Inspection Report For Well: UT20736 - 07118

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: 12:32 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevenson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 28-04
Well Type:	Enhanced Recovery (2R)
Operating Status:	AC (ACTIVE) as of 7/23/2007
Oil Field:	Antelope Creek (Duchesne)
Location:	NWNW S28 T5S R3W
Indian Country:	X, Uintah and Ouray

Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1670 /
Last MIT:	Pass 3/20/2012	***Annulus Pressure From Last MIT:***	1045

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: **(Select One)**

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

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 1615 / 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

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

GREEN	BLUE	CBI
	1	

U2 Entered
Date 12/17/13
Initial SR

Inspection Report For Well: UT20736 - 07118 (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

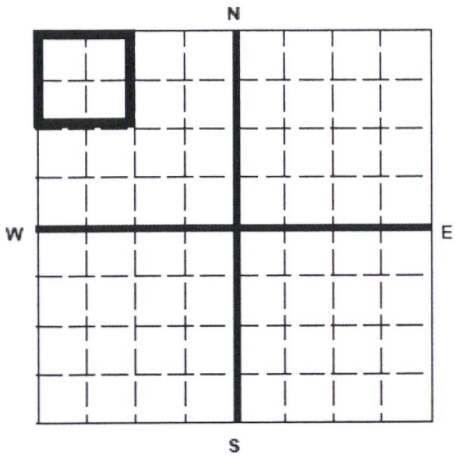
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-07118

Surface Location Description
___ 1/4 of 1/4 of NW 1/4 of NW 1/4 of Section 28 Township 5S Range 3W

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

Surface Location 660 ft. frm (N/S) N Line of quarter section
and 660 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

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 28-04

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1547	1589	553		0	0
February	16	1464	1597	525		0	0
March	16	1576	1630	640		0	0
April	16	1564	1643	654		0	0
May	16	1594	1595	733		0	0
June	16	1591	1613	737		0	0
July	16	1583	1599	745		0	0
August	16	1601	1610	715		0	0
September	16	1584	1602	664		0	0
October	16	1586	1599	736		0	0
November	16	1522	1605	685		0	0
December	16	1603	1613	789		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

GREEN BLUE CBI
TAB 2

Entered
Date 4/5/17
Initial

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

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 28-04 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345323**		

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

Sample Specifics

Test Date:	1/26/2017
System Temperature 1 (°F):	300
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	130
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0050
pH:	9.10
Calculated TDS (mg/L):	11242.41
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	25.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3888.28	Chloride (Cl):	4500.00
Potassium (K):	29.75	Sulfate (SO_4):	60.00
Magnesium (Mg):	9.53	Bicarbonate (HCO_3):	2684.00
Calcium (Ca):	19.02	Carbonate (CO_3):	
Strontium (Sr):	5.66	Hydroxide(HO):	
Barium (Ba):	14.53	Acetic Acid (CH_3COO)	
Iron (Fe):	4.42	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	1.23	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.11	Bromine (Br):	
Aluminum (Al):	0.02	Silica (SiO_2):	25.88
Lithium (Li):	3.13	Calcium Carbonate ($CaCO_3$):	
Boron (B):	5.44	Phosphates (PO_4):	6.22
Silicon (Si):	12.10	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	1.87	16.41	1.19	7.99	4.58	2.44	3.27	3.21	0.00	0.00	0.00	0.00	0.00	0.00	11.63	0.64
149.00	267.00	1.92	16.43	1.09	7.83	4.51	2.44	3.36	3.21	0.00	0.00	0.00	0.00	0.00	0.00	11.35	0.64
168.00	483.00	1.98	16.46	1.02	7.68	4.47	2.44	3.44	3.21	0.00	0.00	0.00	0.00	0.00	0.00	11.11	0.64
187.00	700.00	2.05	16.49	0.96	7.54	4.45	2.44	3.51	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.90	0.64
206.00	917.00	2.13	16.51	0.92	7.43	4.45	2.44	3.59	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.71	0.64
224.00	1133.00	2.21	16.54	0.89	7.36	4.46	2.44	3.65	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.55	0.64
243.00	1350.00	2.30	16.56	0.88	7.31	4.49	2.44	3.71	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.40	0.64
262.00	1567.00	2.39	16.58	0.87	7.29	4.53	2.44	3.76	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.27	0.64
281.00	1783.00	2.49	16.59	0.87	7.30	4.59	2.44	3.81	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.15	0.64
300.00	2000.00	2.58	16.60	0.88	7.34	4.64	2.44	3.84	3.21	0.00	0.00	0.00	0.00	0.00	0.00	10.04	0.64

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

multi-chem®
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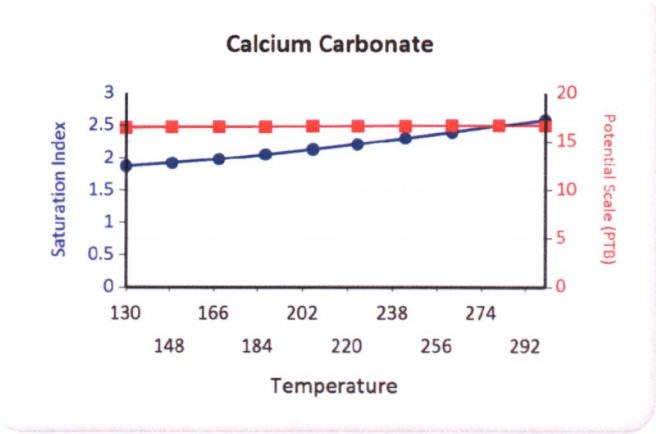
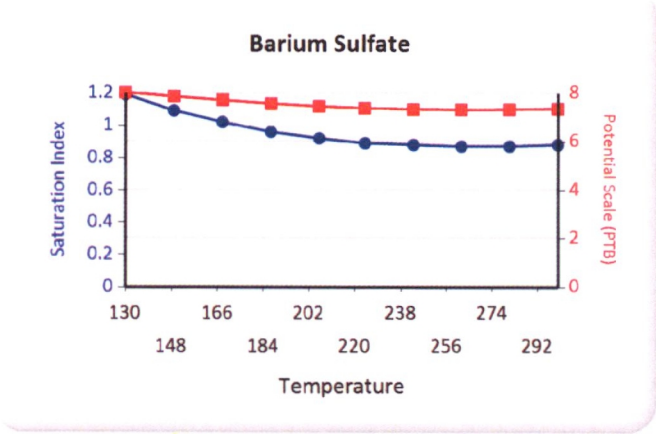
Water Analysis Report

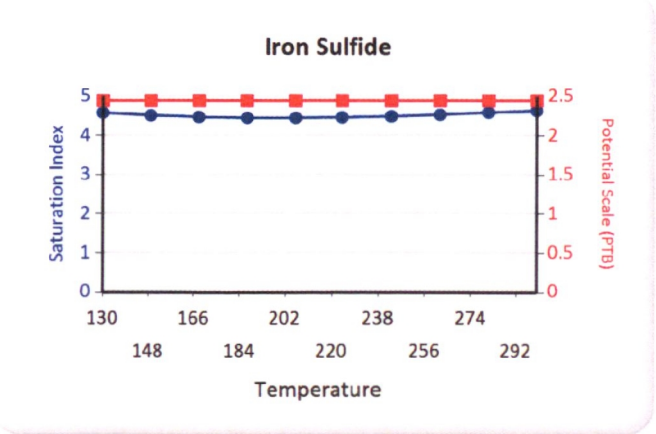
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.82	0.00	0.00	6.85	18.92	3.95	29.05	13.57	3.44
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.61	0.82	0.00	0.00	7.51	18.97	4.30	29.41	13.95	3.44
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.79	0.83	0.00	0.00	8.17	19.00	4.64	29.61	14.34	3.44
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.95	0.83	0.00	0.00	8.82	19.02	4.99	29.70	14.75	3.44
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	3.09	0.83	0.00	0.00	9.45	19.03	5.32	29.73	15.15	3.44
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	3.22	0.83	0.00	0.00	10.05	19.03	5.66	29.75	15.55	3.44
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	3.32	0.83	0.00	0.00	10.64	19.04	5.98	29.76	15.94	3.44
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	3.41	0.83	0.00	0.00	11.19	19.04	6.29	29.76	16.31	3.44
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	3.48	0.83	0.00	0.00	11.72	19.04	6.59	29.76	16.67	3.44
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54	0.83	0.00	0.00	12.21	19.04	6.87	29.76	17.01	3.44

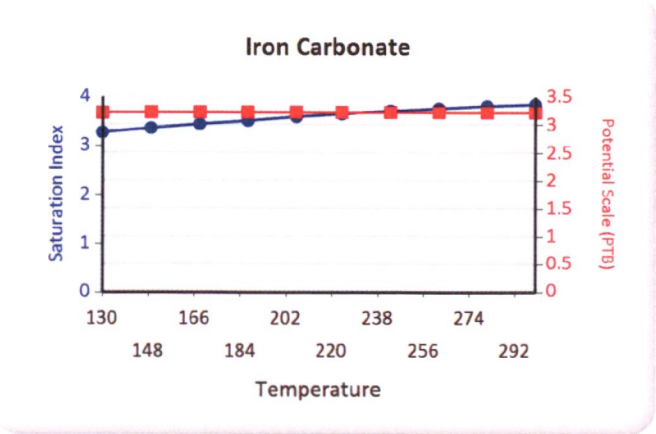
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

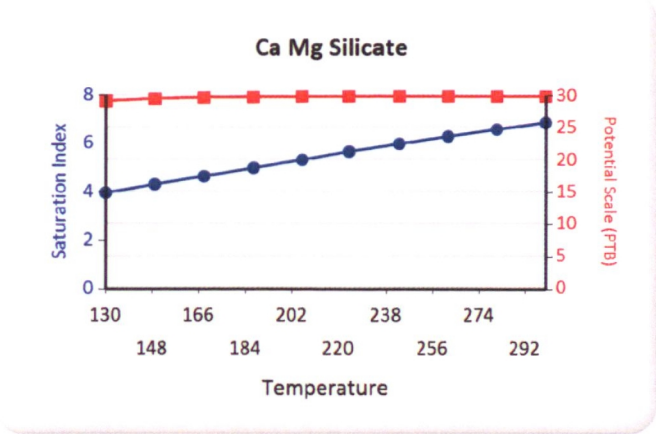
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

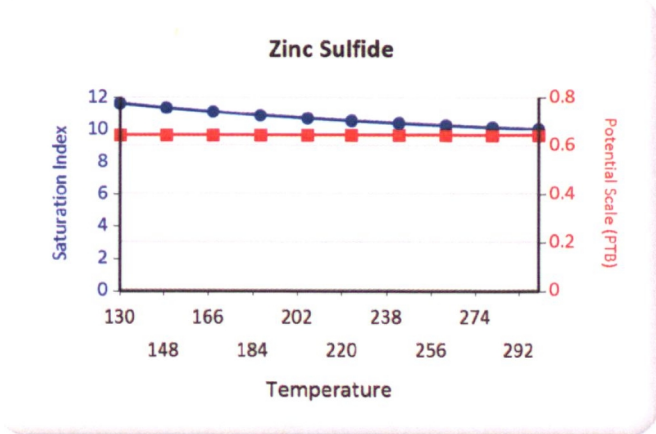


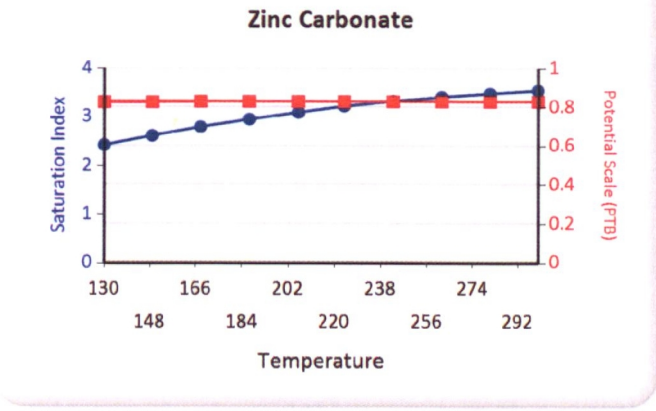







Ca Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
130 166 202 238 274
148 184 220 256 292


Zinc Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
130 166 202 238 274
148 184 220 256 292


Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
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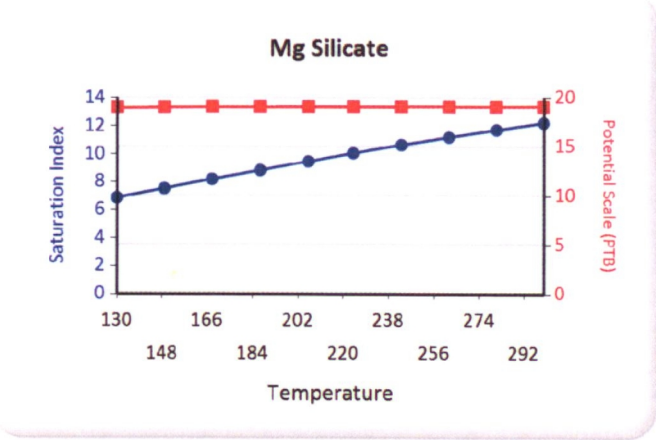
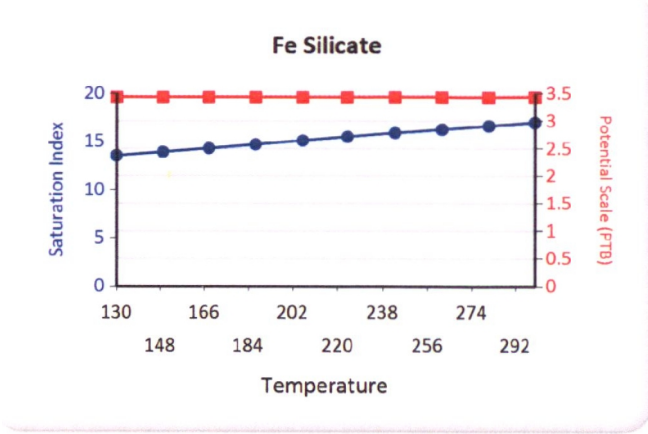
148 184 220 256 292


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
130 166 202 238 274
148 184 220 256 292


Fe Silicate
Saturation Index
Potential Scale (FTB)
Temperature
20
15
10
5
0
3.5
3
2.5
2
1.5
1
0.5
0
130
148
166
184
202
220
238
256
274
292

UT20736-07118

PETROGLYPH EXECUTIVE OFFICES

RECEIVED

MAR 31 2017

Office of Enforcement, Compliance and Environmental Justice (Water)

March 27, 2017

Gary Wang or Don Breffle
Underground Injection Control Enforcement
U.S. Environmental Protection Agency
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: 5-year Mechanical Integrity Tests

Mr. Wang/ Mr. Breffle:

Please find enclosed 5-year Mechanical Integrity Tests for the following wells:

- Ute Tribal 29-08 UT20736-07123
- Ute Tribal 30-14 UT20736-04625
- Ute Tribal 28-04 UT20736-07118

If any questions, please reach me at (208) 685-9711; or Les Farnsworth at (435) 722-5301.

Best Regards,

Nicole Colby
Manager, Land & Regulatory Compliance

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: 3/20/17
Test conducted by: CHAD STEVENSON
Others present: _____

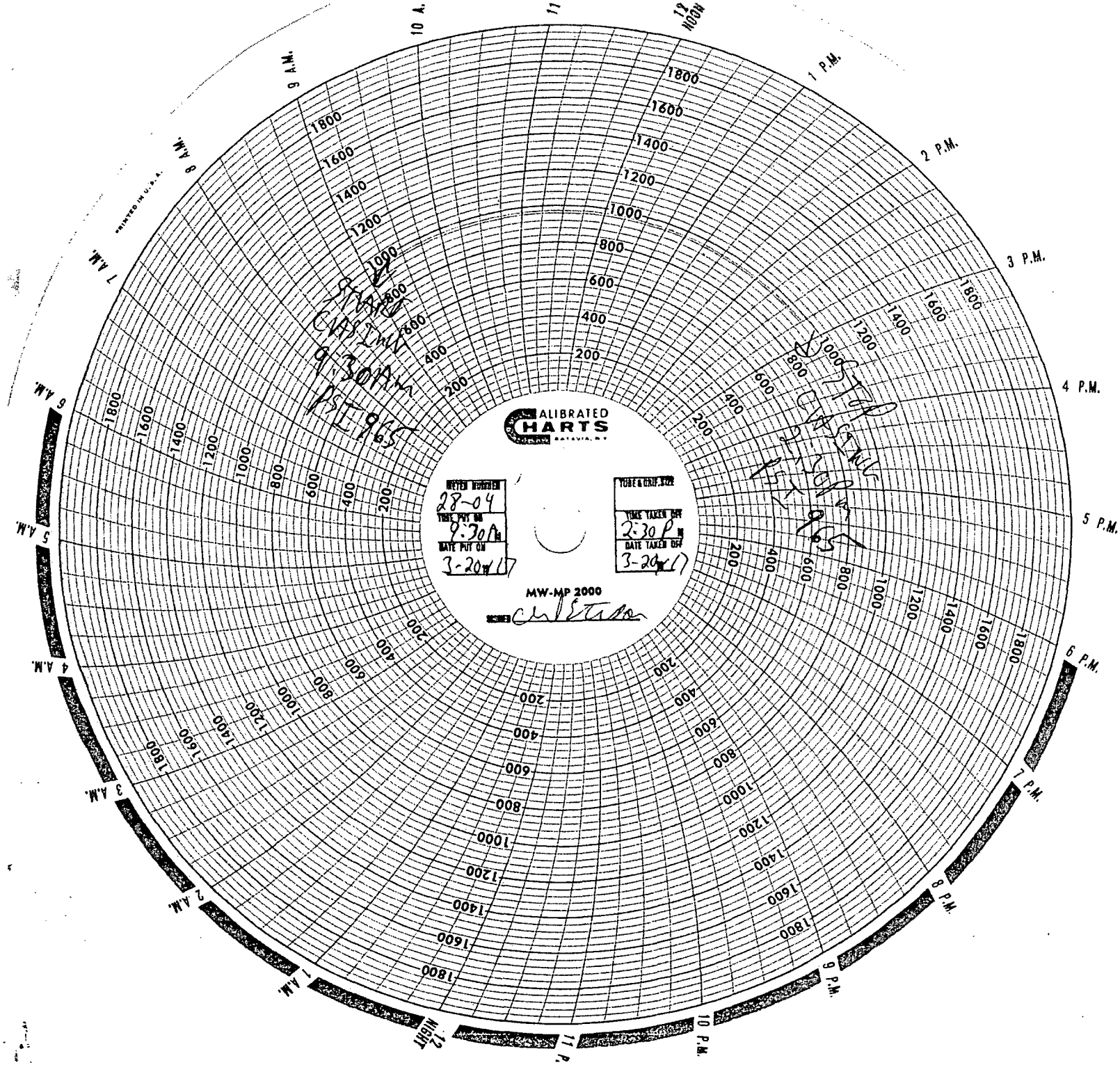
Well Name: 28-04 Type: ER SWD **Status:** AC TA UC
Field: ANTELOPE CREEK
Location: 28-04 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ___/___/___ **Maximum Allowable Pressure:** _____ **PSIG**

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: 19 **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1503 psig	psig	psig
End of test pressure	1503 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	965 psig	psig	psig
5 minutes	965 psig	psig	psig
10 minutes	965 psig	psig	psig
15 minutes	965 psig	psig	psig
20 minutes	965 psig	psig	psig
25 minutes	965 psig	psig	psig
30 minutes	965 psig	psig	psig
5 HOURS minutes	965 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
METER NUMBER
28-04
TIME PUT ON
9:30 AM
DATE PUT ON
3-20-67
TIME TAKEN OFF
2:30 PM
DATE TAKEN OFF
3-20-67
MW-MP 2000
PRINTED IN U.S.A.
MIDNIGHT
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 A.M.
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NOON
1 P.M.
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4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.

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

EPA

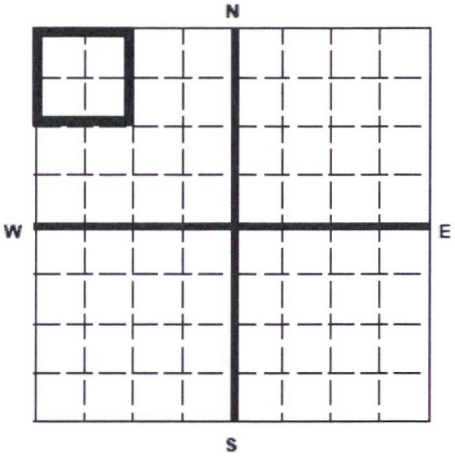
United States Environmental Protection Agency
Washington, DC 20460

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~~ 07118

Surface Location Description
___ 1/4 of ___ 1/4 of NW 1/4 of NW 1/4 of Section 28 Township 5S Range 3W

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

Surface Location 660 ft. frm (N/S) N Line of quarter section and 660 ft. from (E/W) W Line of quarter section.

U2 Entered

Date 3/2/16

Initial TJ

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

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 28-04

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1477	1541	725		0	0
February	15	1607	1628	746		0	0
March	15	1612	1634	821		0	0
April	15	1602	1635	774		0	0
May	15	1601	1628	770		0	0
June	15	1603	1622	724		0	0
July	15	1436	1596	496		0	0
August	15	1546	1618	736		0	0
September	15	1525	1620	597		0	0
October	15	1514	1553	559		0	0
November	15	1556	1601	365		0	0
December	15	1575	1641	469		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

TAB	GREEN	BLUE	CBI
		2	

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

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

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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 28-04 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327659**		

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

Sample Specifics

Test Date:	1/13/2016
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0045
pH:	8.50
Calculated TDS (mg/L):	10358.00
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	20.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3477.07	Chloride (Cl):	4000.00
Potassium (K):	26.93	Sulfate (SO_4):	270.00
Magnesium (Mg):	27.96	Bicarbonate (HCO_3):	2440.00
Calcium (Ca):	78.00	Carbonate (CO_3):	
Strontium (Sr):	6.52	Acetic Acid (CH_3COO)	
Barium (Ba):	1.99	Propionic Acid (C_2H_5COO)	
Iron (Fe):	1.86	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.79	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.81	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.08	Silica (SiO_2):	24.99
Aluminum (Al):	0.01	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.35	Phosphates (PO_4):	10.02
Boron (B):	4.35	Oxygen (O_2):	
Silicon (Si):	11.68		

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	2.17	66.79	0.80	1.00	3.57	1.03	2.78	1.35	0.00	0.00	0.00	0.00	0.00	0.00	10.53	0.94
167.00	267.00	2.09	66.28	0.82	1.01	3.55	1.03	2.68	1.35	0.00	0.00	0.00	0.00	0.00	0.00	10.65	0.94
153.00	483.00	2.02	65.84	0.85	1.02	3.56	1.03	2.58	1.35	0.00	0.00	0.00	0.00	0.00	0.00	10.79	0.94
140.00	700.00	1.96	65.35	0.89	1.03	3.57	1.03	2.49	1.35	0.00	0.00	0.00	0.00	0.00	0.00	10.94	0.94
127.00	917.00	1.90	64.80	0.95	1.05	3.60	1.03	2.40	1.35	0.00	0.00	0.00	0.00	0.00	0.00	11.12	0.94
113.00	1133.00	1.84	64.22	1.01	1.07	3.65	1.03	2.30	1.35	0.00	0.00	0.00	0.00	0.00	0.00	11.31	0.94
100.00	1350.00	1.79	63.60	1.09	1.09	3.70	1.03	2.21	1.34	0.00	0.00	0.00	0.00	0.00	0.00	11.52	0.94
87.00	1567.00	1.75	62.97	1.18	1.11	3.78	1.03	2.12	1.34	0.00	0.00	0.00	0.00	0.00	0.00	11.75	0.94
73.00	1783.00	1.71	62.35	1.29	1.13	3.87	1.03	2.03	1.34	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.94
60.00	2000.00	1.67	61.76	1.42	1.14	3.98	1.03	1.94	1.34	0.00	0.00	0.00	0.00	0.00	0.00	12.28	0.94

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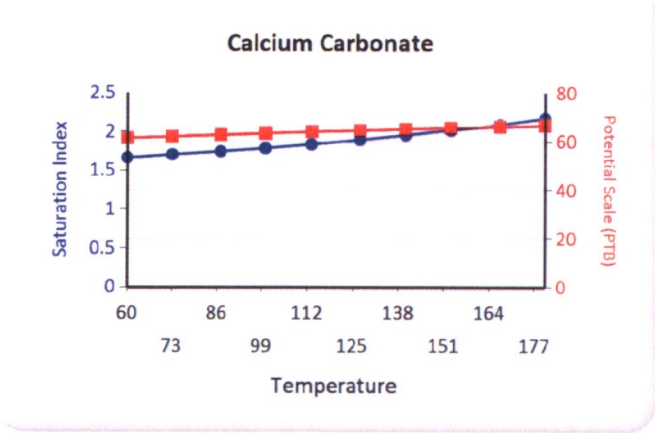
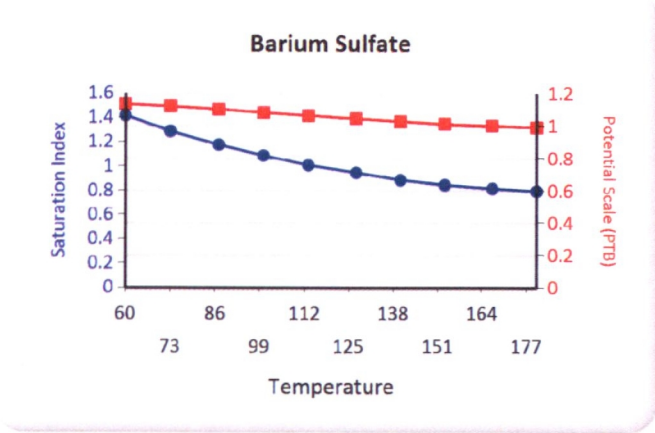
Water Analysis Report

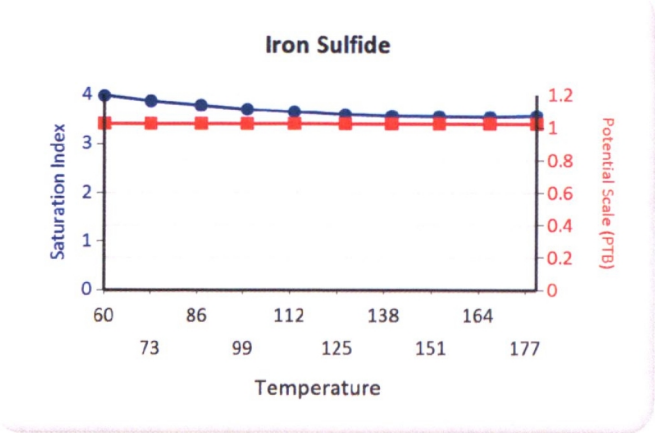
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	1.20	11.46	0.33	7.03	49.91	4.07	31.51	10.88	1.45
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	1.20	11.68	0.33	6.38	46.56	3.69	29.97	10.39	1.45
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30	1.20	11.94	0.33	5.78	43.47	3.35	28.38	9.97	1.45
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14	1.20	12.22	0.33	5.19	39.99	3.01	26.46	9.56	1.44
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	1.19	12.52	0.33	4.59	36.22	2.67	24.28	9.16	1.44
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	1.18	12.85	0.33	3.98	32.25	2.33	21.90	8.76	1.44
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	1.17	13.20	0.33	3.37	28.11	2.00	19.37	8.37	1.44
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40	1.16	13.59	0.33	2.76	23.79	1.67	16.69	7.99	1.44
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	1.13	14.01	0.33	2.15	19.23	1.34	13.88	7.61	1.44
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	1.07	14.47	0.33	1.53	14.34	1.01	10.90	7.25	1.44

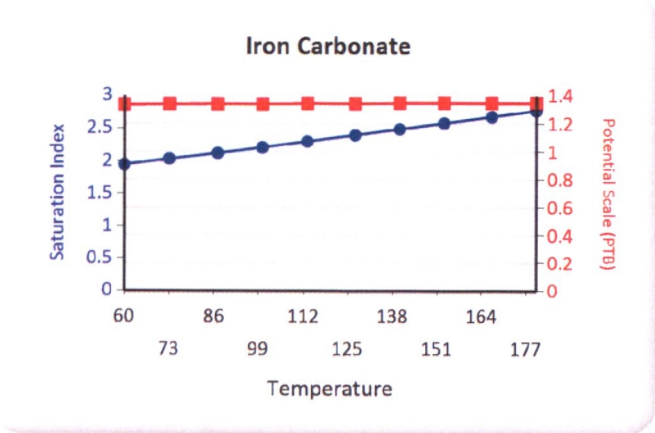
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

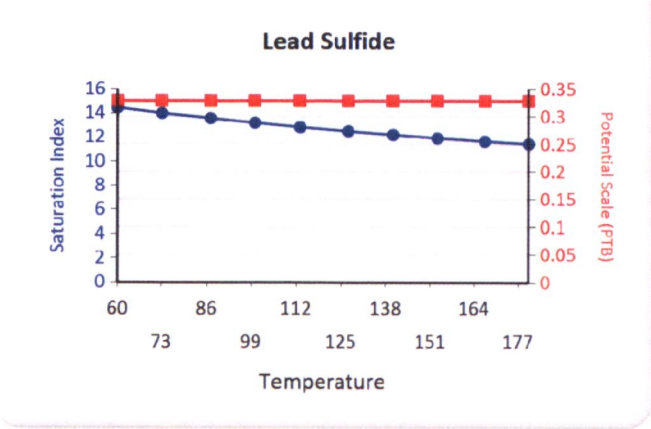
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

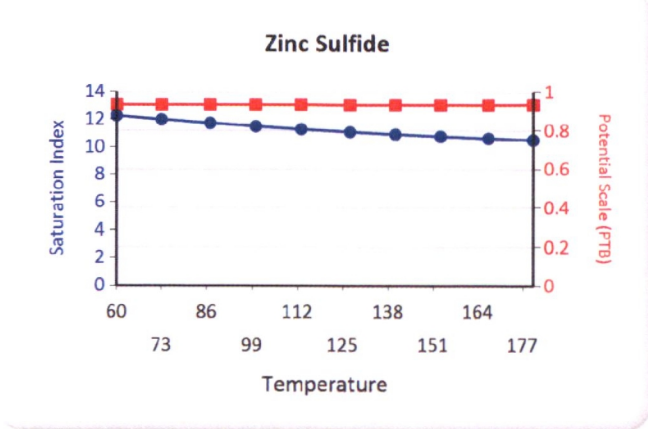


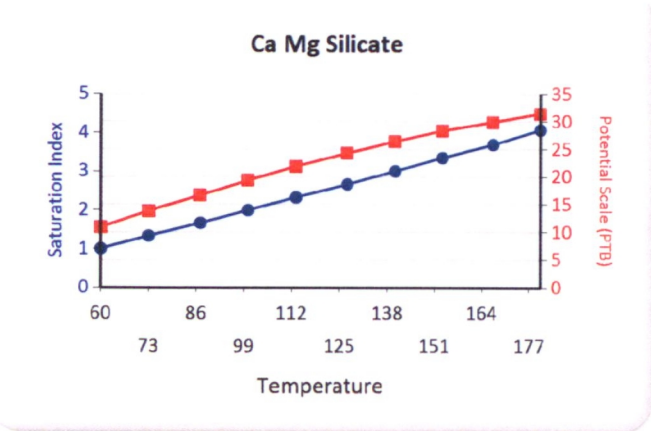


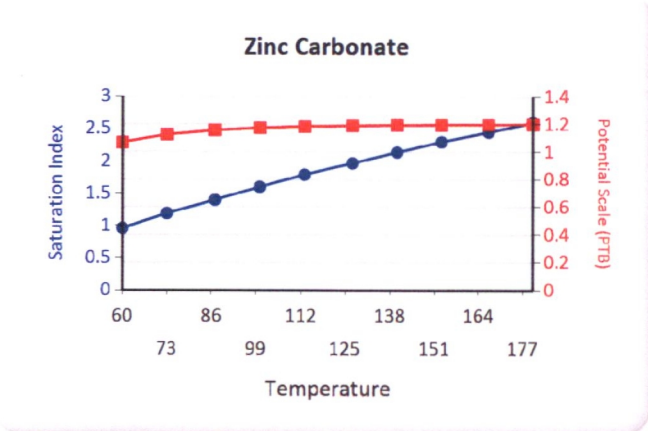


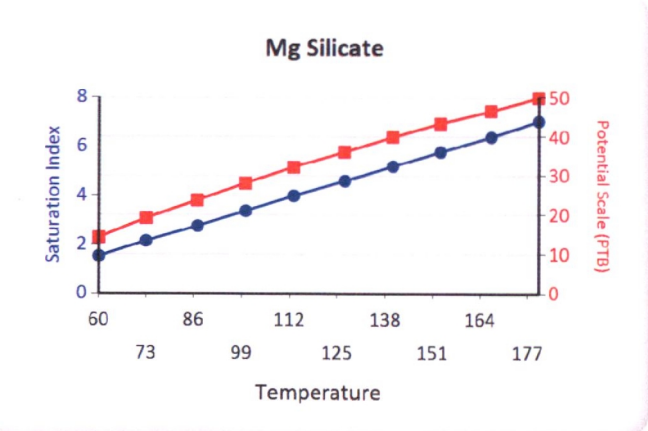


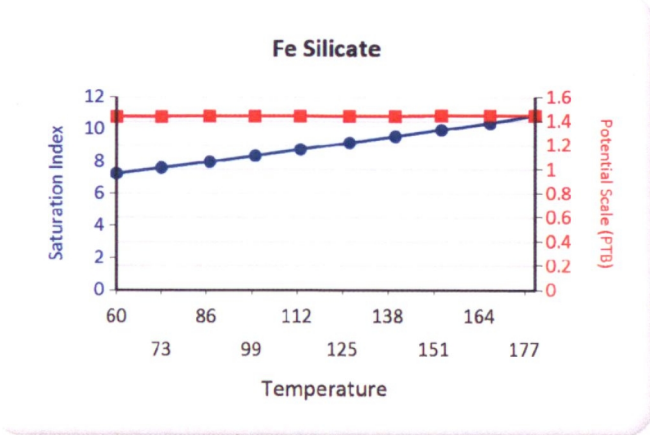

Lead Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Zinc Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Ca Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
6
4
2
0
1.6
1.4
1.2
1
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

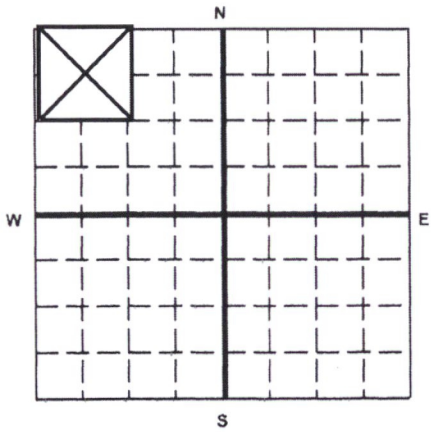
United States Environmental Protection Agency
Washington, DC 20460

EPA

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	UT2736-07118

Surface Location Description

____ 1/4 of ____ 1/4 of NW 1/4 of NW 1/4 of Section 28 Township 5S Range 3W

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

Surface Location 660 ft. frm (N/S) N Line of quarter section and 660 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 28-04

		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	1599	1621	407		0	0
February	14	1611	1625	314		0	0
March	14	1587	1620	285		0	0
April	14	1575	1565	522		0	0
May	14	1594	1611	860		0	0
June	14	1543	1605	768		0	0
July	14	1558	1624	696		0	0
August	14	1607	1637	830		0	0
September	14	1497	1596	685		0	0
October	14	1563	1463	912		0	0
November	14	1610	1632	846		0	0
December	14	1603	1625	821		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 3/31/15
Initial GW

TAB	GREEN	BLUE	CBI
		2	

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

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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 28-04 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297519**		

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):	1.0043
pH:	8.00
Calculated TDS (mg/L):	10759.17
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	24.00
H_2S in Gas (%):	
H2S in Water (mg/L):	15.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2765.52	Chloride (Cl):	5000.00
Potassium (K):	45.17	Sulfate (SO_4):	248.00
Magnesium (Mg):	25.82	Bicarbonate (HCO_3):	2562.00
Calcium (Ca):	46.69	Carbonate (CO_3):	
Strontium (Sr):	5.45	Acetic Acid (CH_3COO)	
Barium (Ba):	9.58	Propionic Acid (C_2H_5COO)	
Iron (Fe):	15.30	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	4.04	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.02	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.08	Silica (SiO_2):	31.50

Notes:
B=6.05 Al=.11 Li=1.41

(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	1.31	36.62	2.02	5.65	4.28	8.44	2.78	11.10	0.00	0.00	0.00	0.00	0.00	0.00	11.71	2.11
88.00	157.00	1.28	36.17	1.94	5.64	4.17	8.44	2.78	11.10	0.00	0.00	0.00	0.00	0.00	0.00	11.49	2.11
97.00	300.00	1.30	36.44	1.86	5.63	4.12	8.44	2.83	11.11	0.00	0.00	0.00	0.00	0.00	0.00	11.34	2.11
106.00	443.00	1.33	36.72	1.79	5.61	4.08	8.44	2.89	11.11	0.00	0.00	0.00	0.00	0.00	0.00	11.19	2.11
115.00	585.00	1.35	37.01	1.73	5.60	4.04	8.44	2.94	11.11	0.00	0.00	0.00	0.00	0.00	0.00	11.05	2.11
124.00	728.00	1.38	37.29	1.67	5.58	4.01	8.44	2.99	11.11	0.00	0.00	0.00	0.00	0.00	0.00	10.93	2.11
133.00	871.00	1.41	37.57	1.61	5.57	3.99	8.44	3.04	11.11	0.00	0.00	0.00	0.00	0.00	0.00	10.81	2.11
142.00	1014.00	1.45	37.84	1.57	5.55	3.98	8.44	3.09	11.11	0.00	0.00	0.00	0.00	0.00	0.00	10.70	2.11
151.00	1157.00	1.48	38.10	1.52	5.53	3.97	8.44	3.13	11.12	0.00	0.00	0.00	0.00	0.00	0.00	10.60	2.11
160.00	1300.00	1.52	38.36	1.48	5.51	3.97	8.44	3.18	11.12	0.00	0.00	0.00	0.00	0.00	0.00	10.50	2.11

		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	1.35	2.59	11.67	0.01	0.00	0.00	0.00	0.00	7.93	11.83
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	2.61	11.35	0.01	0.00	0.00	0.00	0.00	7.89	11.82
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	2.64	11.08	0.01	0.13	1.18	0.00	0.00	8.14	11.83
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69	2.66	10.84	0.01	0.55	4.50	0.00	0.00	8.40	11.85
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	2.67	10.61	0.01	0.98	7.88	0.08	0.90	8.68	11.86
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	2.68	10.39	0.01	1.42	11.29	0.32	2.93	8.96	11.87
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	2.69	10.18	0.01	1.86	14.70	0.57	4.96	9.26	11.87
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13	2.70	9.99	0.01	2.30	18.05	0.82	6.95	9.56	11.88
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	2.23	2.70	9.81	0.01	2.75	21.29	1.07	8.88	9.87	11.89
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	2.70	9.64	0.01	3.19	24.34	1.33	10.69	10.18	11.89

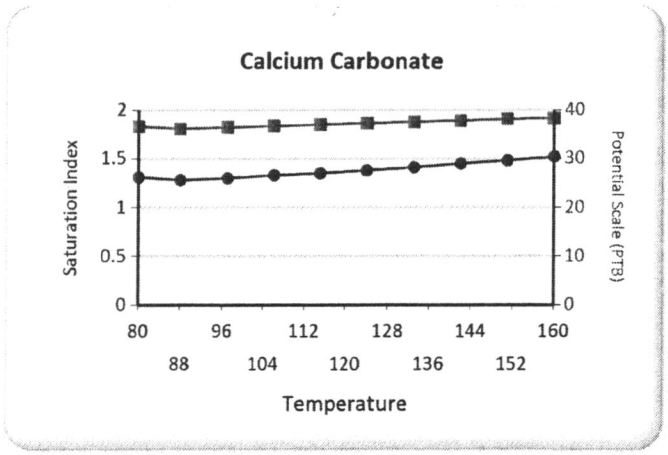
Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

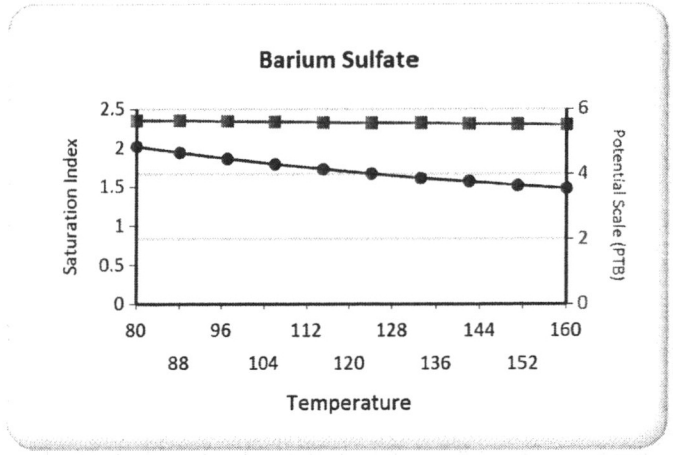
multi-chem
A HALLIBURTON SERVICE

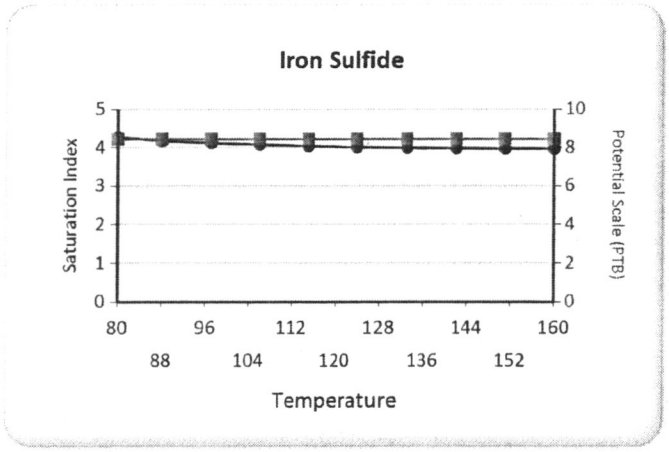
Water Analysis Report

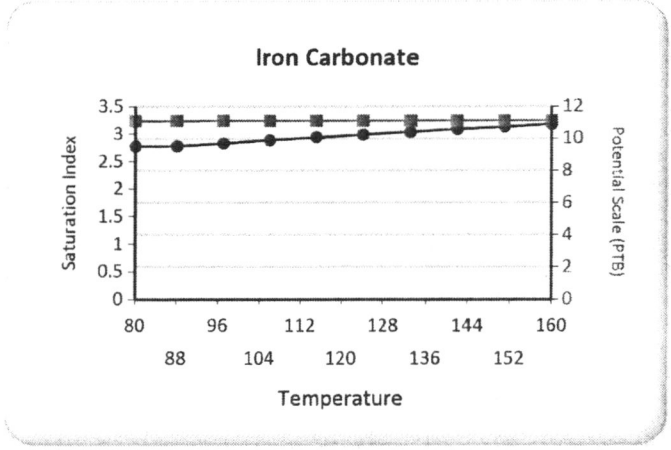
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Fe Silicate

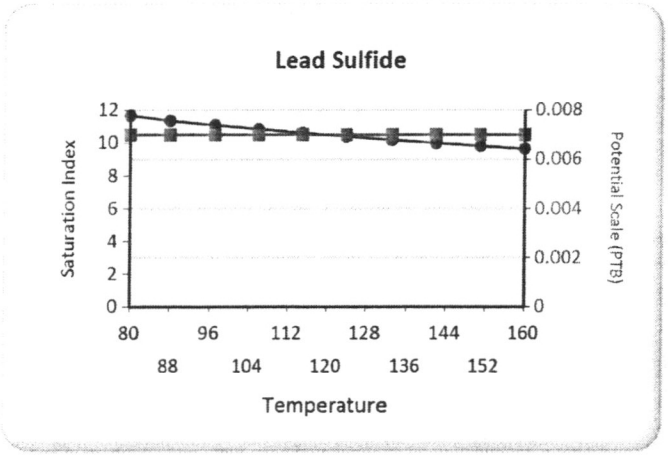
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

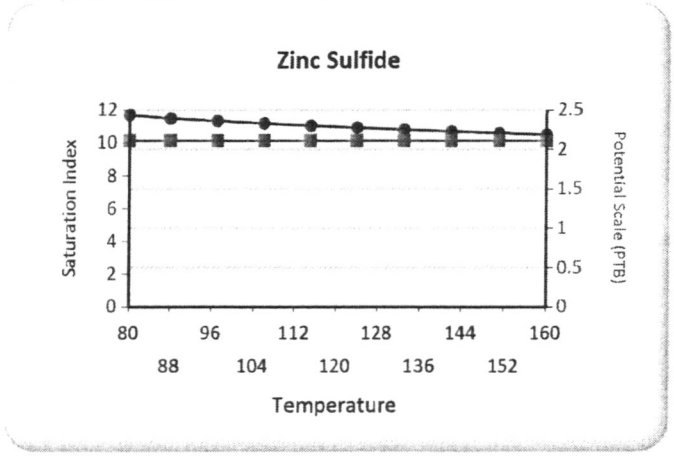












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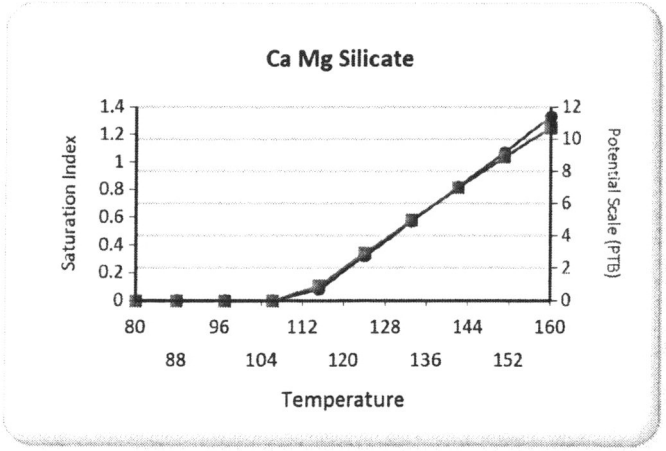
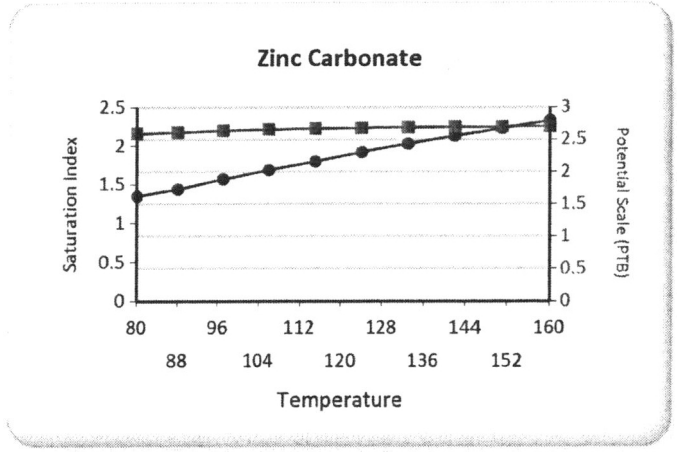
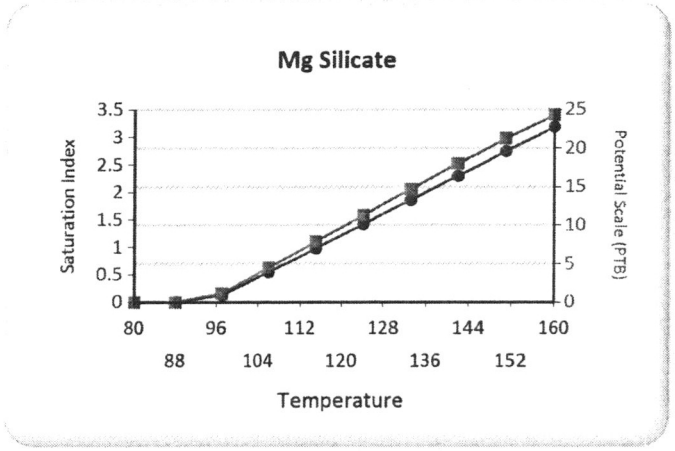
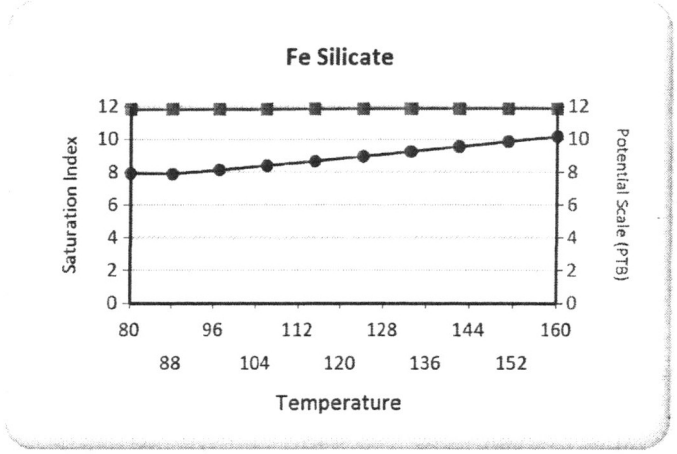








OMB No. 2040-0042 Approval Expires 12/31/2011

EPA

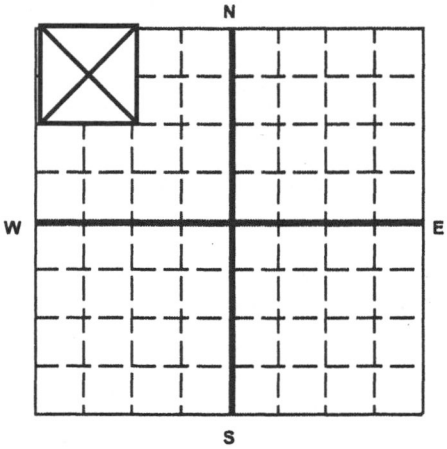
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
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	UT2736-07118

Surface Location Description
___ 1/4 of ___ 1/4 of NW 1/4 of NW 1/4 of Section 28 Township 5S Range 3W

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

Surface Location 660 ft. frm (N/S) N Line of quarter section
and 660 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 28-04

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	13	0	-2	0		0	0
February	13	940	-3	0		0	0
March	13	774	1290	172		0	0
April	13	1609	1638	989		0	0
May	13	1581	1616	669		0	0
June	13	1606	1622	607		0	0
July	13	1565	1622	321		0	0
August	13	1605	1623	479		0	0
September	13	1626	1636	348		0	0
October	13	1605	1638	404		0	0
November	13	1596	1598	490		0	0
December	13	1606	1628	527		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)

GREEN	BLUE	CBI
	2	

U2 Entered
Date 3/21/14
Initial 23

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 28-04 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-262978**

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):	1.006
pH:	8.30
Calculated TDS (mg/L):	12038.07
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	3.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4119.33	Chloride (Cl):	5000.00
Potassium (K):	54.00	Sulfate (SO_4):	461.00
Magnesium (Mg):	26.00	Bicarbonate (HCO_3):	2244.80
Calcium (Ca):	59.00	Carbonate (CO_3):	
Strontium (Sr):	4.80	Acetic Acid (CH_3COO)	
Barium (Ba):	2.00	Propionic Acid (C_2H_5COO)	
Iron (Fe):	45.00	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.40	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.03	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.31	Silica (SiO_2):	21.40

Notes:
B=4.5 Al=.03 Li=.82

(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	1.51	46.21	1.73	1.17	4.42	2.72	3.21	32.68	0.00	0.00	0.00	0.00	0.00	0.00	10.68	0.21
73.00	157.00	1.51	46.07	1.59	1.16	4.27	2.72	3.27	32.69	0.00	0.00	0.00	0.00	0.00	0.00	10.37	0.21
86.00	300.00	1.54	46.49	1.46	1.15	4.16	2.72	3.34	32.69	0.00	0.00	0.00	0.00	0.00	0.00	10.10	0.21
100.00	443.00	1.56	46.94	1.34	1.14	4.07	2.72	3.42	32.70	0.00	0.00	0.00	0.00	0.00	0.00	9.85	0.21
113.00	585.00	1.60	47.40	1.25	1.13	4.00	2.72	3.49	32.70	0.00	0.00	0.00	0.00	0.00	0.00	9.63	0.21
126.00	728.00	1.63	47.85	1.16	1.11	3.95	2.72	3.55	32.71	0.00	0.00	0.00	0.00	0.00	0.00	9.43	0.21
140.00	871.00	1.67	48.30	1.09	1.09	3.91	2.72	3.62	32.71	0.00	0.00	0.00	0.00	0.00	0.00	9.25	0.21
153.00	1014.00	1.72	48.72	1.02	1.08	3.89	2.72	3.69	32.71	0.00	0.00	0.00	0.00	0.00	0.00	9.08	0.21
166.00	1157.00	1.76	49.12	0.97	1.06	3.88	2.72	3.75	32.71	0.00	0.00	0.00	0.00	0.00	0.00	8.94	0.21
180.00	1300.00	1.82	49.48	0.93	1.05	3.88	2.72	3.82	32.72	0.00	0.00	0.00	0.00	0.00	0.00	8.80	0.21

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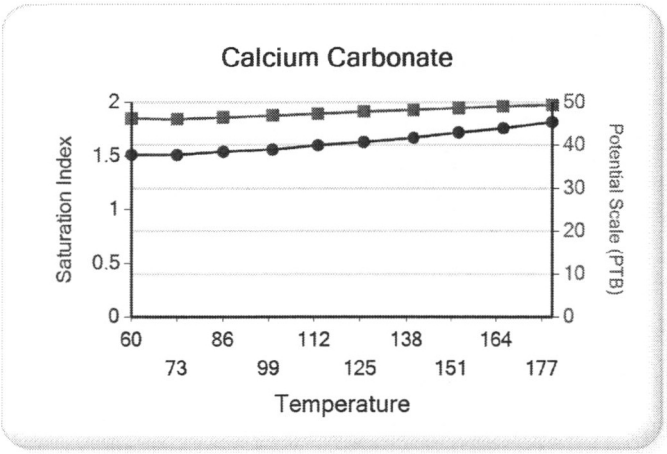
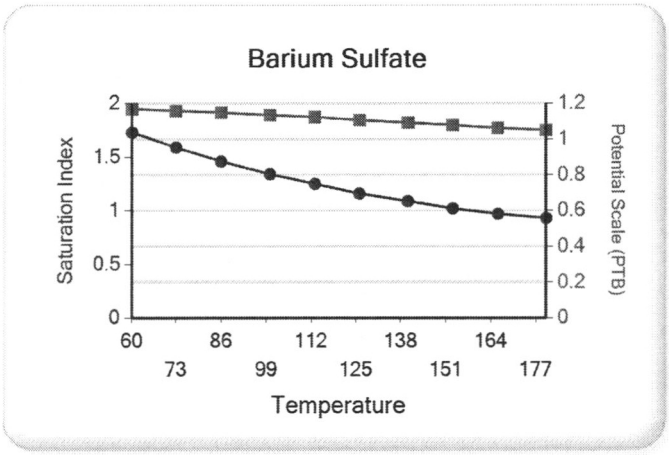
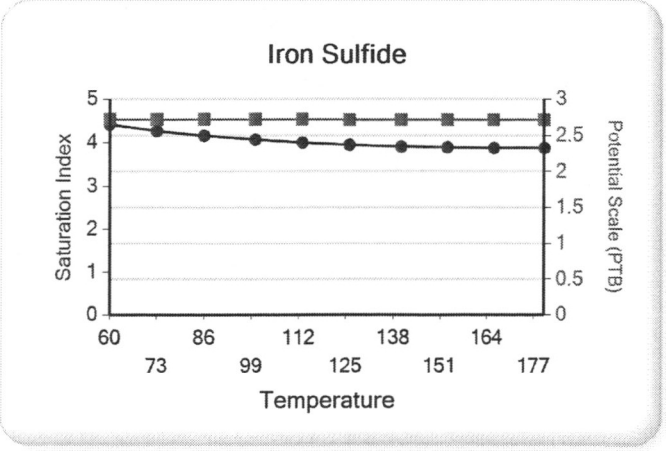
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.09	12.09	0.01	0.00	0.00	0.00	0.00	9.91	23.19
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.16	11.60	0.01	0.43	3.29	0.00	0.00	10.10	23.19
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.20	11.16	0.01	0.98	6.92	0.21	1.74	10.40	23.20
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.22	10.76	0.01	1.55	10.45	0.51	3.70	10.72	23.20
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.24	10.39	0.01	2.13	13.82	0.82	5.56	11.07	23.20
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.25	10.05	0.01	2.72	16.95	1.14	7.27	11.44	23.20
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.25	0.25	9.74	0.01	3.32	19.73	1.47	8.79	11.82	23.21
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.26	9.46	0.01	3.92	22.01	1.81	10.06	12.21	23.21
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.26	9.19	0.01	4.51	23.69	2.15	11.08	12.62	23.21
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.65	0.26	8.95	0.01	5.11	24.77	2.49	11.84	13.03	23.21

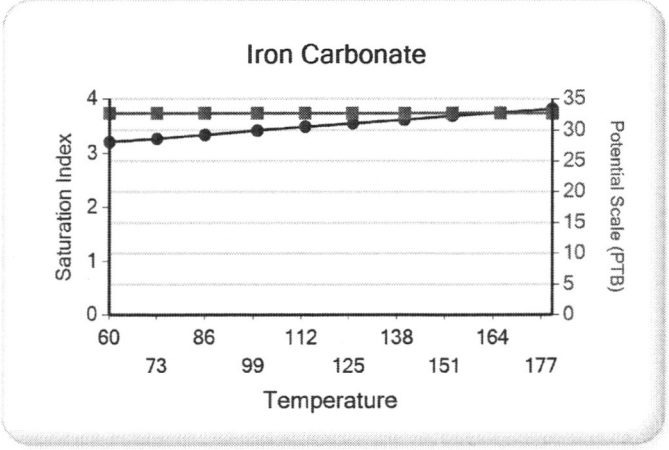
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Fe Silicate

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









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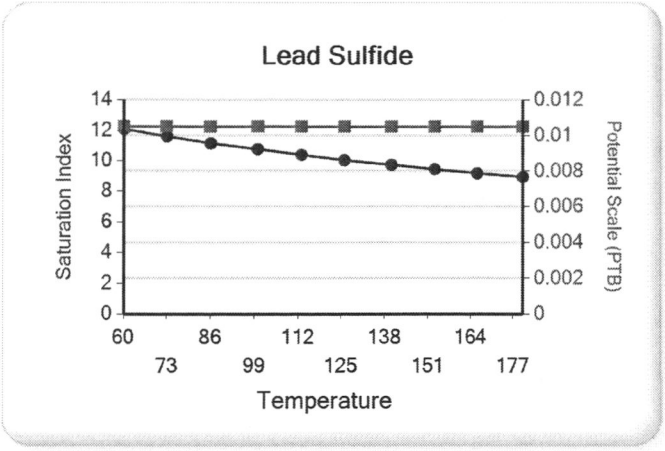

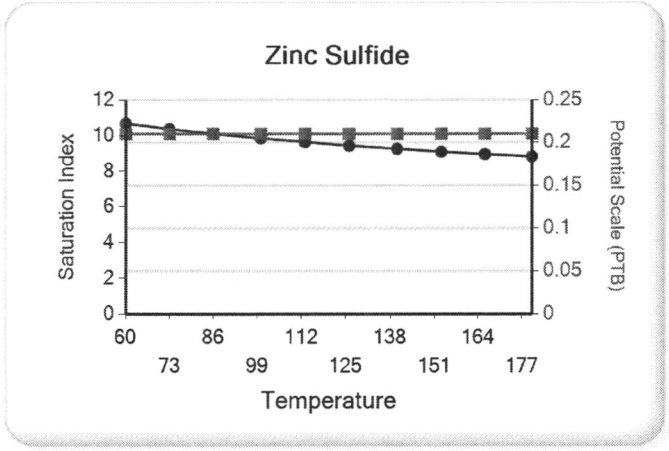

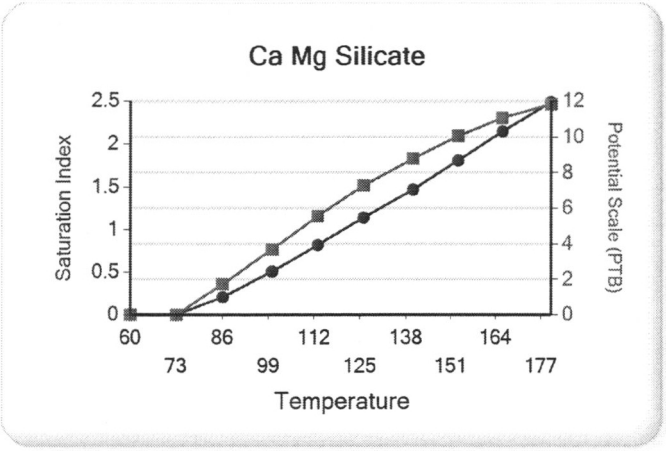

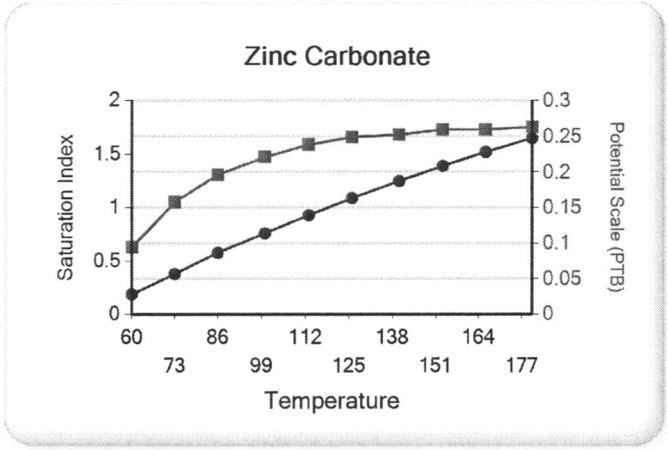

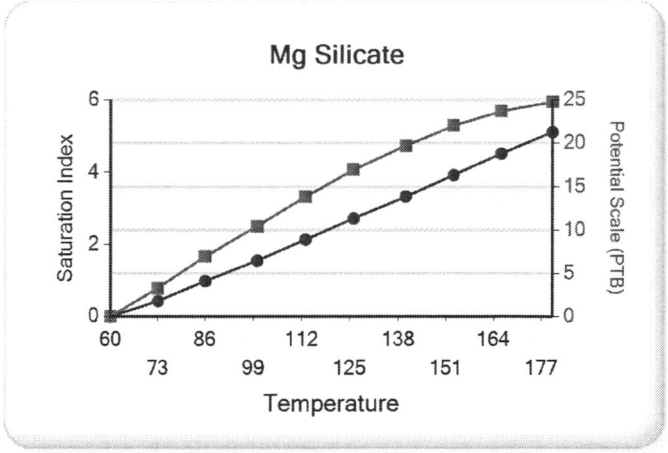

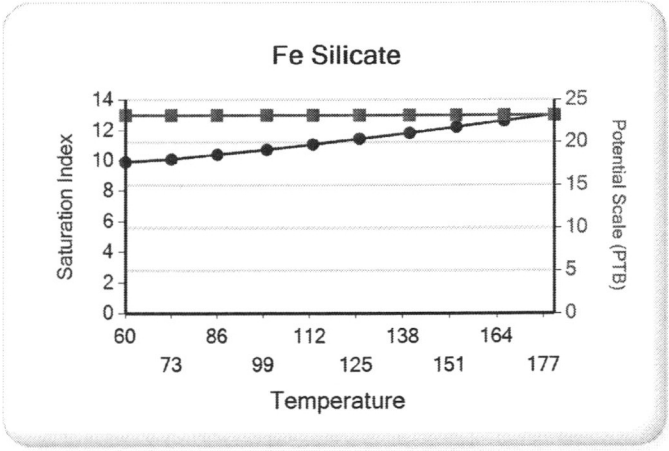
Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
14
12
10
8
6
4
2
0
25
20
15
10
5
0
60
86
112
138
164
73
99
125
151
177