



02469625

OS-067-0892.5
Loc# 333941



inter-ed
1125 1182 + 1183

Samson Plaza
Two West Second Street
Tulsa, Oklahoma 74103-3103
USA
918/591-1791
Fax 918/591-1796

591-7370

August 28, 2006

Colorado Oil & Gas Conservation Commission
Attn: Debbie Baldwin
1120 Lincoln Street
Suite 801
Denver, CO 80203

Reference: Water well results

Dear Ms. Baldwin:

Attached are copies of letters and analytical data for water well tests that have been run in compliance with COGCC. Samson will continue to get this information out to the water well owners and the COGCC in a timely fashion.

Please call me at (918) 591-1365, if you have any questions or need additional information.

Thank you.

Sincerely,

SAMSON RESOURCES COMPANY

Amanda Walker
Environmental & Safety Technician

11D 1182

ANALYSIS REPORT

Lab #: 97907 Job #: 7196
 Sample Name/Number: Randy & Vivian Neil Water Well
 Company: Samson Resources
 Date Sampled: 5/09/2006
 Container: Square Plastic Bottle & Sm Bottle
 Field/Site Name: Arco 32-7-6 #3
 Location: LaPlata County
 Formation/Depth: SESE S6 T32 R7
 Sampling Point: FCG# 050906-L1
 Date Received: 5/11/2006 Date Reported: 6/01/2006

RECEIVED
 Environmental & Safety Services
 JUL 03 2006

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 18O per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	1.48			
Oxygen -----	0.213			
Nitrogen -----	85.13			
Carbon Dioxide -----	0.56			
Methane -----	12.55	-51.97	-118.8	
Ethane -----	0.0703			
Ethylene -----	nd			
Propane -----	nd			
Iso-butane -----	nd			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			
Water -----			-99.3	-12.77
Dissolved Inorganic Carbon -		-19.21		

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 128

Specific gravity, calculated: 0.925

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.72

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen and oxygen are relative to VSMOW. Calculations for BTU and specific gravity per D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. ASTM Chemical analysis based on standards accurate to within 2%



11D 1183

**Four Corners Geoscience
BART (Bacterial Test Results)**

Arco 32-7-6#3
GasWell 1

NAME	FCG #	DATE
<u>Randy & Vivian Neil (Rental)Follow-up</u>	<u>050906-L2</u>	<u>5/9/2006</u>

Water Well Location

QTRQTR NESE Section 6 TWP(North) 32 RGE(West) 7

Methane Result(mg/L)

0.095 NO
CH4_MG_L ISOTOPE

SRB

Sulfate reducing bacteria very aggressive at 3 days.Growth throughout sample.

**BART Hach Company
BART TYPE: SRB-BART
Batch # 00784-S,T Lot 0784-T
Expiration Date Decmeber 2007**

IRB

Iron related bacteria very aggressive.Enteric bacteria present.
Pseudomonads present.

**BART hach Company
BART TYPE:IRB-BART
Batch #:0485-L,MLot #:0485-M
Expiration Date December 2007**

11D 1182

**Four Corners Geoscience
BART (Bacterial Test Results)**

Arco 32-7-6#3
GasWell 1

NAME Randy & Vivian Neil -Main House Followup FCG # 050906-L1 DATE 5/9/2006

Water Well Location

QTRQTR SENW Section 6 TWP(North) 32 RGE(West) 7

Methane Result(mg/L) 1.34 YES-Pending
CH4_MG_L ISOTOPE

SRB

Sulfate reducing bacteria present very to moderately aggressive.
Sulfate bacterial growth throughout sample.

**BART Hach Company
BART TYPE: SRB-BART
Batch # 00784-S,T Lot 0784-T
Expiration Date Decmeber 2007**

IRB

Iron related bacteria very aggressive at 4 days. enteric and pseudomonas present.

**BART hach Company
BART TYPE:IRB-BART
Batch #:0485-L,MLot #:0485-M
Expiration Date December 2007**

Samson Resources
 Domestic Water Well Test
 COGCC Infill Order
 112-156;112-157;112-180
 FCGeo Water Well Test Report

FCG # 050906-L2 BLM NO
 DATE 5/9/2006 IID(COGCC) 1183

Randy & Vivian Neil (Rental) Follow-up

NAME
 4425 CR 319 Ignacio, CO 81137 P.O. Box 1207 Ignacio, CO 81137 970-563-3670
 Address Water Well Mailing Address Telephone#

Water Well Location and Permit Data	222422	360	170	1.75
	WaterWellPermit#	WellDepth(Ft)	StaticWater Level(Ft)	Yield(Permit)
NESE	6	32	7	3500N4200W
QTRQTR	SECTION	TWP(North)	RGE(West)	FTG
				LaPlataCounty,CO

Garmin GPS NAD CONUS 27 until 2/20/2006 then NAD 83 Commenced	-107.64466	37.04392
	Longitude(DecDegrees)	Latitude(DecDegrees)

Field Chemistries	9.1	675	422	15
	pH	Electric Conductivity	TDS(Calculated)	H2OTemp(Degrees Celsius)

Water samples delivered Analytical Laboratory for chemistries. See attached results.

Methane Result (mg/L)(Dissolved)	0.095 mg/L	Detection Limit 0.0005 mg/L-USGS/BLM METHOD
Hydrogen Sulfide (mg/L)	>2.0 <5.0 mg/L	Detection Limit 0.1 mg/L-HACH Test 25378-00
San Juan Basin Health- Coliform Test Only	Absent	Presence/Absence-State of Colorado See Attachment
	Coliform Bacteria	

Conducted field parameter tests while Randy pumped well 289 gallons to clean well for fresh aquifer. Initially grey tint then clear, some coal or carbonaceous shale in bucket. Slight "S" odor. Water grey brown to grey near end of pumping. BARTS No isotope.

COMMENTS

Monitor well for Infill	SESE Sec 6 T32N R7W
Arco 32-7-6#3	Location Gas Well
Gas Well Name	067-08925

Four Corners Geoscience conducted onsite field chemistries, observations of physical characteristics of well water while pumping well to receive a fresh aquifer sample. Water samples were collected and delivered to analytical laboratory. Methane samples were delivered to Four Corners Geoscience for analysis for methane in accordance with BLM/USGS Method established in 1993 for LaPlata County Colorado. Onsite water well evaluation and sample collection and analysis are conducted in compliance with the Colorado Oil and Gas Conservation Commission Order Numbers 112-156 and 112-157 established in July 2000 and Order Number 112-180 established in 2005. Four Corners Geoscience is not liable for the results or interpretation of these analyses. Qualified specialists should be consulted for interpretation or treatment of water.

Samson Resources
 Domestic Water Well Test
 COGCC Infill Order
 112-156;112-157;112-180
 FCGeo Water Well Test Report

FCG # 050906-L1 BLM NO _____
 DATE 5/9/2006 IID(COGCC) 1182

Randy & Vivian Neil -Main House Followup

NAME
 4050 CR 319 Ignacio,CO 81137 P.O. Box 1207 Ignacio,CO 81137 970-563-3670
 AddressWaterWell Mailing Address Telephone#

Water Well Location and Permit Data				222423	340	175	1.0
				WaterWellPermit#	WellDepth(Ft)	StaticWater Level(Ft)	Yield(Permit)
SENW	6	32	7	1380N2400W	LaPlataCounty,CO		
QTRQTR	SECTION	TWP(North)	RGE(West)	FTG			

Garmin GPS NAD CONUS 27 until 2/20/2006 then NAD 83 Commenced
 -107.65011 Longitude(DecDegrees)
 37.04856 Latitude(DecDegrees)

Field Chemistries	8.94	680	425	14
	pH	ElectricConductivity	TDS(Calculated)	H2OTemp(DegreesCelsius)

Water samples delivered Analytical Laboratory for chemistries. See attached results.

Methane Result (mg/L)(Dissolved)	1.34 mg/L	DetectionLimit 0.0005 mg/L-USGS/ BLM METHOD
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HydrogenSulfide (mg/L)	>5.0 mg/L	Detection Limit 0.1 mg/L-HACH Test 25378-00
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San Juan Basin Health- Coliform Test Only	Absent	Presence/Absence-State of Colorado See Attachment
	ColiformBacteria	

Hose attached to bypass cistern. Water running when we arrived. 291 gallons measured before & during field test. Water clear, strong sulfur odor, Tr. very fine sands, silt & carb shale or coal fines. Green tint. Large bubbles from end of hose. Iso & BARTS

COMMENTS

Monitor well for Infill

Arco 32-7-6#3	SESE Sec 6 T32N R7W
GasWellName	LocationGasWell

Four Corners Geoscience conducted onsite field chemistries, observations of physical characteristics of well water while pumping well to receive a fresh aquifer sample. Water samples were collected and delivered to analytical laboratory.
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