



State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109



DE	LT	CE	FS

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 77330	4. Contact Name Catherine Dickert	Complete the Attachment Checklist OP OGCC
2. Name of Operator: SG Interests I Ltd.	Phone: 970-385-0696	
3. Address: 1485 Florida Road, C202 City: Durango State: CO Zip: 81301	Fax: 970-385-0636	
5. API Number 05-	OGCC Facility ID Number 418790 / 421066	Survey Plat
6. Well/Facility Name: McIntyre Flowback Pit	7. Well/Facility Number #4	Directional Survey
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): NWNE Section 26 T11S R90W 6th PM		Surface Eqpm Diagram
9. County: Gunnison	10. Field Name: NA	Technical Info Page
11. Federal, Indian or State Lease Number: NA		Other

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)	
Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/> FNL/FSL <input type="checkbox"/> FEL/FWL
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> <input type="checkbox"/> attach directional survey
Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer	
Latitude	Distance to nearest property line
Longitude	Distance to nearest bldg, public rd, utility or RR
Ground Elevation	Distance to nearest lease line
	Is location in a High Density Area (rule 603b)? Yes/No
	Distance to nearest well same formation
	Surface owner consultation date:
GPS DATA:	
Date of Measurement	PDOP Reading
	Instrument Operator's Name
<input type="checkbox"/> CHANGE SPACING UNIT	<input type="checkbox"/> Remove from surface bond
Formation	Signed surface use agreement attached
Formation Code	
Spacing order number	
Unit Acreage	
Unit configuration	
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling):	<input type="checkbox"/> CHANGE WELL NAME
Effective Date:	From:
Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual	To:
	Effective Date:
<input type="checkbox"/> ABANDONED LOCATION:	<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS
Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No	Date well shut in or temporarily abandoned:
Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No	Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No
Date Ready for Inspection:	MIT required if shut in longer than two years. Date of last MIT
<input type="checkbox"/> SPUD DATE:	<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK	*submit cbl and cement job summaries
Method used	Cementing tool setting/perf depth
Cement volume	Cement top
Cement bottom	Date
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.	
Final reclamation will commence on approximately	<input type="checkbox"/> Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Report of Work Done
Approximate Start Date:	Date Work Completed:
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)	
<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: add water sources
	<input type="checkbox"/> E&P Waste Disposal
	<input type="checkbox"/> Beneficial Reuse of E&P Waste
	<input type="checkbox"/> Status Update/Change of Remediation Plans
	for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Catherine Dickert Date: 10/02/2012 Email: cdickert@sginterests.com  
Print Name: Catherine Dickert Title: Environmental and Permitting Manager

COGCC Approved: [Signature] Title: Env. Supr Date: 4/13/12/13  
CONDITIONS OF APPROVAL, IF ANY:

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: 77330 API Number: NA
2. Name of Operator: SG Interests I Ltd OGCC Facility ID # 41890 / 42106
3. Well/Facility Name: McIntyre Flowback Pit Well/Facility Number: 4
4. Location (Qtr Qtr, Sec, Twp, Rng, Meridian): NWNE Section 26 T11S R90W6th PM

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5.

**DESCRIBE PROPOSED OR COMPLETED OPERATIONS**

Please add the following wells to the list of sources of water for this pit:

Federal 11-90-26 #1 API #05-051-06060  
Federal 11-90-24 #1A API# 05-051-06069  
Falcon Seaboard 11-90-11 #2 API#05-051-06061  
Falcon Seaboard 11-90-12 #1A API#05-051-06070  
Falcon Seaboard 11-90-12 #2 API#05-051-06046  
Falcon Seaboard 11-90-12 #1 API#05-051-06047  
Pasco Spadafora #3 API#05-051-06102

The water analysis results for the above listed wells are attached to this notice.



**DownHole SAT Rx**  
**SOURCE WATER CHEMISTRY FOR MIXING**

Federal 11-90-26 # 1

Report Date: 06-29-2012 Sampled: 06-29-2012  
Sample #: 0 at 0836

**CATIONS**

Calcium (as Ca)	2.89
Magnesium (as Mg)	0.190
Barium (as Ba)	0.00
Strontium (as Sr)	0.999
Sodium (as Na)	1211
Potassium (as K)	39.30
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	11.61
Manganese (as Mn)	0.0320
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

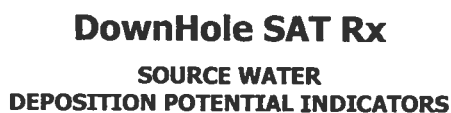
**ANIONS**

Chloride (as Cl)	1670
Sulfate (as SO <sub>4</sub> )	0.00
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0318
Bicarbonate (as HCO <sub>3</sub> )	450.72
Carbonate (as CO <sub>3</sub> )	3.07
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

**PARAMETERS**

pH	7.34
Temperature (°F)	120.00
Density(g/mL)	1.00
Pressure(psia)	14.70
Calculated T.D.S.	3389
Molar Conductivity	5802
Dissolved O <sub>2</sub>	0.00

**FRENCH CREEK SOFTWARE, INC.**  
**KIMBERTON & HARES HILL ROAD, KIMBERTON, PA 19442**



Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0836

## OPERATING CONDITIONS

Temperature (°F)	120.00
Time(mins)	3.00

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**DownHole SAT Rx**  
**SOURCE WATER CHEMISTRY FOR MIXING**

Federal 11-90-24 # 1A

Report Date: 06-29-2012    Sampled: 06-29-2012  
Sample #: 0    at 0911

**CATIONS**

Calcium (as Ca)	193.10
Magnesium (as Mg)	19.97
Barium (as Ba)	12.59
Strontium (as Sr)	8.80
Sodium (as Na)	1565
Potassium (as K)	2783
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	370.80
Manganese (as Mn)	4.03
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

**ANIONS**

Chloride (as Cl)	5403
Sulfate (as SO <sub>4</sub> )	0.00
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0315
Bicarbonate (as HCO <sub>3</sub> )	296.64
Carbonate (as CO <sub>3</sub> )	212.89
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

**PARAMETERS**

pH	6.31
Temperature (°F)	120.00
Density(g/mL)	1.00
Pressure(psia)	14.70
Calculated T.D.S.	11079
Molar Conductivity	16280
Dissolved O <sub>2</sub>	0.00

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**KIMBERTON & HARES HILL ROAD, KIMBERTON, PA 19442**



DownHole SAT Rx  
SOURCE WATER  
DEPOSITION POTENTIAL INDICATORS

Federal 11-90-24 # 1A

Report Date: 06-29-2012 Sampled: 06-29-2012  
Sample #: 0 at 0911

SATURATION LEVEL

Calcite (CaCO <sub>3</sub> )	0.606
Aragonite (CaCO <sub>3</sub> )	0.512
Witherite (BaCO <sub>3</sub> )	0.0128
Strontianite (SrCO <sub>3</sub> )	0.0822
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	0.00
Magnesite (MgCO <sub>3</sub> )	0.0732
Anhydrite (CaSO <sub>4</sub> )	0.00
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	0.00
Barite (BaSO <sub>4</sub> )	0.00
Celestite (SrSO <sub>4</sub> )	0.00
Fluorite (CaF <sub>2</sub> )	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica (SiO <sub>2</sub> )	0.00
Brucite (Mg(OH) <sub>2</sub> )	< 0.001
Magnesium silicate	0.00
Iron hydroxide (Fe(OH) <sub>3</sub> )	1254
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	0.00
Siderite (FeCO <sub>3</sub> )	2771
Halite (NaCl)	< 0.001
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	0.00
Iron sulfide (FeS)	0.00

FREE ION MOMENTARY EXCESS (ppm)

Calcite (CaCO <sub>3</sub> )	-0.249
Aragonite (CaCO <sub>3</sub> )	-0.363
Witherite (BaCO <sub>3</sub> )	-24.30
Strontianite (SrCO <sub>3</sub> )	-4.66
Calcium oxalate (CaC <sub>2</sub> O <sub>4</sub> )	-0.480
Magnesite (MgCO <sub>3</sub> )	-3.84
Anhydrite (CaSO <sub>4</sub> )	-2087
Gypsum (CaSO <sub>4</sub> *2H <sub>2</sub> O)	-1991
Barite (BaSO <sub>4</sub> )	-4.94
Celestite (SrSO <sub>4</sub> )	-255.72
Fluorite (CaF <sub>2</sub> )	-44.35
Calcium phosphate	>-0.001
Hydroxyapatite	-895.12
Silica (SiO <sub>2</sub> )	-205.62
Brucite (Mg(OH) <sub>2</sub> )	0.00756
Magnesium silicate	-324.86
Iron hydroxide (Fe(OH) <sub>3</sub> )	< 0.001
Strengite (FePO <sub>4</sub> *2H <sub>2</sub> O)	>-0.001
Siderite (FeCO <sub>3</sub> )	0.443
Halite (NaCl)	-513910
Thenardite (Na <sub>2</sub> SO <sub>4</sub> )	-138746
Iron sulfide (FeS)	-0.0105

SIMPLE INDICES

Langelier	-0.172
Ryznar	6.65
Puckorius	4.36
Larson-Skold Index	12.76
Stiff Davis Index	-0.123
Oddo-Tomson	-0.327

BOUND IONS

Calcium	193.10
Barium	12.59
Carbonate	0.856
Phosphate	0.00
Sulfate	0.00

TOTAL

FREE

OPERATING CONDITIONS

Temperature (°F)	120.00
Time(mins)	3.00

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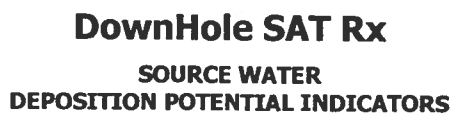
Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                                  at 0905

Calcium (as Ca)	47.46
Magnesium (as Mg)	89.83
Barium (as Ba)	47.52
Strontium (as Sr)	70.35
Sodium (as Na)	9986
Potassium (as K)	69.44
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	10.37
Manganese (as Mn)	0.00
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

Chloride (as Cl)	15334
Sulfate (as SO <sub>4</sub> )	0.00
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0310
Bicarbonate (as HCO <sub>3</sub> )	696.96
Carbonate (as CO <sub>3</sub> )	137.29
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

pH	8.28
Temperature (°F)	120.00
Density(g/mL)	1.01
Pressure(psia)	14.70
Calculated T.D.S.	26450
Molar Conductivity	35611
Dissolved O2	0.00

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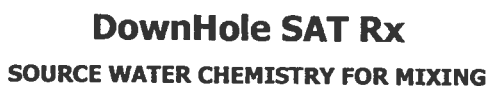
Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0905

## OPERATING CONDITIONS

Temperature (°F)	120.00
Time(mins)	3.00

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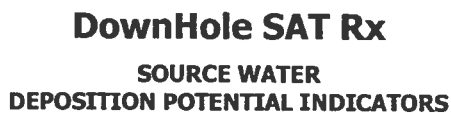
Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0857

Calcium (as Ca)	175.80
Magnesium (as Mg)	27.84
Barium (as Ba)	132.30
Strontium (as Sr)	41.09
Sodium (as Na)	8258
Potassium (as K)	321.90
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	4.50
Manganese (as Mn)	0.0270
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

Chloride (as Cl)	12862
Sulfate (as SO <sub>4</sub> )	0.00
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0311
Bicarbonate (as HCO <sub>3</sub> )	734.40
Carbonate (as CO <sub>3</sub> )	203.64
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

pH	7.46
Temperature (°F)	120.00
Density(g/mL)	1.01
Pressure(psia)	14.70
Calculated T.D.S.	22870
Molar Conductivity	31532
Dissolved O2	0.00

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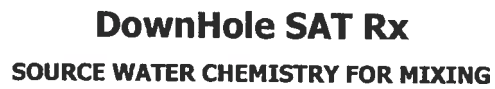


Report Date: 06-29-2012 Sampled: 06-29-2012  
Sample #: 0 at 0857

## OPERATING CONDITIONS

Temperature (°F)	120.00
Time(mins)	3.00

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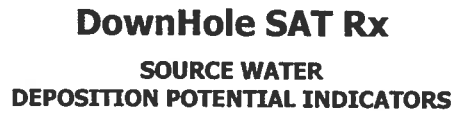
Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0900

Calcium (as Ca)	102.80
Magnesium (as Mg)	14.83
Barium (as Ba)	5.67
Strontium (as Sr)	13.40
Sodium (as Na)	2437
Potassium (as K)	27.04
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	2.48
Manganese (as Mn)	0.764
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

Chloride (as Cl)	3791
Sulfate (as SO <sub>4</sub> )	0.00
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0317
Bicarbonate (as HCO <sub>3</sub> )	164.16
Carbonate (as CO <sub>3</sub> )	117.63
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

pH	6.61
Temperature (°F)	120.00
Density(g/mL)	1.00
Pressure(psia)	14.70
Calculated T.D.S.	6787
Molar Conductivity	11375
Dissolved O2	0.00

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**KIMBERTON & HARES HILL ROAD, KIMBERTON, PA 19442**



Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0900

Calcite ( $\text{CaCO}_3$ )	0.419
Aragonite ( $\text{CaCO}_3$ )	0.354
Witherite ( $\text{BaCO}_3$ )	0.00754
Strontianite ( $\text{SrCO}_3$ )	0.162
Calcium oxalate ( $\text{CaC}_2\text{O}_4$ )	0.00
Magnesite ( $\text{MgCO}_3$ )	0.0696
Anhydrite ( $\text{CaSO}_4$ )	0.00
Gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )	0.00
Barite ( $\text{BaSO}_4$ )	0.00
Celestite ( $\text{SrSO}_4$ )	0.00
Fluorite ( $\text{CaF}_2$ )	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica ( $\text{SiO}_2$ )	0.00
Brucite ( $\text{Mg}(\text{OH})_2$ )	< 0.001
Magnesium silicate	0.00
Iron hydroxide ( $\text{Fe}(\text{OH})_3$ )	37.98
Strengite ( $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$ )	0.00
Siderite ( $\text{FeCO}_3$ )	23.55
Halite ( $\text{NaCl}$ )	< 0.001
Thenardite ( $\text{Na}_2\text{SO}_4$ )	0.00
Iron sulfide ( $\text{FeS}$ )	0.00

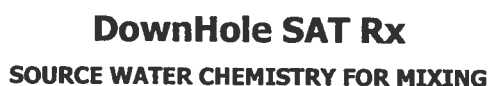
Calcite ( $\text{CaCO}_3$ )	-0.524
Aragonite ( $\text{CaCO}_3$ )	-0.687
Witherite ( $\text{BaCO}_3$ )	-24.21
Strontianite ( $\text{SrCO}_3$ )	-2.54
Calcium oxalate ( $\text{CaC}_2\text{O}_4$ )	-0.686
Magnesite ( $\text{MgCO}_3$ )	-3.93
Anhydrite ( $\text{CaSO}_4$ )	-1920
Gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )	-1842
Barite ( $\text{BaSO}_4$ )	-6.17
Celestite ( $\text{SrSO}_4$ )	-216.12
Fluorite ( $\text{CaF}_2$ )	-51.24
Calcium phosphate	>-0.001
Hydroxyapatite	-811.23
Silica ( $\text{SiO}_2$ )	-207.18
Brucite ( $\text{Mg}(\text{OH})_2$ )	0.0145
Magnesium silicate	-309.94
Iron hydroxide ( $\text{Fe}(\text{OH})_3$ )	< 0.001
Strengite ( $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$ )	>-0.001
Siderite ( $\text{FeCO}_3$ )	0.418
Halite ( $\text{NaCl}$ )	-496657
Thenardite ( $\text{Na}_2\text{SO}_4$ )	-131880
Iron sulfide ( $\text{FeS}$ )	-0.450

Langelier	-0.339
Ryznar	7.29
Puckorius	5.67
Larson-Skold Index	16.17
Stiff Davis Index	-0.275
Oddo-Tomson	-0.422

Calcium	102.80	99.08
Barium	5.67	5.67
Carbonate	0.980	0.227
Phosphate	0.00	0.00
Sulfate	0.00	0.00

Temperature (°F)	120.00
Time(mins)	3.00

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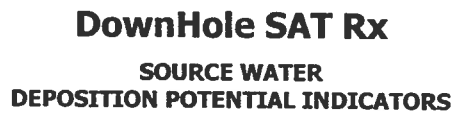
Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0850

## ANIONS

Calcium (as Ca)	24.31	Chloride (as Cl)	1207
Magnesium (as Mg)	2.25	Sulfate (as SO <sub>4</sub> )	0.00
Barium (as Ba)	3.54	Bromine (as Br)	0.00
Strontium (as Sr)	4.41	Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0318
Sodium (as Na)	735.80	Bicarbonate (as HCO <sub>3</sub> )	90.72
Potassium (as K)	36.37	Carbonate (as CO <sub>3</sub> )	26.56
Lithium (as Li)	0.00	Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Ammonia (as NH <sub>3</sub> )	0.00	Silica (as SiO <sub>2</sub> )	0.00
Aluminum (as Al)	0.00	Phosphate(as PO <sub>4</sub> )	0.00
Iron (as Fe)	53.91	H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Manganese (as Mn)	3.47	Fluoride (as F)	0.00
Zinc (as Zn)	0.00	Nitrate (as NO <sub>3</sub> )	0.00
Lead (as Pb)	0.00	Boron (as B)	0.00

pH	6.54
Temperature (°F)	120.00
Density(g/mL)	1.00
Pressure(psia)	14.70
Calculated T.D.S.	2211
Molar Conductivity	4020
Dissolved O2	0.00

**FRENCH CREEK SOFTWARE, INC.**  
**KIMBERTON & HARES HILL ROAD, KIMBERTON, PA 19442**



Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0850

## OPERATING CONDITIONS

Temperature (°F)	120.00
Time(mins)	3.00

**FRENCH CREEK SOFTWARE, INC.**  
**KIMBERTON & HARES HILL ROAD, KIMBERTON, PA 19442**

## DownHole SAT Rx

### SOURCE WATER CHEMISTRY FOR MIXING

Pasco Spadafora # 3

Report Date: 06-29-2012      Sampled: 06-29-2012  
Sample #: 0                              at 0911

## CATIONS

Calcium (as Ca)	1066
Magnesium (as Mg)	159.40
Barium (as Ba)	83.31
Strontium (as Sr)	180.80
Sodium (as Na)	13660
Potassium (as K)	213.00
Lithium (as Li)	0.00
Ammonia (as NH <sub>3</sub> )	0.00
Aluminum (as Al)	0.00
Iron (as Fe)	56.65
Manganese (as Mn)	1.77
Zinc (as Zn)	0.00
Lead (as Pb)	0.00

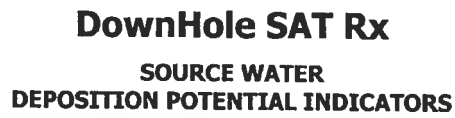
## ANIONS

Chloride (as Cl)	22293
Sulfate (as SO <sub>4</sub> )	0.00
Bromine (as Br)	0.00
Dissolved CO <sub>2</sub> (as CO <sub>2</sub> )	0.0308
Bicarbonate (as HCO <sub>3</sub> )	231.84
Carbonate (as CO <sub>3</sub> )	1225
Oxalic acid (as C <sub>2</sub> O <sub>4</sub> )	0.00
Silica (as SiO <sub>2</sub> )	0.00
Phosphate(as PO <sub>4</sub> )	0.00
H <sub>2</sub> S (as H <sub>2</sub> S)	0.00
Fluoride (as F)	0.00
Nitrate (as NO <sub>3</sub> )	0.00
Boron (as B)	0.00

## PARAMETERS

pH	6.24
Temperature (°F)	120.00
Density(g/mL)	1.02
Pressure(psia)	14.70
Calculated T.D.S.	40191
Molar Conductivity	44446
Dissolved O2	0.00

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**KIMBERTON & HARES HILL ROAD, KIMBERTON, PA 19442**



Report Date: 06-29-2012 Sampled: 06-29-2012  
Sample #: 0 at 0911

Calcite ( $\text{CaCO}_3$ )	5.65
Aragonite ( $\text{CaCO}_3$ )	4.78
Witherite ( $\text{BaCO}_3$ )	0.125
Strontianite ( $\text{SrCO}_3$ )	2.54
Calcium oxalate ( $\text{CaC}_2\text{O}_4$ )	0.00
Magnesite ( $\text{MgCO}_3$ )	1.07
Anhydrite ( $\text{CaSO}_4$ )	0.00
Gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )	0.00
Barite ( $\text{BaSO}_4$ )	0.00
Celestite ( $\text{SrSO}_4$ )	0.00
Fluorite ( $\text{CaF}_2$ )	0.00
Calcium phosphate	0.00
Hydroxyapatite	0.00
Silica ( $\text{SiO}_2$ )	0.00
Brucite ( $\text{Mg}(\text{OH})_2$ )	< 0.001
Magnesium silicate	0.00
Iron hydroxide ( $\text{Fe}(\text{OH})_3$ )	82.68
Strengite ( $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$ )	0.00
Siderite ( $\text{FeCO}_3$ )	681.72
Halite ( $\text{NaCl}$ )	0.00391
Thenardite ( $\text{Na}_2\text{SO}_4$ )	0.00
Iron sulfide ( $\text{FeS}$ )	0.00

Calcite ( $\text{CaCO}_3$ )	1.17
Aragonite ( $\text{CaCO}_3$ )	1.13
Witherite ( $\text{BaCO}_3$ )	-16.85
Strontianite ( $\text{SrCO}_3$ )	1.27
Calcium oxalate ( $\text{CaC}_2\text{O}_4$ )	-0.192
Magnesite ( $\text{MgCO}_3$ )	0.0759
Anhydrite ( $\text{CaSO}_4$ )	-2307
Gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ )	-2160
Barite ( $\text{BaSO}_4$ )	-2.49
Celestite ( $\text{SrSO}_4$ )	-285.50
Fluorite ( $\text{CaF}_2$ )	-27.36
Calcium phosphate	>-0.001
Hydroxyapatite	-1185
Silica ( $\text{SiO}_2$ )	-192.55
Brucite ( $\text{Mg(OH)}_2$ )	0.00732
Magnesium silicate	-368.34
Iron hydroxide ( $\text{Fe(OH)}_3$ )	< 0.001
Strengite ( $\text{FePO}_4 \cdot 2\text{H}_2\text{O}$ )	>-0.001
Siderite ( $\text{FeCO}_3$ )	1.64
Halite ( $\text{NaCl}$ )	-529072
Thenardite ( $\text{Na}_2\text{SO}_4$ )	-183699
Iron sulfide ( $\text{FeS}$ )	-0.209

Langelier	0.915
Ryznar	4.41
Puckorius	1.20
Larson-Skold Index	14.06
Stiff Davis Index	0.640
Oddo-Tomson	0.358

Calcium	1066	938.91
Barium	83.31	83.31
Carbonate	12.87	0.853
Phosphate	0.00	0.00
Sulfate	0.00	0.00

Temperature (°F)	120.00
Time(mins)	3.00

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