % CO2 in Gas : mole %
 H2S in Water : 0.0 mg/l
 H2S in gas : ppm
 Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.43	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.28	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.07	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.15	Calcite PTB @ 140 F :	37.6
Calcite (CaCO3) SI @ 160 F :	0.37	Calcite PTB @ 160 F :	84.7
Calcite (CaCO3) SI @ 180 F :	0.61	Calcite PTB @ 180 F :	128.6
Calcite (CaCO3) SI @ 200 F :	0.84	Calcite PTB @ 200 F :	163.1
Gypsum (CaSO4) SI :	-1.58	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Champion Technologies, Inc.
 Vernal District Technical Services



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Nonsuch Natural Gas

Field : Logan Wash
 Lease : Logan Wash

Parachute CO

Location : Logan Wash #14

Attention :
 cc1 :
 cc2 :
 cc3 :

Sample Point : wellhead
 Salesman : Dan Leithauser
 Analyst : Lab

Comments : No metal sample

CATIONS

Calcium : 386 mg/l
 Magnesium : 67 mg/l
 Barium : 0 mg/l
 Strontium : 0 mg/l
 Iron : mg/l
 Manganese : mg/l
 Sodium : 6867 mg/l

ANIONS

Chloride : 10,920 mg/l
 Carbonate : 0 mg/l
 Bicarbonate : 490 mg/l
 Sulfate : 355 mg/l

pH (field) : 6.70
 Temperature : 85 degrees F
 Ionic Strength : 0.32
 Dissolved Solids : ppm
 Resistivity : ohm-meters
 Ammonia : ppm

Specific Gravity : 1.015 grams/ml
 CO2 in Water : 82 mg/l
 Mole % CO2 in Gas : mole %
 H2S in Water : 0.0 mg/l
 H2S in gas : ppm
 Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.55	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.39	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.18	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	0.04	Calcite PTB @ 140 F :	7.9
Calcite (CaCO3) SI @ 160 F :	0.26	Calcite PTB @ 160 F :	54.1
Calcite (CaCO3) SI @ 180 F :	0.49	Calcite PTB @ 180 F :	93.6
Calcite (CaCO3) SI @ 200 F :	0.73	Calcite PTB @ 200 F :	127.9
Gypsum (CaSO4) SI :	-1.50	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A



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Nonsuch Natural Gas

Field : Logan Wash
 Lease : Logan Wash

Parachute CO

Location : Logan Wash #22

Attention :

Sample Point : wellhead

cc1 :

Salesman : Dan Leithauser

cc2 :

Analyst : Lab

cc3 :

Comments : No metal sample

C A T I O N S

A N I O N S

Calcium :	262 mg/l	Chloride :	12,500 mg/l
Magnesium :	43 mg/l	Carbonate :	0 mg/l
Barium :	0 mg/l	Bicarbonate :	480 mg/l
Strontium :	0 mg/l	Sulfate :	155 mg/l
Iron :	mg/l		
Manganese :	mg/l		
Sodium :	7980 mg/l		

pH (field) :	6.60	Specific Gravity :	1.015 grams/ml
Temperature :	85 degrees F	CO2 in Water :	148 mg/l
Ionic Strength :	0.36	Mole % CO2 in Gas:	mole %
Dissolved Solids :	ppm	H2S in Water :	0.0 mg/l
Resistivity :	ohm-meters	H2S in gas :	ppm
Ammonia :	ppm	Dissolved Oxygen :	ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-1.05	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.90	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.69	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.47	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	-0.24	Calcite PTB @ 160 F :	N/A
Calcite (CaCO3) SI @ 180 F :	-0.01	Calcite PTB @ 180 F :	N/A
Calcite (CaCO3) SI @ 200 F :	0.23	Calcite PTB @ 200 F :	41.2
Gypsum (CaSO4) SI :	-2.03	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

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Nonsuch Natural Gas

Field : Logan Wash
 Lease : Logan Wash

Parachute CO

Location : Puckett

Attention :
 cc1 :
 cc2 :
 cc3 :

Sample Point : wellhead
 Salesman : Dan Leithauser
 Analyst : Lab

Comments : No metal sample

CATIONS

Calcium : 241 mg/l
 Magnesium : 17 mg/l
 Barium : 0 mg/l
 Strontium : 0 mg/l
 Iron : mg/l
 Manganese : mg/l
 Sodium : 8302 mg/l

ANIONS

Chloride : 12,560 mg/l
 Carbonate : 0 mg/l
 Bicarbonate : 880 mg/l
 Sulfate : 280 mg/l

pH (field) : 6.50
 Temperature : 85 degrees F
 Ionic Strength : 0.37
 Dissolved Solids : ppm
 Resistivity : ohm-meters
 Ammonia : ppm

Specific Gravity : 1.010 grams/ml
 CO2 in Water : 170 mg/l
 Mole % CO2 in Gas : mole %
 H2S in Water : 0.0 mg/l
 H2S in gas : ppm
 Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.64	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.48	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	-0.27	Calcite PTB @ 120 F :	N/A
Calcite (CaCO3) SI @ 140 F :	-0.05	Calcite PTB @ 140 F :	N/A
Calcite (CaCO3) SI @ 160 F :	0.17	Calcite PTB @ 160 F :	41.2
Calcite (CaCO3) SI @ 180 F :	0.40	Calcite PTB @ 180 F :	87.3
Calcite (CaCO3) SI @ 200 F :	0.64	Calcite PTB @ 200 F :	125.1
Gypsum (CaSO4) SI :	-1.81	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A