Inspection Report For Well: UT20736 - 06601

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah — Date: ~~10~~ 12/10/2013

Others: Ajayi, Christopher — Time: 10:30 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevenson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 16-03		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 12/9/2005		
Oil Field:	Antelope Creek (Duchesne)		
Location:	NENW S16 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1905 /
Last MIT:	Pass 12/29/2010	***Annulus Pressure From Last MIT:***	1110

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: **(Select One)**

- [ ] Construction / Workover
- [ ] Plugging
- [ ] Post-Closure
- [ ] Response to Complaint
- [x] Routine
- [ ] Witness MIT
- [ ] Other

ICIS Entered
Date 12/19/13
Initials DJ

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 1827 / L: ____ psig Gauge Range: Scada psig	Gauge Owner:	[ ] EPA [x] Operator
Annulus Gauge:	[x] Yes [ ] No	Pressure: 0 psig Gauge Range: opened psig	Gauge Owner:	[x] EPA [ ] Operator
Bradenhead Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator
Pump Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator

Operating Status: (Select One)
- [x] Active
- [ ] Being Reworked
- [ ] Not Injecting
- [ ] Production
- [ ] Plugged and Abandoned
- [ ] Under Construction

U2 Entered
Date 12/17/13
Initial AC

See page 2 for photos, comments, and site conditions.

TAB	GREEN	BLUE	CBI
		1	

Inspection Report For Well: UT20736 - 06601 (PAGE 2)

PHOTOGRAPHS: ☐ Yes ☒ No List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s): _____ _____

☐ Data Entry ☐ Compliance Staff ☐ Hard Copy Filing

NOTICE OF INSPECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/16/13
Hour: 8:00a

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts
Inspector's Name & Title (Print)

Inspector's Signature

EPA R8 3560-1 (8-89)

Original - Regional Office Copy
Yellow Copy - Operator Copy

OMB No. 2040-0042 Approval Expires 11/30/2014

EPA

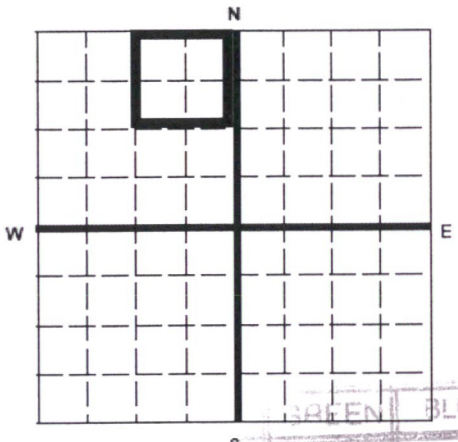
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-06601

Surface Location Description
___ 1/4 of ___ 1/4 of NE 1/4 of NW 1/4 of Section 16 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 491 ft. frm (N/S) N Line of quarter section
and 2050 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
[ ] Brine Disposal	[ ] Individual
[X] Enhanced Recovery	[X] Area
[ ] Hydrocarbon Storage	Number of Wells 111

U2 Entered
Date 3/30/17
Initial DB

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-03

GREEN BLUE CBI
2

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	16	1768	1808	1119		0	0
February	16	1790	1841	913		0	0
March	16	1807	1849	941		0	0
April	16	1794	1851	935		0	0
May	16	1782	1782	1007		0	0
June	16	1765	1844	936		0	0
July	16	1761	1788	958		0	0
August	16	1746	1835	980		0	0
September	16	1741	1776	926		0	0
October	16	1787	1843	1080		0	0
November	16	1748	1819	1002		0	0
December	16	1799	1819	1094		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		03/21/2017

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 16-03 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345361**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/25/2017
System Temperature 1 (°F):	300
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	130
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0057
pH:	8.40
Calculated TDS (mg/L):	12021.09
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4107.49	Chloride (Cl):	5000.00
Potassium (K):	34.35	Sulfate (SO_4):	0.00
Magnesium (Mg):	7.54	Bicarbonate (HCO_3):	2684.00
Calcium (Ca):	21.07	Carbonate (CO_3):	
Strontium (Sr):	5.67	Hydroxide(HO):	
Barium (Ba):	41.51	Acetic Acid (CH_3COO)	
Iron (Fe):	70.72	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	17.15	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.55	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.19	Bromine (Br):	
Aluminum (Al):	0.47	Silica (SiO_2):	30.85
Lithium (Li):	2.88	Calcium Carbonate ($CaCO_3$):	
Boron (B):	5.43	Phosphates (PO_4):	10.15
Silicon (Si):	14.42	Oxygen (O_2):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	1.36	17.38	0.00	0.00	0.00	0.00	4.04	51.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149.00	267.00	1.41	17.50	0.00	0.00	0.00	0.00	4.12	51.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168.00	483.00	1.48	17.65	0.00	0.00	0.00	0.00	4.21	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187.00	700.00	1.55	17.78	0.00	0.00	0.00	0.00	4.30	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206.00	917.00	1.64	17.91	0.00	0.00	0.00	0.00	4.38	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224.00	1133.00	1.74	18.02	0.00	0.00	0.00	0.00	4.46	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243.00	1350.00	1.84	18.11	0.00	0.00	0.00	0.00	4.53	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262.00	1567.00	1.95	18.19	0.00	0.00	0.00	0.00	4.60	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281.00	1783.00	2.07	18.25	0.00	0.00	0.00	0.00	4.67	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2000.00	2.19	18.30	0.00	0.00	0.00	0.00	4.73	51.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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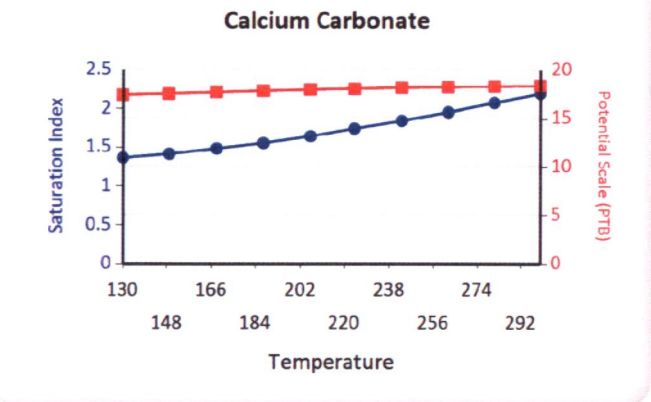
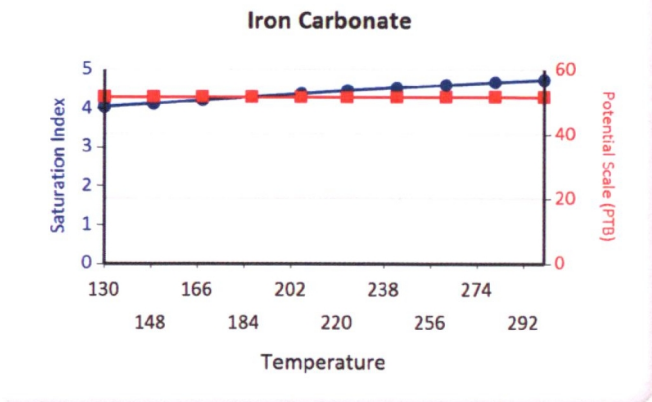
Water Analysis Report

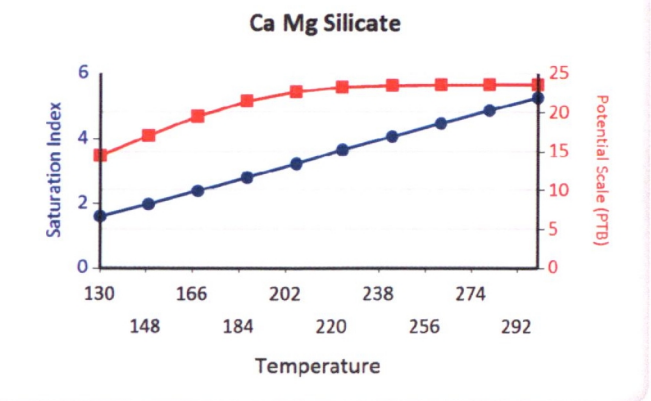
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.98	11.52	0.00	0.00	2.87	12.18	1.59	14.48	13.89	54.94
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	3.17	11.52	0.00	0.00	3.59	13.33	1.97	17.03	14.32	54.96
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	3.36	11.52	0.00	0.00	4.33	14.09	2.39	19.51	14.80	54.98
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	3.53	11.53	0.00	0.00	5.08	14.53	2.80	21.42	15.30	54.99
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	3.68	11.53	0.00	0.00	5.82	14.77	3.22	22.62	15.80	54.99
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	3.82	11.53	0.00	0.00	6.54	14.90	3.64	23.21	16.32	55.00
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	3.94	11.53	0.00	0.00	7.25	14.98	4.05	23.43	16.83	55.00
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	4.05	11.53	0.00	0.00	7.94	15.02	4.46	23.51	17.35	55.00
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14	11.53	0.00	0.00	8.62	15.04	4.86	23.54	17.86	55.00
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	4.21	11.53	0.00	0.00	9.27	15.05	5.25	23.54	18.35	55.00

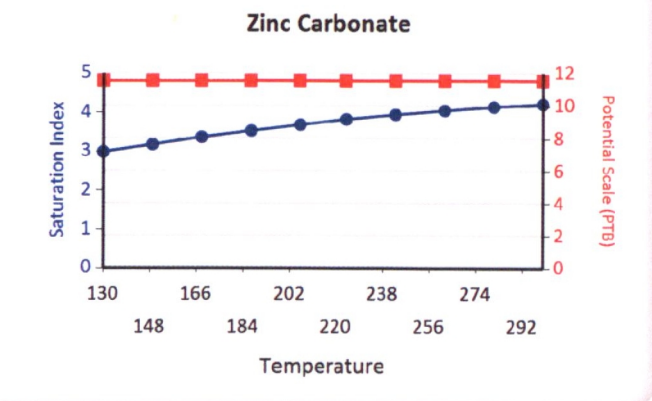
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate









Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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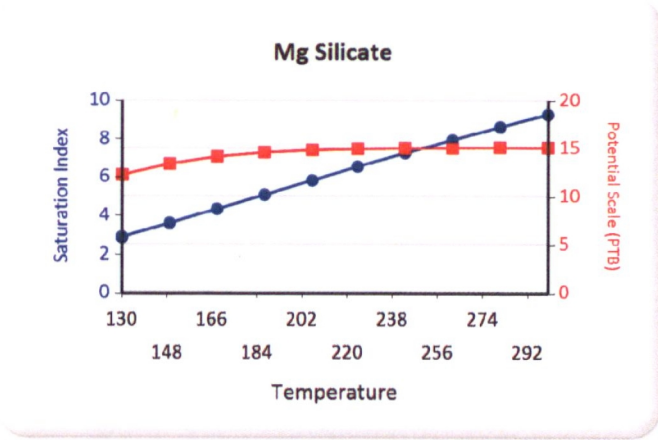
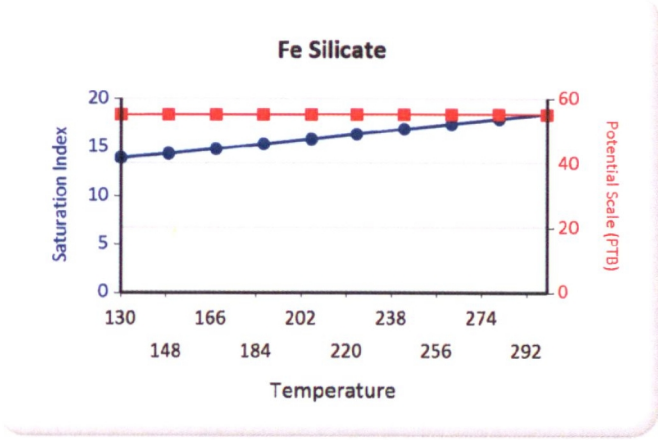




OMB No. 2040-0042 Approval Expires 11/30/2014

EPA

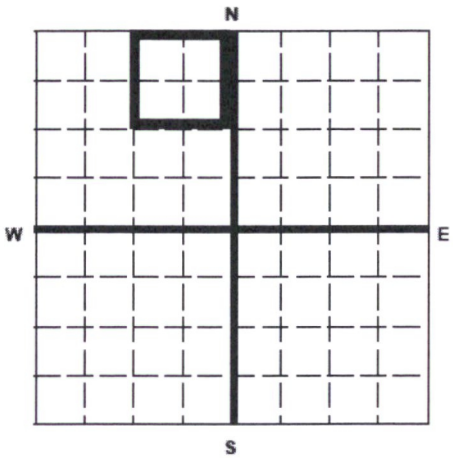
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-~~04434~~ 06601

Surface Location Description
___ 1/4 of ___ 1/4 of NE 1/4 of NW 1/4 of Section 16 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 491 ft. frm (N/S) N Line of quarter section
and 2050 ft. from (E/W) W Line of quarter section. U2 Entered

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Date 3/1/16
Initial DJ

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-03

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	15	1723	1812	1233		0	0
February	15	1787	1847	1116		0	0
March	15	1799	1855	1155		0	0
April	15	1772	1841	1061		0	0
May	15	1797	1854	1138		0	0
June	15	1810	1855	1135		0	0
July	15	1803	1850	1144		0	0
August	15	1798	1849	1165		0	0
September	15	1802	1839	1086		0	0
October	15	1801	1824	1131		0	0
November	15	1835	1851	1116		0	0
December	15	1816	1845	1125		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		02/08/2016

GREEN BLUE CBI
TAB 2

EPA Form 7520-11 (Rev. 12-11)

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem®
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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 16-03 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327642**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/14/2016
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0022
pH:	7.50
Calculated TDS (mg/L):	7032.82
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	60.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2258.58	Chloride (Cl):	3000.00
Potassium (K):	7.66	Sulfate (SO_4):	420.00
Magnesium (Mg):	66.21	Bicarbonate (HCO_3):	1098.00
Calcium (Ca):	145.47	Carbonate (CO_3):	
Strontium (Sr):	4.80	Acetic Acid (CH_3COO)	
Barium (Ba):	3.55	Propionic Acid (C_2H_5COO)	
Iron (Fe):	0.88	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.39	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.60	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.05	Silica (SiO_2):	26.63
Aluminum (Al):	0.05	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	0.39	Phosphates (PO_4):	4.26
Boron (B):	0.50	Oxygen (O_2):	
Silicon (Si):	12.45		

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	1.41	94.53	1.33	2.02	0.00	0.00	1.34	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	1.25	85.35	1.35	2.02	0.00	0.00	1.16	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	1.15	78.99	1.38	2.03	0.00	0.00	1.03	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	1.05	72.53	1.42	2.03	0.00	0.00	0.90	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.96	66.12	1.47	2.04	0.00	0.00	0.78	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.87	59.89	1.53	2.05	0.00	0.00	0.65	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.79	53.94	1.61	2.06	0.00	0.00	0.52	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.71	48.38	1.70	2.07	0.00	0.00	0.40	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.64	43.28	1.81	2.08	0.00	0.00	0.28	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.58	38.70	1.93	2.09	0.00	0.00	0.16	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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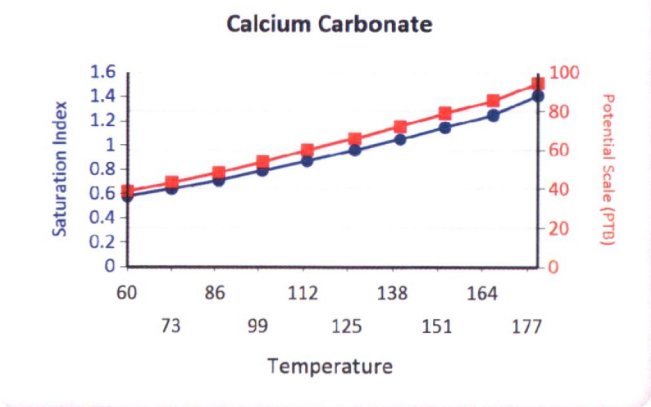
A HALLIBURTON SERVICE

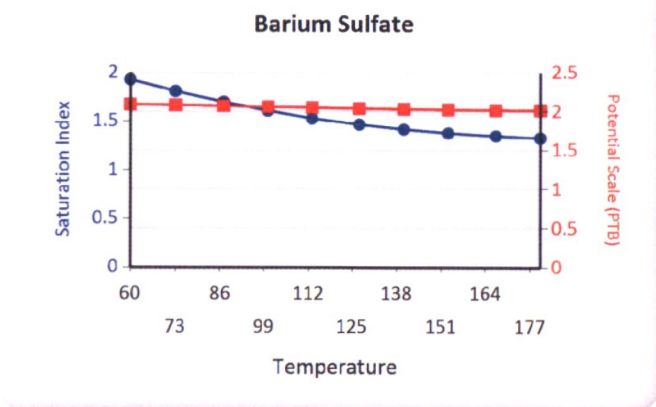
Water Analysis Report

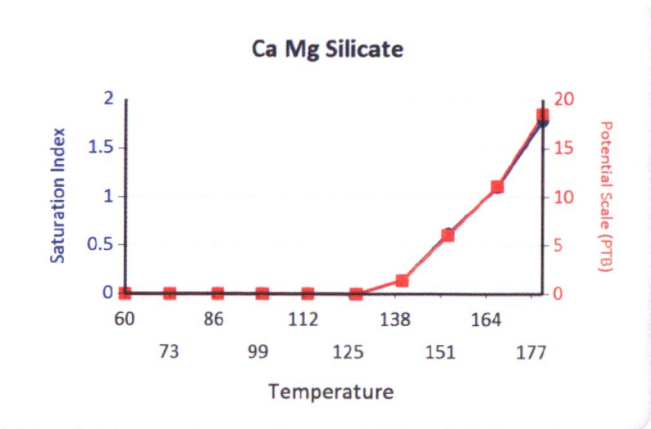
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.23	0.00	0.00	3.63	39.33	1.78	18.41	5.20	0.67
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.21	0.00	0.00	2.54	25.98	1.10	11.07	4.27	0.66
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.19	0.00	0.00	1.74	16.92	0.62	6.06	3.64	0.64
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.14	0.00	0.00	0.94	8.62	0.14	1.38	3.01	0.61
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.07	0.00	0.00	0.15	1.31	0.00	0.00	2.40	0.57
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	0.50
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.41
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.26
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

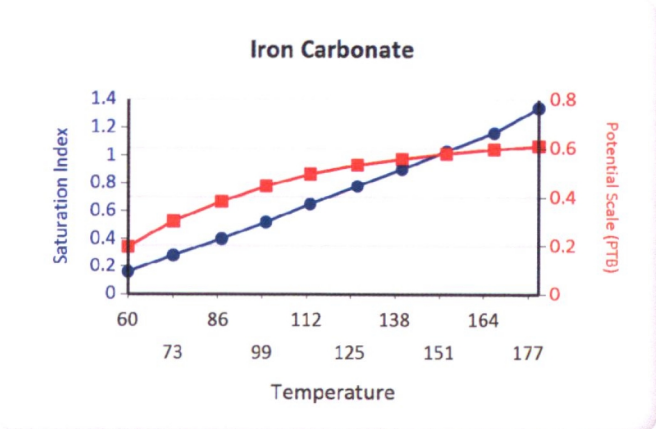
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

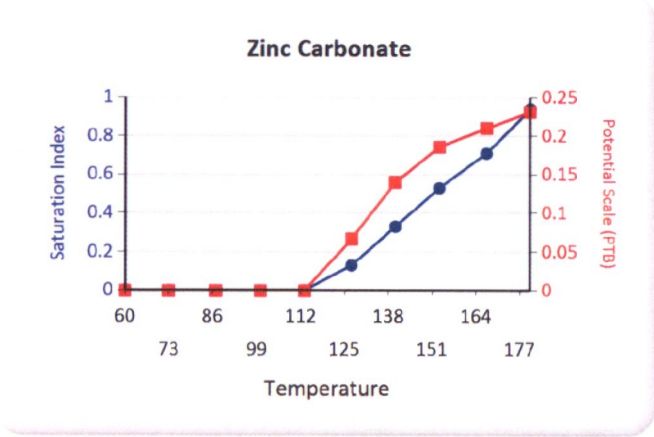
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate

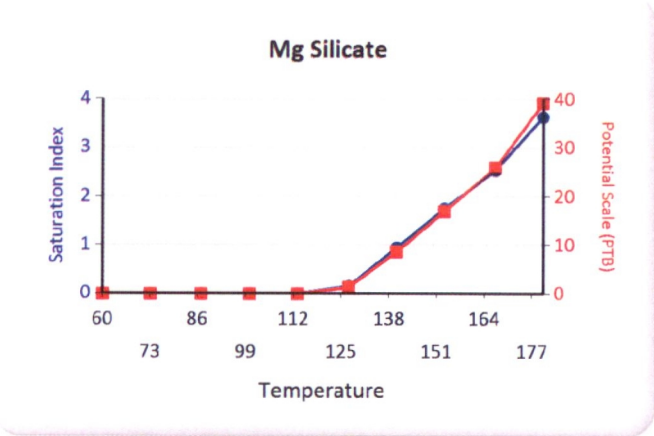


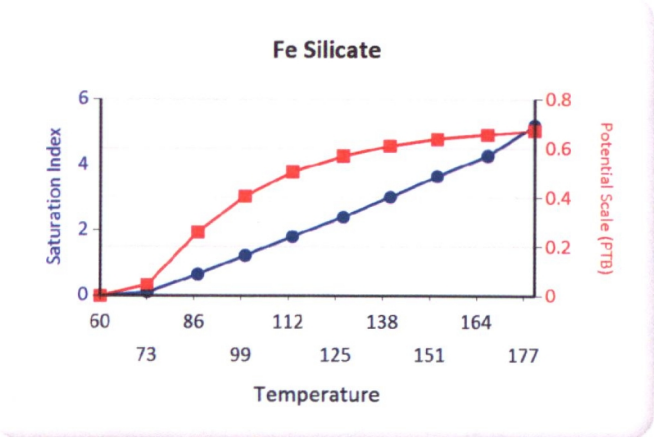







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
1
0.8
0.6
0.4
0.2
0
0.25
0.2
0.15
0.1
0.05
0
60
86
112
138
164
73
99
125
151
177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
4
3
2
1
0
40
30
20
10
0
60
86
112
138
164
73
99
125
151
177


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
6
4
2
0
0.8
0.6
0.4
0.2
0
60
86
112
138
164
73
99
125
151
177

OMB No. 2040-0042 Approval Expires 12/31/2011

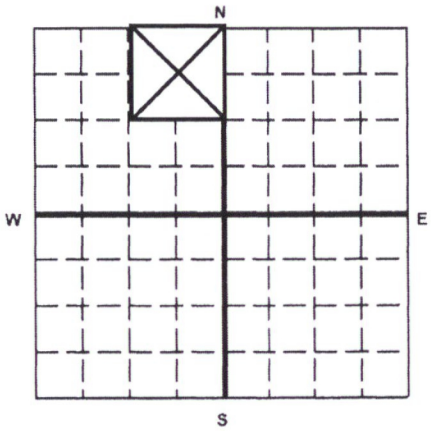
EPA

United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709	Ute Indian Tribe P.O. Box 70 Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-06601

Surface Location Description

____ 1/4 of ____ 1/4 of NE 1/4 of NW 1/4 of Section 16 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 491 ft. frm (N/S) N Line of quarter section and 2050 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY

- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT

- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-03

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1821	1843	1322		0	0
February	14	1834	1854	1162		0	0
March	14	1829	1852	1332		0	0
April	14	1852	1865	1342		0	0
May	14	1850	1857	1456		0	0
June	14	1822	1864	1521		0	0
July	14	1753	1809	1468		0	0
August	14	1821	1838	1322		0	0
September	14	1764	1840	1187		0	0
October	14	1811	1830	1376		0	0
November	14	1840	1856	1462		0	0
December	14	1836	1859	1476		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered
Date 3/20/15
Initial GW

	GREEN	BLUE	CBI
TAB		2	

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 16-03 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297453**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/14/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	0.9990
pH:	7.40
Calculated TDS (mg/L):	2772.21
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	24.00
H_2S in Gas (%):	
H2S in Water (mg/L):	5.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	222.86	Chloride (Cl):	1000.00
Potassium (K):	3.70	Sulfate (SO_4):	313.00
Magnesium (Mg):	74.04	Bicarbonate (HCO_3):	976.00
Calcium (Ca):	151.87	Carbonate (CO_3):	
Strontium (Sr):	4.14	Acetic Acid (CH_3COO)	
Barium (Ba):	0.39	Propionic Acid (C_2H_5COO)	
Iron (Fe):	1.42	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.37	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.02	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.07	Silica (SiO_2):	24.33

Notes:
B=.76 Al=.04 Li=.24

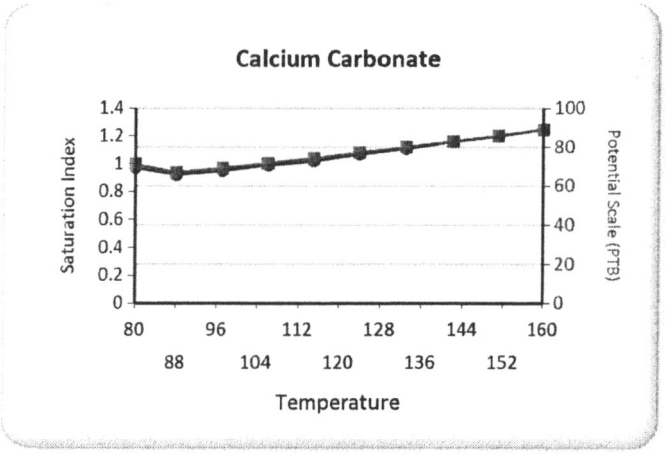
(PTB = Pounds per Thousand Barrels)

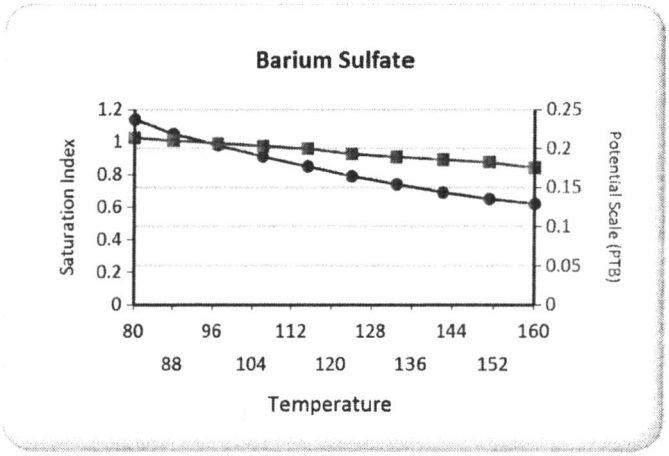
		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.97	71.06	1.14	0.21	2.13	0.77	0.80	0.87	0.00	0.00	0.00	0.00	0.00	0.00	9.74	0.19
88.00	157.00	0.92	66.91	1.05	0.21	1.99	0.77	0.78	0.86	0.00	0.00	0.00	0.00	0.00	0.00	9.50	0.19
97.00	300.00	0.95	69.28	0.98	0.21	1.96	0.77	0.84	0.88	0.00	0.00	0.00	0.00	0.00	0.00	9.36	0.19
106.00	443.00	0.99	71.81	0.91	0.20	1.93	0.77	0.91	0.90	0.00	0.00	0.00	0.00	0.00	0.00	9.24	0.19
115.00	585.00	1.02	74.46	0.85	0.20	1.92	0.77	0.97	0.92	0.00	0.00	0.00	0.00	0.00	0.00	9.12	0.19
124.00	728.00	1.07	77.22	0.79	0.19	1.91	0.77	1.04	0.94	0.00	0.00	0.00	0.00	0.00	0.00	9.02	0.19
133.00	871.00	1.11	80.06	0.74	0.19	1.91	0.77	1.10	0.95	0.00	0.00	0.00	0.00	0.00	0.00	8.92	0.19
142.00	1014.00	1.16	82.98	0.69	0.19	1.92	0.77	1.17	0.96	0.00	0.00	0.00	0.00	0.00	0.00	8.83	0.19
151.00	1157.00	1.20	85.94	0.65	0.18	1.93	0.77	1.23	0.97	0.00	0.00	0.00	0.00	0.00	0.00	8.75	0.19
160.00	1300.00	1.25	88.92	0.62	0.18	1.95	0.77	1.30	0.98	0.00	0.00	0.00	0.00	0.00	0.00	8.67	0.19

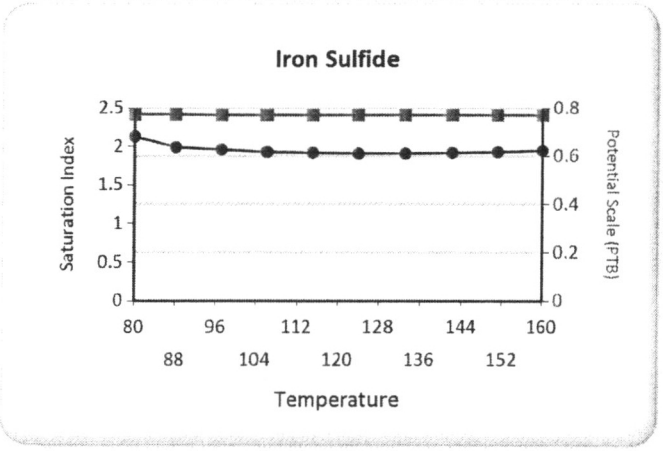
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.75	0.01	0.00	0.00	0.00	0.00	0.95	0.54
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.39	0.01	0.00	0.00	0.00	0.00	0.74	0.46
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.15	0.01	0.00	0.00	0.00	0.00	1.07	0.59
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.92	0.01	0.00	0.00	0.00	0.00	1.40	0.70
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	9.71	0.01	0.00	0.00	0.00	0.00	1.75	0.80
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.08	9.52	0.01	0.00	0.00	0.00	0.00	2.12	0.87
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.12	9.33	0.01	0.00	0.00	0.00	0.00	2.49	0.93
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.15	9.16	0.01	0.49	4.25	0.00	0.00	2.88	0.97
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.18	9.00	0.01	1.02	8.79	0.00	0.00	3.27	1.01
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.19	8.84	0.01	1.55	13.23	0.16	1.35	3.67	1.03

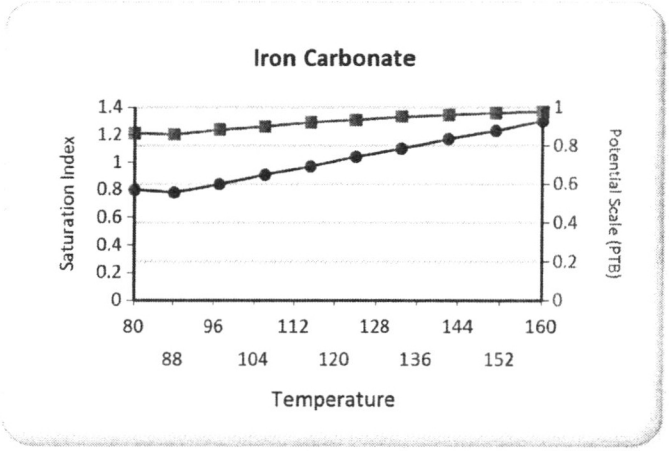
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Lead Sulfide Fe Silicate

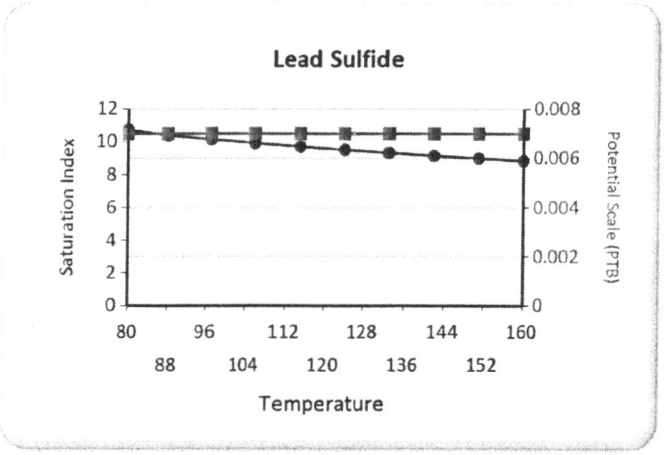
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

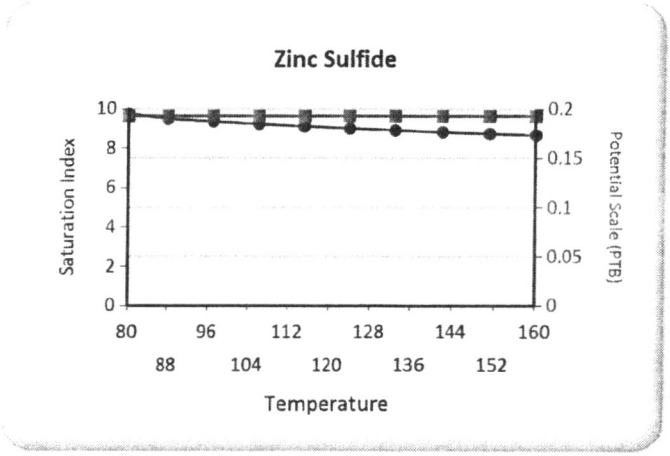


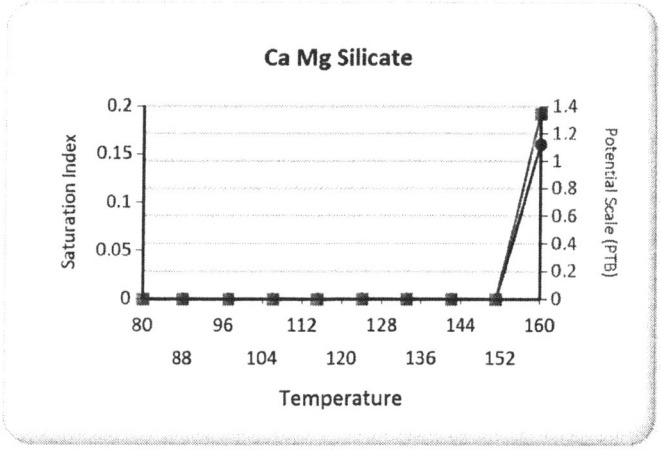


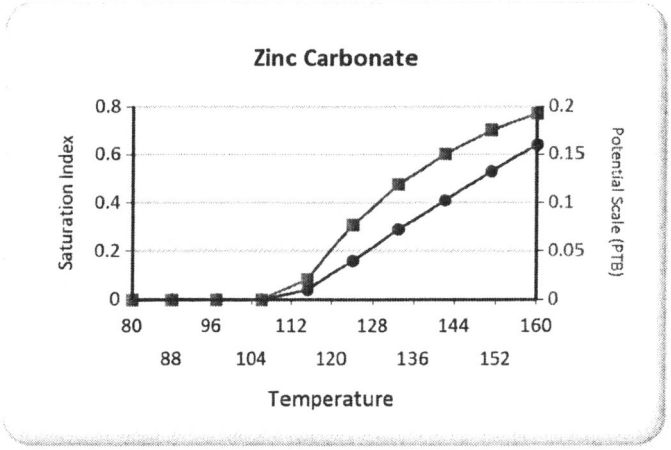


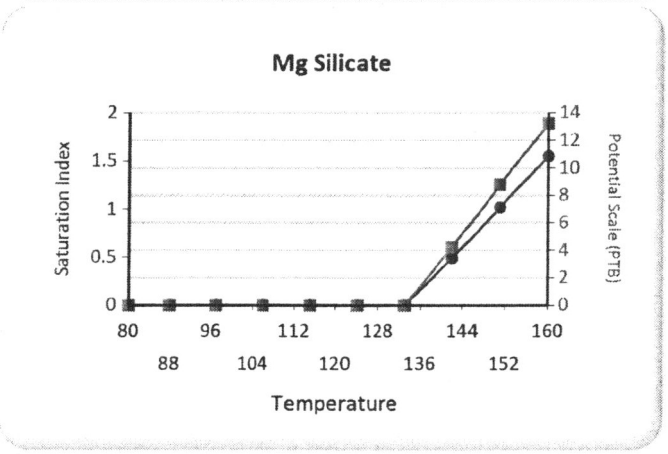


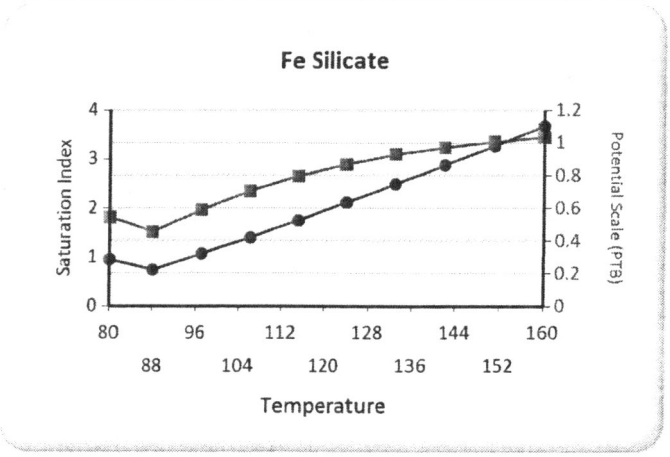





Ca Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
0.2
0.15
0.1
0.05
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
80
88
96
104
112
120
128
136
144
152
160


Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
0.8
0.6
0.4
0.2
0
0.2
0.15
0.1
0.05
0
80
88
96
104
112
120
128
136
144
152
160


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
2
1.5
1
0.5
0
14
12
10
8
6
4
2
0
80
88
96
104
112
120
128
136
144
152
160


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
4
3
2
1
0
1.2
1
0.8
0.6
0.4
0.2
0
80
88
96
104
112
120
128
136
144
152
160

December 29, 2015

Gary Wang
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: EPA AREA PERMIT NO. UT2736-06601
Mechanical Integrity Test
Standard Five year retesting for Ute Tribal 16-03

Mr. Breffle:
The enclose Mechanical Integrity Test was performed on the above referenced well on December 24, 2015. This MIT was performed because the well was due for the regular five year Mechanical Integrity Test.

If you need any more information please call at (435) 722-5302.

Sincerely,
Petroglyph Operating Co., Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

Encl: MIT for the Ute Tribal 16-03

U2 Entered
Date 2/2/16
Initial DB

	GREEN	BLUE	CBI
TAB		2	

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: _____ Date: 12/24/15
Test conducted by: CHAD STEVENSON
Others present: _____

Well Name: 16-03 Type: ER SWD **Status:** AC TA UC
Field: ANTELOPE CREEK
Location: 16-03 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ___/___/___ **Maximum Allowable Pressure:** _____ **PSIG**

Regularly scheduled test? [X] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [ ] Yes [ ] No

Well injecting during test? If Yes, rate: 37 **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1827 psig	psig	psig
End of test pressure	1827 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1020 psig	psig	psig
5 minutes	1020 psig	psig	psig
10 minutes	1020 psig	psig	psig
15 minutes	1020 psig	psig	psig
20 minutes	1020 psig	psig	psig
25 minutes	1020 psig	psig	psig
30 minutes	1020 psig	psig	psig
3½ Hours ~~minutes~~	1020 psig	psig	psig
_____ minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? If Yes, _____ **psig.**

CALIBRATED CHARTS
BATAVIA, N.Y.
METER NUMBER
6-03
TIME PUT ON
2:30 P.M.
DATE PUT ON
12-24-15
TUBE & ORIF. SIZE
TIME TAKEN OFF
11:00 AM
DATE TAKEN OFF
12-24-15
MW-MP 2000
PRINTED IN U.S.A.
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10
11 A.M.

OMB No. 2040-0042 Approval Expires 12/31/2011

United States Environmental Protection Agency
Washington, DC 20460

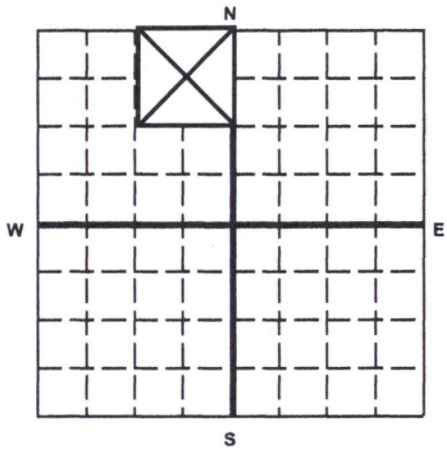
EPA

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-06601

Surface Location Description
___ 1/4 of ___ 1/4 of NE 1/4 of NW 1/4 of Section 16 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 491 ft. frm (N/S) N Line of quarter section
and 2050 ft. from (E/W) W Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-03

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1590	1793	1178		0	0
February	13	1802	1842	1144		0	0
March	13	1714	1811	1119		0	0
April	13	1825	1842	1183		0	0
May	13	1828	1860	1141		0	0
June	13	1757	1806	883		0	0
July	13	1747	1803	953		0	0
August	13	1795	1843	1066		0	0
September	13	1719	1865	823		0	0
October	13	1752	1811	992		0	0
November	13	1821	1832	1135		0	0
December	13	1822	1834	1226		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/11/2014

EPA Form 7520-11 (Rev. 12-08)

TAB 2

U2 Entered
Date 3/18/14
Initial BB

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem®
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 16-03 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-263382**

Sales Rep: **James Patry**
Lab Tech: **Gary Winegar**

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	0.999
pH:	7.50
Calculated TDS (mg/L):	2473.03
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	223.00	Chloride (Cl):	1000.00
Potassium (K):	8.00	Sulfate (SO_4):	337.00
Magnesium (Mg):	67.00	Bicarbonate (HCO_3):	658.80
Calcium (Ca):	141.00	Carbonate (CO_3):	
Strontium (Sr):	4.00	Acetic Acid (CH_3COO)	
Barium (Ba):	0.60	Propionic Acid (C_2H_5COO)	
Iron (Fe):	10.00	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.01	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.08	Silica (SiO_2):	23.54

Notes:
B=.6 Al=.06 Li=.08

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.76	39.07	1.58	0.35	0.00	0.00	1.35	6.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	0.74	37.87	1.43	0.34	0.00	0.00	1.39	6.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	0.79	40.79	1.30	0.34	0.00	0.00	1.49	6.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	0.85	44.10	1.19	0.33	0.00	0.00	1.59	7.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	0.91	47.74	1.10	0.33	0.00	0.00	1.70	7.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	0.98	51.67	1.01	0.32	0.00	0.00	1.80	7.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.05	55.86	0.95	0.32	0.00	0.00	1.91	7.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.13	60.25	0.89	0.31	0.00	0.00	2.01	7.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.21	64.78	0.85	0.30	0.00	0.00	2.11	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.30	69.41	0.81	0.30	0.00	0.00	2.21	7.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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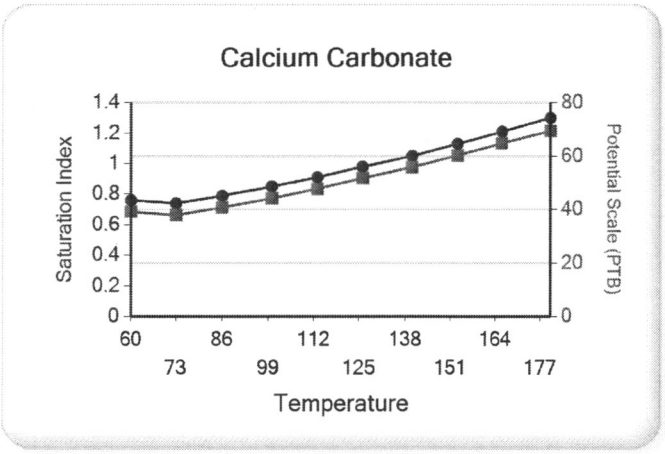
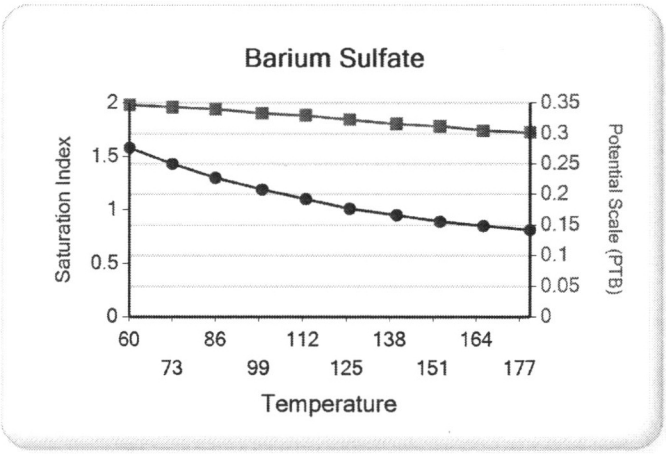
Water Analysis Report

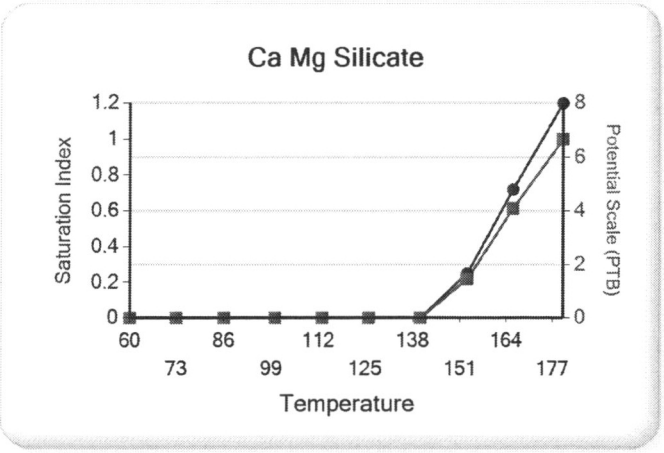
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11	6.08
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.16	6.12
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62	6.55
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.12	6.91
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.66	7.19
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.35	0.00	0.00	5.22	7.39
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	4.91	0.00	0.00	5.80	7.53
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	9.92	0.25	1.45	6.40	7.62
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	15.04	0.72	4.09	7.00	7.68
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	19.79	1.20	6.66	7.62	7.71

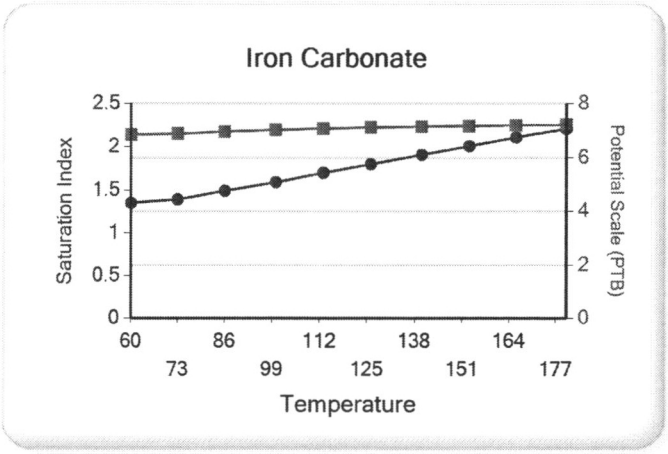
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

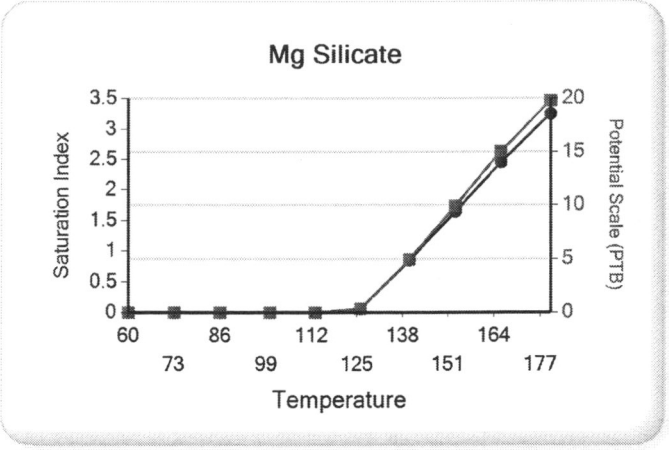
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

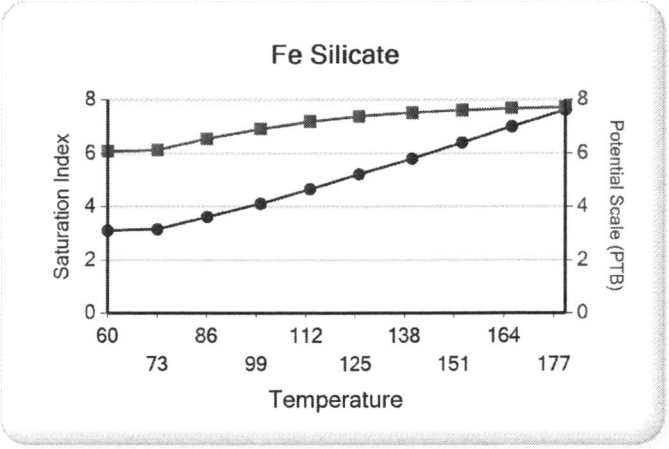









Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
3.5
3
2.5
2
1.5
1
0.5
0
20
15
10
5
0
60
86
112
138
164
73
99
125
151
177


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
8
6
4
2
0
60
86
112
138
164
73
99
125
151
177

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

AUG 20 2007

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Steve Wall
District Manager
Petroglyph Energy, Inc.
4116 West 3000 So. Ioka Lane
Roosevelt, UT 84066

RE: UNDERGROUND INJECTION CONTROL (UIC) PROGRAM
Minor Permit Modification No. 2
Increase Injection Pressure No.1
UIC Area Permit No. UT20736-00000
EPA Well ID No. UT20736-06601
Ute Tribal 16-03
Antelope Creek Field, Duchesne County, Utah

Dear Mr. Wall:

The Region 8 Ground Water Program office of the Environmental Protection Agency (EPA) received from Petroglyph Energy, Inc. the results of a March 22, 2007 Step-Rate Test (SRT) conducted on the Ute Tribal 16-03 injection well, as required by the initial permit requirements. This test is required by the EPA to increase the maximum allowed injection pressure (MAIP).

This SRT identified the fracture gradient (FG) of the authorized injection interval to be **0.86 psi/ft**. Therefore, the maximum authorized injection pressure is **1905 psig**, not 1660 psig as stated in the previous Authorization For Additional Well, signed August 24, 2005.

This increase of MAIP for the Ute Tribal 16-03 injection well is being made under the authority of 40 CFR §144.41 (e) and terms of the Antelope Creek Waterflood UIC Area Permit No. UT20736-00000. In the future, should you choose to request a modification to the approved MAIP, new supporting data such as a new SRT will be required. In order to inject at pressures greater than the permitted MAIP during any future test(s), you must receive prior authorization from the Director.

Please be reminded that it is your responsibility to be aware of and to comply with all conditions of your Permit. If you have any questions regarding this approval, please call Linda Bowling at 800-227-8917 (ext. 312-6254).

For questions regarding notification, testing, monitoring, reporting, or other Permit requirements, please call Nathan Wiser at 800-227-8917 (ext.312-6211).

Sincerely,

for Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

cc:

Curtis Cesspooch, Chairperson
Uintah & Ouray Business Committee
Ute Indian Tribe

Ronald Groves, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Irene Cuch, Vice-Chairperson
Uintah & Ouray Business Committee
Ute Indian Tribe

Steven Cesspooch, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Phillip Chimbraus, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Francis Poowegup, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Chester Mills, Superintendent
BIA - Uintah & Ouray Indian Agency

Kenneth Smith
Executive Vice President and Chief
Operating Officer
Petroglyph Energy, Inc.

Shawn Chapoose, Director
Land Use Department
Ute Indian Tribe

Gil Hunt
Technical Services Manager
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office
BLM - Vernal Office

Lynn Becker, Director
Energy and Minerals Department
Ute Indian Tribe

bcc w/o enclosures:

Monica Morales, 8TAP
Nathan Wiser, ENF-UFO

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

AUG 2 1 2007

Mr. Steve Wall
District Manager
Petroglyph Energy, Inc
4116 West 3000 So. Ioka Lane
Roosevelt, UT 84066 K PW GW UFC

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X PA Cox ☐ Agent ☐ Addressee

B. Received by (Printed Name) PA Cox
C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

ROOSEVELT UT 84066 AUG 2 3 2007 USPS

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7005 1820 0005 4855 8152

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Total Postag	

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Sent To Mr. Steve Wall
District Manager
Petroglyph Energy, Inc
Street, Apt. N or PO Box No 4116 West 3000 So. Ioka Lane
City, State, Z Roosevelt, UT 84066

PS Form 3800, June 2002 See Reverse for Instructions

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