Inspection Report For Well: UT20736 - 07116

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: 12:08 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevinson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 21-07		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 1/30/2007		
Oil Field:	Antelope Creek (Duchesne)		
Location:	SWNE S21 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1708 /
Last MIT:	Pass 11/28/2011	***Annulus Pressure From Last MIT:***	1000

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 12/20/13
Initials DB

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 1648 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

GREEN	BLUE	CBI
	1	

LAB

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

UIC Entered
Date 12/17/13
Initial SR

Inspection Report For Well: UT20736 - 07116 (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: 12/10/13
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

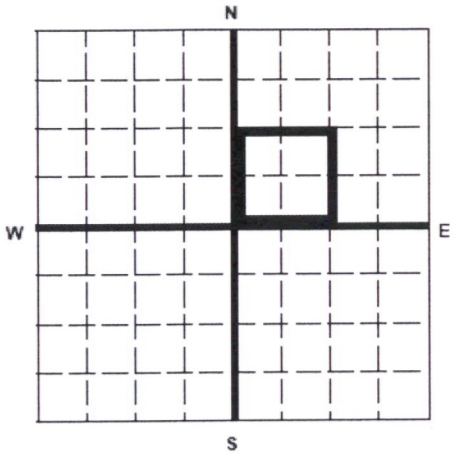
United States Environmental Protection Agency
Washington, DC 20460

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	UT20736-07116

Surface Location Description
___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 21 Township 5S Range 3W

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

Surface Location 1980 ft. frm (N/S) N Line of quarter section
and 3300 ft. from (E/W) W Line of quarter section.

U2 Entered
Date 4/4/17
Initial JB

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 21-07

GREEN BLUE CBI TAB 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	1595	1612	732		0	0
February	16	1626	1655	980		0	0
March	16	1650	1654	932		0	0
April	16	1647	1667	860		0	0
May	16	1641	1670	886		0	0
June	16	1661	1673	1091		0	0
July	16	1634	1669	1131		0	0
August	16	1639	1666	675		0	0
September	16	1636	1656	652		0	0
October	16	1582	1700	551		0	0
November	16	1651	1674	777		0	0
December	16	1608	1680	760		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 21-07 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345298**		

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):	1.0027
pH:	8.40
Calculated TDS (mg/L):	7629.95
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	5.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2307.93	Chloride (Cl):	3000.00
Potassium (K):	17.15	Sulfate (SO_4):	100.00
Magnesium (Mg):	37.58	Bicarbonate (HCO_3):	1830.00
Calcium (Ca):	151.17	Carbonate (CO_3):	
Strontium (Sr):	4.11	Hydroxide(HO):	
Barium (Ba):	3.55	Acetic Acid (CH_3COO)	
Iron (Fe):	100.25	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	47.50	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.15	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	1.06	Bromine (Br):	
Aluminum (Al):	7.60	Silica (SiO_2):	29.50
Lithium (Li):	2.83	Calcium Carbonate ($CaCO_3$):	
Boron (B):	3.25	Phosphates (PO_4):	11.25
Silicon (Si):	13.79	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	2.12	117.74	0.89	1.84	4.69	4.53	4.04	72.86	0.00	0.00	0.00	0.00	0.00	0.00	11.91	5.02
149.00	267.00	2.18	119.55	0.79	1.77	4.63	4.53	4.14	72.87	0.00	0.00	0.00	0.00	0.00	0.00	11.65	5.02
168.00	483.00	2.25	122.19	0.72	1.70	4.60	4.53	4.23	72.88	0.00	0.00	0.00	0.00	0.00	0.00	11.43	5.02
187.00	700.00	2.33	124.53	0.66	1.64	4.60	4.53	4.32	72.88	0.00	0.00	0.00	0.00	0.00	0.00	11.23	5.02
206.00	917.00	2.43	126.50	0.62	1.59	4.61	4.53	4.41	72.89	0.00	0.00	0.00	0.00	0.00	0.00	11.06	5.02
224.00	1133.00	2.52	128.08	0.59	1.56	4.65	4.53	4.50	72.89	0.00	0.00	0.00	0.00	0.00	0.00	10.92	5.02
243.00	1350.00	2.63	129.30	0.58	1.54	4.70	4.53	4.57	72.89	0.00	0.00	0.00	0.00	0.00	0.00	10.79	5.02
262.00	1567.00	2.74	130.21	0.57	1.54	4.77	4.53	4.65	72.89	0.00	0.00	0.00	0.00	0.00	0.00	10.69	5.02
281.00	1783.00	2.86	130.87	0.58	1.54	4.85	4.53	4.72	72.89	0.00	0.00	0.00	0.00	0.00	0.00	10.59	5.02
300.00	2000.00	2.98	131.34	0.59	1.56	4.93	4.53	4.78	72.89	0.00	0.00	0.00	0.00	0.00	0.00	10.51	5.02

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

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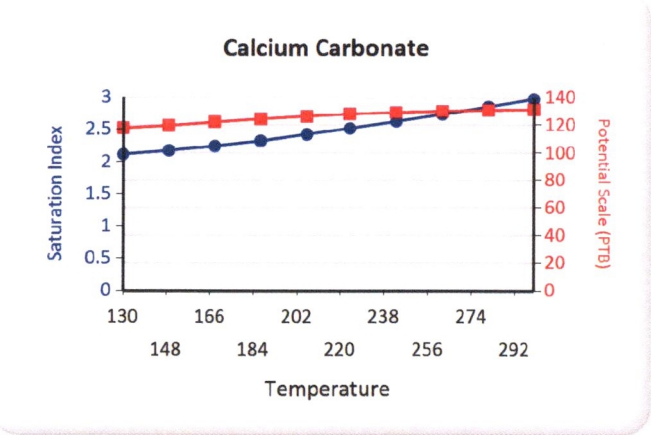
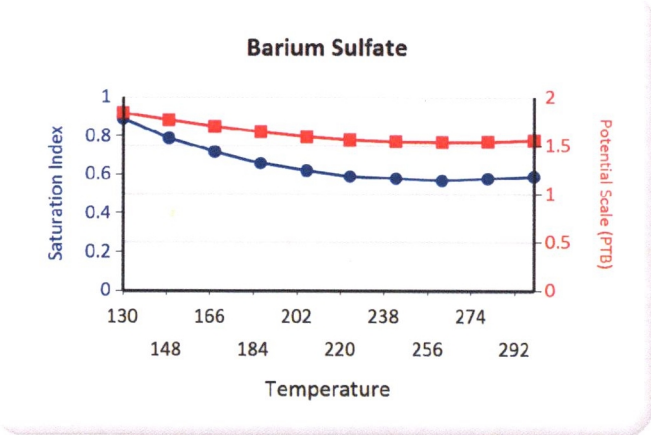
Water Analysis Report

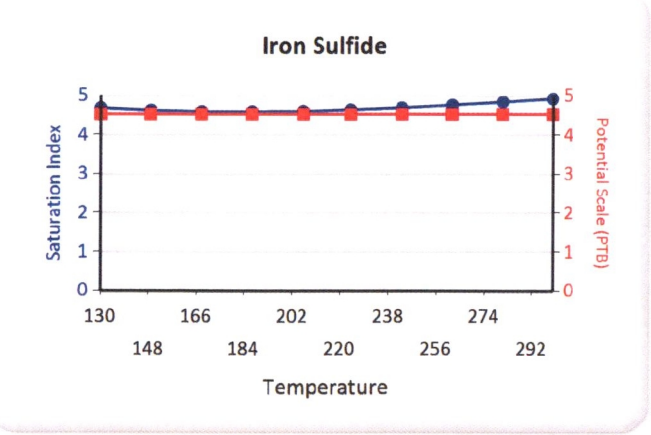
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37	31.91	11.12	0.06	5.03	39.02	3.18	27.21	14.27	68.34
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57	31.92	10.68	0.06	5.76	44.63	3.58	30.05	14.71	68.38
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	3.77	31.93	10.30	0.06	6.52	51.38	4.00	33.24	15.22	68.41
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	3.94	31.93	9.96	0.06	7.28	57.58	4.43	35.79	15.74	68.43
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	4.10	31.93	9.66	0.06	8.03	62.80	4.86	37.55	16.27	68.43
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	4.24	31.93	9.39	0.06	8.77	66.84	5.28	38.62	16.80	68.44
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	4.37	31.93	9.15	0.06	9.49	69.77	5.70	39.22	17.33	68.44
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	4.48	31.93	8.94	0.06	10.18	71.78	6.11	39.53	17.85	68.44
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	4.57	31.93	8.75	0.06	10.85	73.10	6.51	39.69	18.36	68.44
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	4.65	31.94	8.58	0.06	11.49	73.93	6.89	39.77	18.85	68.44

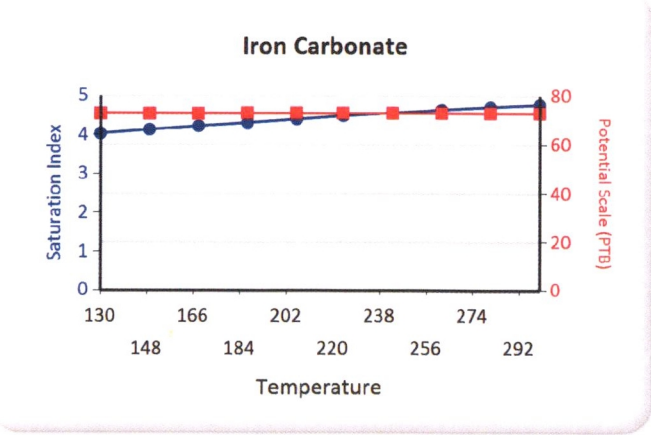
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

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









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

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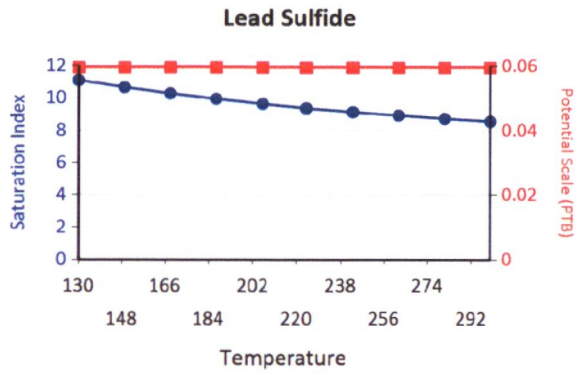
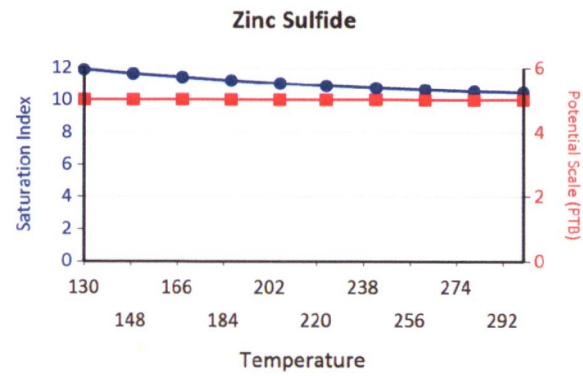
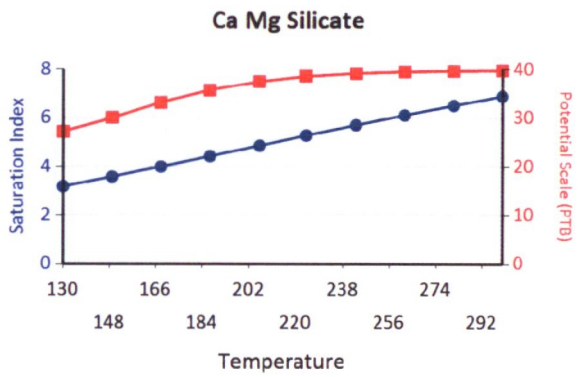
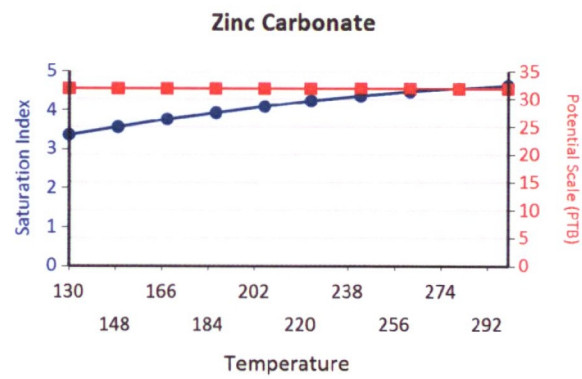
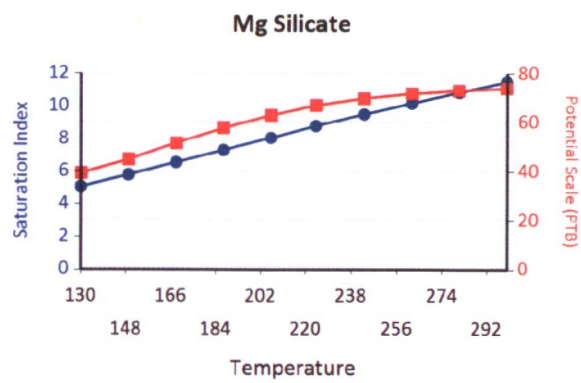
Water Analysis Report

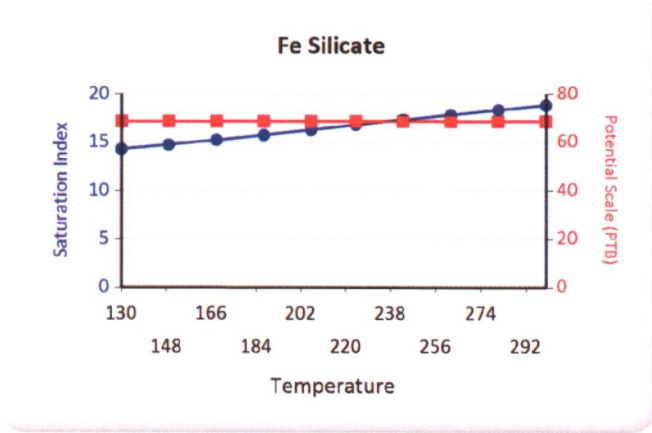











Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
20
15
10
5
0
80
60
40
20
0
130
166
202
238
274
148
184
220
256
292

PETROGLYPH EXECUTIVE OFFICES

December 14, 2016

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
Ute Tribal 09-15, 21-07, 29-01, 30-10

Mr. Wang/ Mr. Breffle:

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

- Ute Tribal 09-15 UT20736-06698
- Ute Tribal 21-07 UT20736-07116
- Ute Tribal 29-01 UT20736-04619
- Ute Tribal 30-10 UT20736-04524

If any questions, please reach me at (208) 685-9711.

Best Regards,

Nicole Colby
Manager, Land & Regulatory Compliance

U2 Entered
Date 12/21/16
Initial DB

TAB	GREEN	BLUE	CBI
		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: 11/23/16
Test conducted by: CHAD STEVENSON
Others present: _____

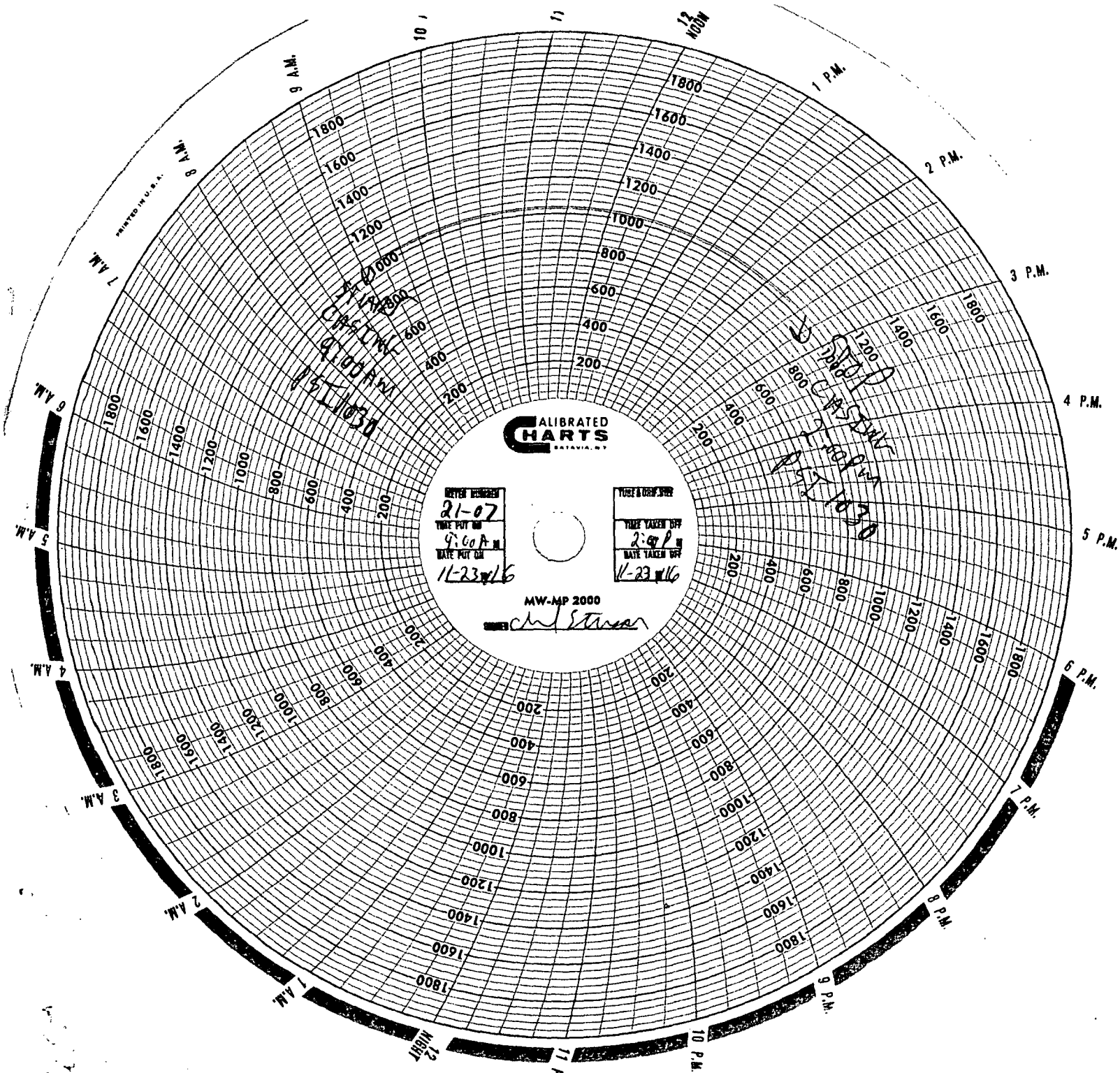
Well Name: 21-07 Type: ER SWD **Status:** AC TA UC
Field: ANTELOPE CREEK
Location: 21-07 Sec: ___ T ___ N / S R ___ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ___/___/___ **Maximum Allowable Pressure:** _____ **PSIG**

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: 28 bpd
Pre-test annulus pressure: psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1662 psig	psig	psig
End of test pressure	1662 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1030 psig	psig	psig
5 minutes	1030 psig	psig	psig
10 minutes	1030 psig	psig	psig
15 minutes	1030 psig	psig	psig
20 minutes	1030 psig	psig	psig
25 minutes	1030 psig	psig	psig
30 minutes	1030 psig	psig	psig
5 HOURS minutes	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
21-07
TIME PUT ON
9:00 A.M.
DATE PUT ON
11-23-16
TIME & DRIP STEP
TIME TAKEN OFF
2:00 P.M.
DATE TAKEN OFF
11-23-16
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 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
11

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

EPA

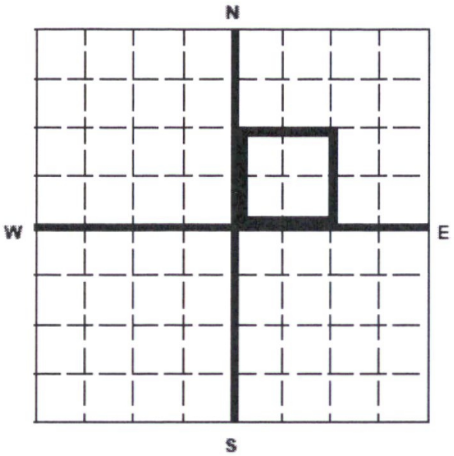
United States Environmental Protection Agency
Washington, DC 20460

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~~04494~~ 07116

Surface Location Description
___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 21 Township 5S Range 3W

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

Surface Location 1980 ft. frm (N/S) N Line of quarter section
and 3300 ft. from (E/W) W Line of quarter section.

U2 Entered
Date 3/2/16
Initial JB

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 21-07

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	1566	1644	943		0	0
February	15	1579	1630	597		0	0
March	15	1615	1659	844		0	0
April	15	1616	1646	792		0	0
May	15	1659	1671	819		0	0
June	15	1648	1671	722		0	0
July	15	1652	1669	621		0	0
August	15	1605	1643	595		0	0
September	15	1642	1657	661		0	0
October	15	1628	1641	702		0	0
November	15	1606	1664	595		0	0
December	15	1358	1619	546		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

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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 21-07 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327629**		

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):	1.0030
pH:	8.10
Calculated TDS (mg/L):	8262.74
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):	2721.77	Chloride (Cl):	3500.00
Potassium (K):	14.59	Sulfate (SO_4):	340.00
Magnesium (Mg):	53.18	Bicarbonate (HCO_3):	1464.00
Calcium (Ca):	121.09	Carbonate (CO_3):	
Strontium (Sr):	5.89	Acetic Acid (CH_3COO)	
Barium (Ba):	4.54	Propionic Acid (C_2H_5COO)	
Iron (Fe):	8.23	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	3.63	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.43	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.04	Silica (SiO_2):	25.35
Aluminum (Al):	0.01	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.16	Phosphates (PO_4):	5.37
Boron (B):	1.53	Oxygen (O_2):	
Silicon (Si):	11.85		

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	1.90	94.24	1.31	2.57	0.00	0.00	2.89	5.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	1.78	89.79	1.33	2.58	0.00	0.00	2.76	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	1.70	86.41	1.36	2.59	0.00	0.00	2.65	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	1.62	82.76	1.40	2.60	0.00	0.00	2.55	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	1.55	78.94	1.45	2.61	0.00	0.00	2.44	5.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	1.48	75.02	1.52	2.62	0.00	0.00	2.33	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	1.42	71.13	1.59	2.64	0.00	0.00	2.23	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	1.36	67.36	1.69	2.65	0.00	0.00	2.12	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	1.31	63.79	1.79	2.66	0.00	0.00	2.02	5.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	1.26	60.50	1.92	2.67	0.00	0.00	1.92	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
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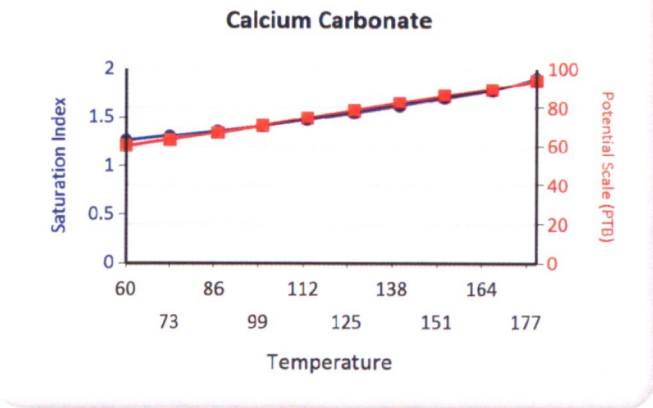
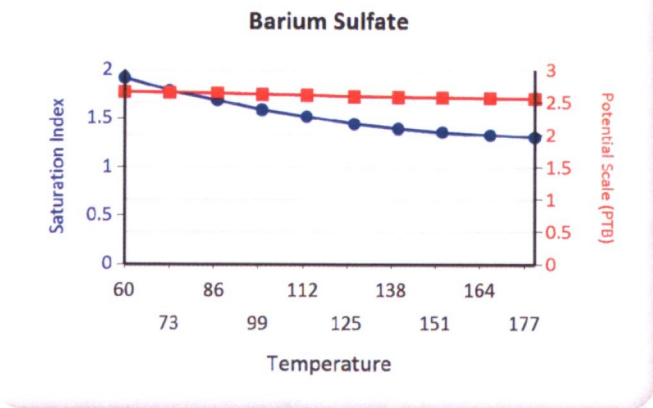
Water Analysis Report

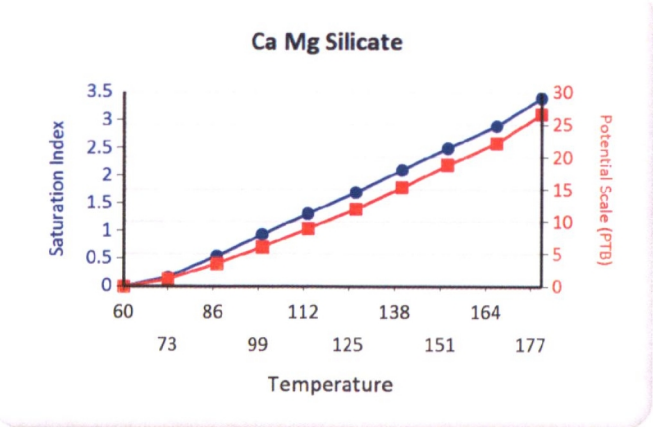
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	2.43	0.00	0.00	6.07	50.71	3.39	26.67	10.88	6.40
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	2.43	0.00	0.00	5.25	41.32	2.89	22.24	10.22	6.40
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11	2.42	0.00	0.00	4.57	34.40	2.49	18.81	9.72	6.39
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94	2.41	0.00	0.00	3.90	27.70	2.10	15.36	9.22	6.39
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	2.39	0.00	0.00	3.22	21.52	1.70	12.04	8.73	6.38
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	2.37	0.00	0.00	2.54	15.99	1.31	8.96	8.25	6.38
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	2.32	0.00	0.00	1.86	11.09	0.93	6.13	7.79	6.36
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14	2.25	0.00	0.00	1.18	6.74	0.54	3.54	7.33	6.34
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	2.12	0.00	0.00	0.49	2.80	0.16	1.14	6.88	6.32
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	1.90	0.00	0.00	0.00	0.00	0.00	0.00	6.44	6.28

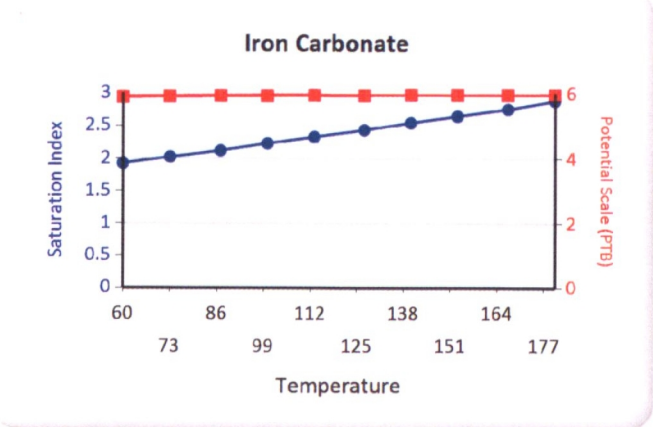
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

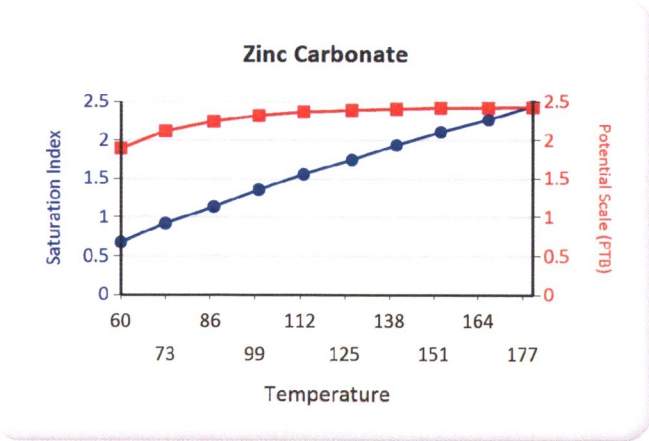
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Fe Silicate

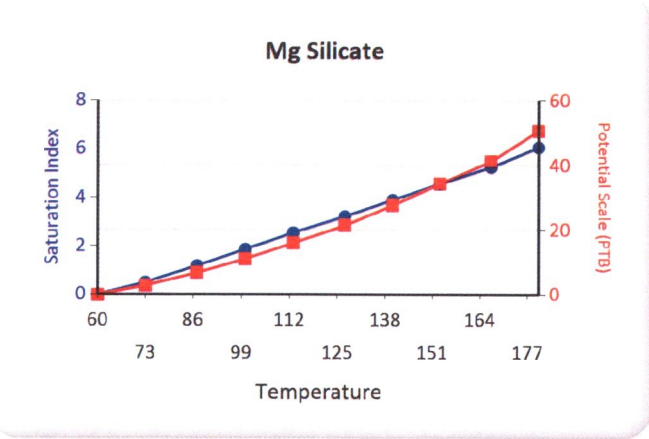


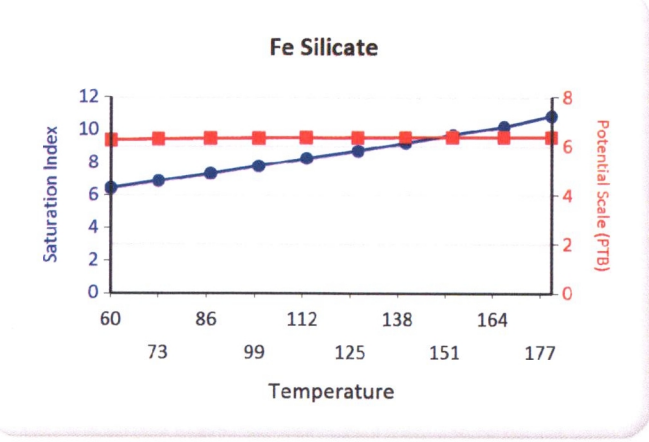







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
60
86
112
138
164
73
99
125
151
177


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
60
86
112
138
164
73
99
125
151
177

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

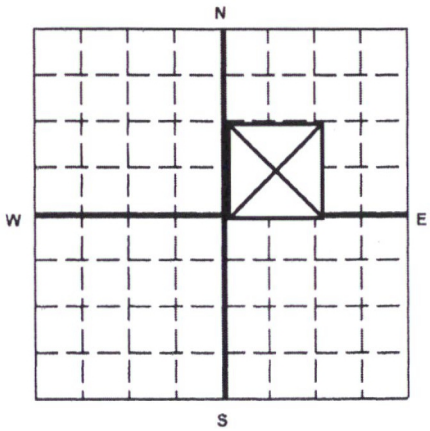
EPA

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	UT20736-07116

Surface Location Description

___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 21 Township 5S Range 3W

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

Surface Location 1980 ft. frm (N/S) N Line of quarter section and 3300 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 21-07

		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	1656	1669	971		0	0
February	14	1652	1663	919		0	0
March	14	1658	1660	1178		0	0
April	14	1652	1678	1018		0	0
May	14	1660	1675	960		0	0
June	14	1637	1674	918		0	0
July	14	1627	1655	1088		0	0
August	14	1644	1641	1107		0	0
September	14	1547	1649	1026		0	0
October	14	1649	1672	1299		0	0
November	14	1643	1649	1089		0	0
December	14	1653	1669	1121		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

	GREEN	BLUE	CBI
TAB		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 21-07 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297477**		

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):	1.0014
pH:	8.20
Calculated TDS (mg/L):	6321.15
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	15.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	1712.34	Chloride (Cl):	3000.00
Potassium (K):	29.12	Sulfate (SO_4):	70.00
Magnesium (Mg):	44.79	Bicarbonate (HCO_3):	1342.00
Calcium (Ca):	79.42	Carbonate (CO_3):	
Strontium (Sr):	4.73	Acetic Acid (CH_3COO)	
Barium (Ba):	5.42	Propionic Acid (C_2H_5COO)	
Iron (Fe):	7.58	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	3.97	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.04	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.10	Silica (SiO_2):	21.64

Notes:
B=3.98 Al=.04 Li=.83

(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	1.49	54.34	1.42	3.10	4.13	4.18	2.34	5.48	0.00	0.00	0.00	0.00	0.00	0.00	12.01	2.08
88.00	157.00	1.48	52.86	1.33	3.07	4.03	4.18	2.35	5.48	0.00	0.00	0.00	0.00	0.00	0.00	11.80	2.08
97.00	300.00	1.50	53.67	1.26	3.04	3.98	4.18	2.40	5.49	0.00	0.00	0.00	0.00	0.00	0.00	11.64	2.08
106.00	443.00	1.52	54.53	1.19	3.01	3.93	4.18	2.45	5.49	0.00	0.00	0.00	0.00	0.00	0.00	11.50	2.08
115.00	585.00	1.54	55.42	1.12	2.97	3.89	4.18	2.50	5.49	0.00	0.00	0.00	0.00	0.00	0.00	11.36	2.08
124.00	728.00	1.57	56.34	1.06	2.94	3.86	4.18	2.55	5.49	0.00	0.00	0.00	0.00	0.00	0.00	11.23	2.08
133.00	871.00	1.60	57.27	1.01	2.90	3.84	4.18	2.60	5.50	0.00	0.00	0.00	0.00	0.00	0.00	11.11	2.08
142.00	1014.00	1.62	58.20	0.97	2.86	3.82	4.18	2.64	5.50	0.00	0.00	0.00	0.00	0.00	0.00	10.99	2.08
151.00	1157.00	1.66	59.12	0.92	2.83	3.81	4.18	2.69	5.50	0.00	0.00	0.00	0.00	0.00	0.00	10.89	2.08
160.00	1300.00	1.69	60.02	0.89	2.79	3.81	4.18	2.74	5.50	0.00	0.00	0.00	0.00	0.00	0.00	10.79	2.08

		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	1.36	2.54	12.28	0.02	1.23	6.17	0.30	1.66	7.61	5.85
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46	2.57	11.97	0.02	1.42	6.71	0.38	1.94	7.64	5.85
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.59	2.59	11.70	0.02	1.81	8.60	0.59	2.93	7.87	5.86
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	2.61	11.45	0.02	2.21	10.57	0.80	3.95	8.11	5.86
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82	2.63	11.22	0.02	2.62	12.62	1.03	4.99	8.37	5.87
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93	2.64	11.00	0.02	3.03	14.71	1.25	6.03	8.64	5.88
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	2.64	10.79	0.02	3.44	16.80	1.49	7.06	8.91	5.88
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14	2.65	10.59	0.02	3.86	18.81	1.72	8.05	9.19	5.88
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	2.24	2.65	10.41	0.02	4.28	20.67	1.96	9.00	9.48	5.88
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	2.66	10.23	0.02	4.70	22.28	2.20	9.86	9.77	5.89

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

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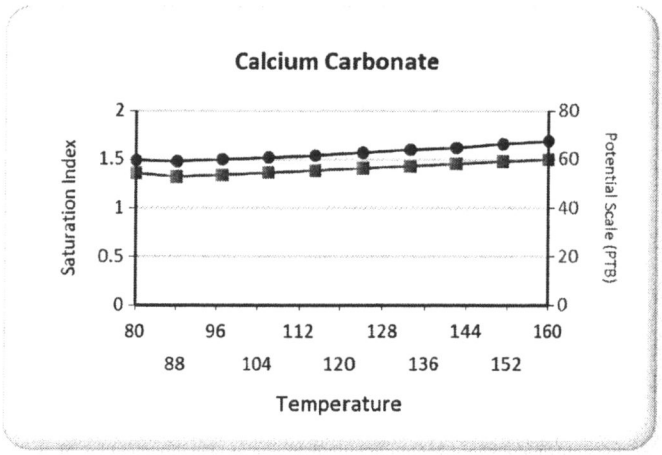
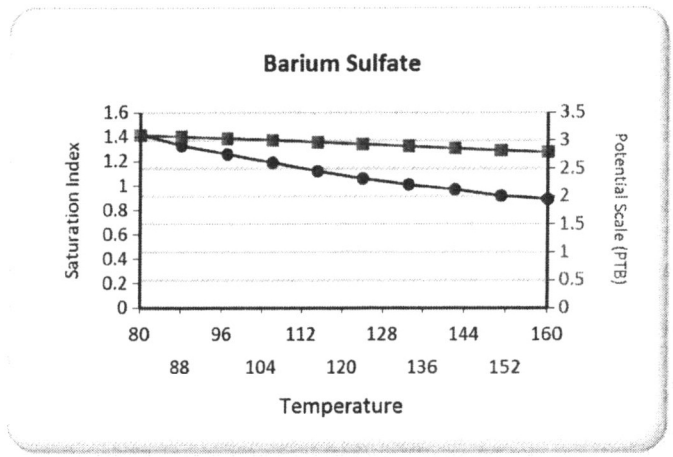
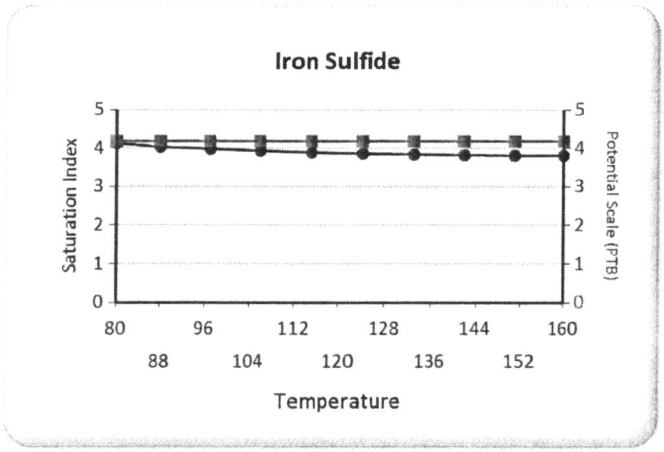
Water Analysis Report

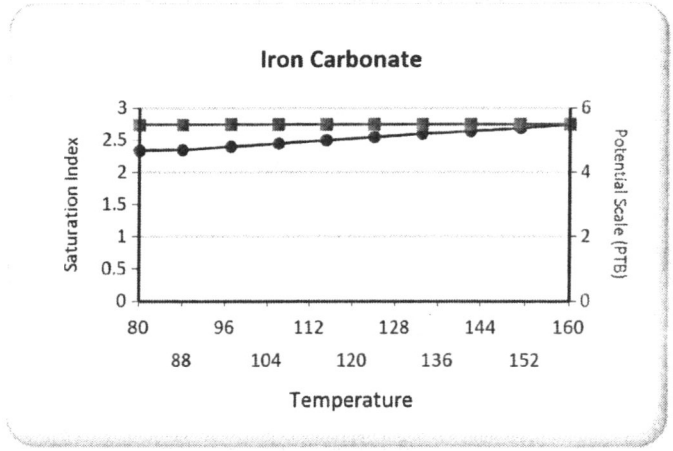
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

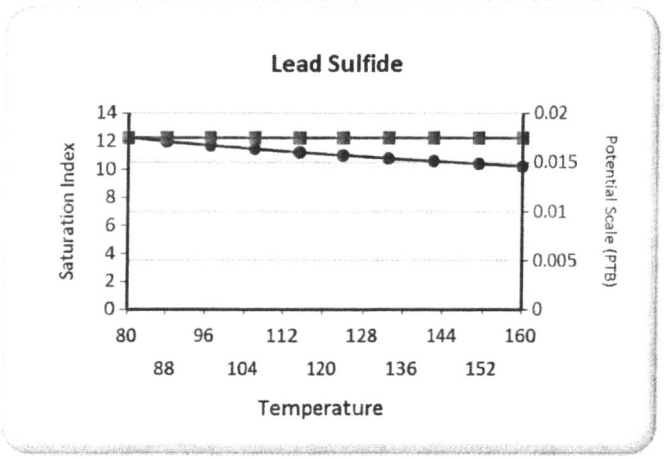
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

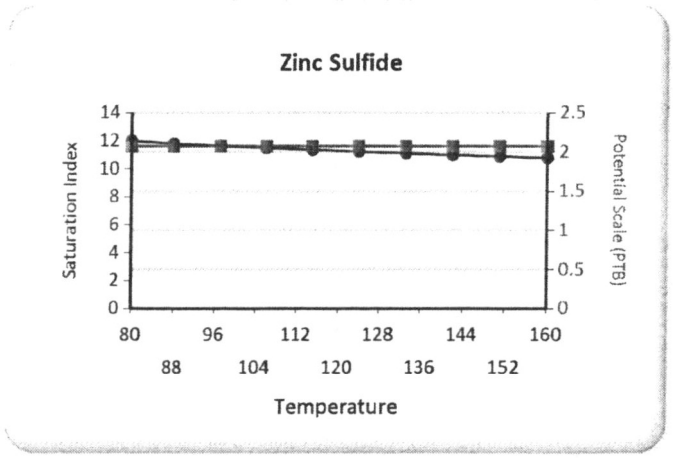












Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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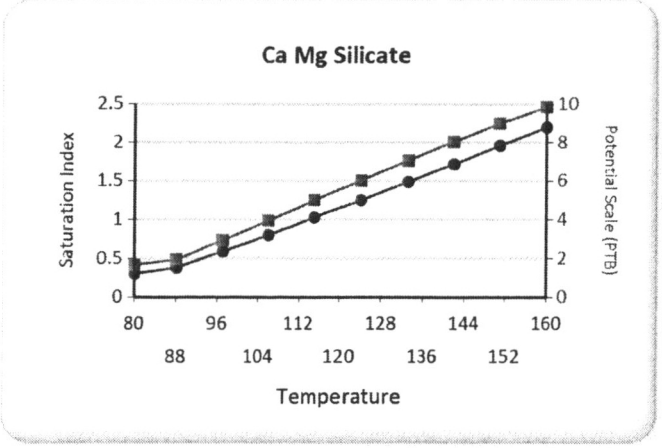
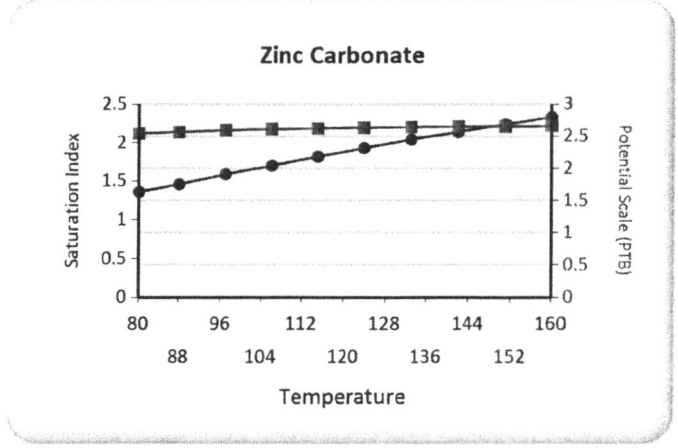
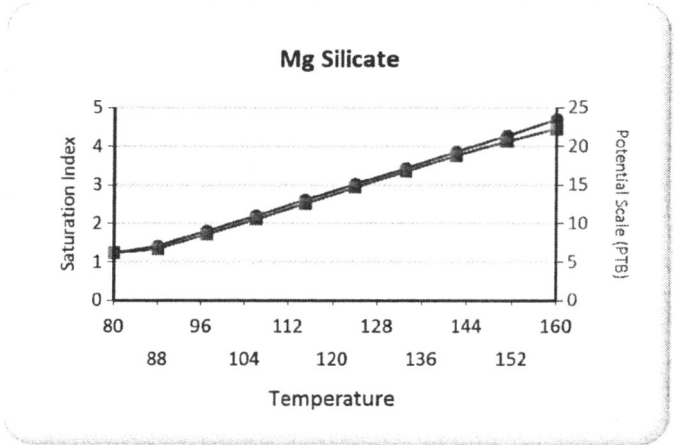
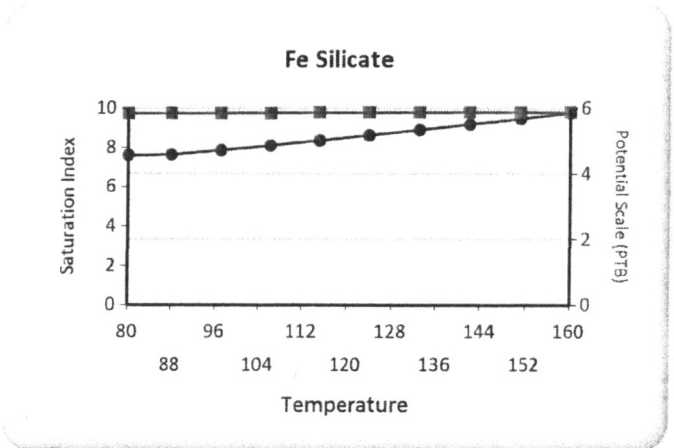
Water Analysis Report









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

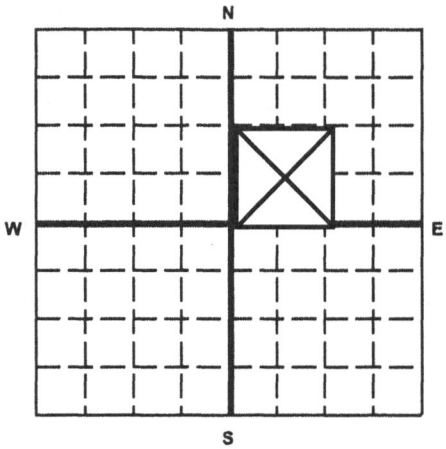
United States Environmental Protection Agency
Washington, DC 20460

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	UT20736-07116

Surface Location Description
___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 21 Township 5S Range 3W

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

Surface Location 1980 ft. frm (N/S) N Line of quarter section
and 3300 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 21-07

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	1531	1659	575		0	0
February	13	1608	1646	496		0	0
March	13	1636	1665	637		0	0
April	13	1638	1675	707		0	0
May	13	1618	1648	709		0	0
June	13	1641	1675	3858		0	0
July	13	1621	1651	7985		0	0
August	13	1633	1662	935		0	0
September	13	1623	1650	1008		0	0
October	13	1648	1670	1169		0	0
November	13	1655	1679	986		0	0
December	13	1647	1666	921		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 | GRF | SLUE | CBL
2

U2 Entered
Date 3/20/14
Initial JB

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 ENERGY INC**
Well Name: **UTE TRIBAL 21-07 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-263031**

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):	1.001
pH:	8.00
Calculated TDS (mg/L):	4786.74
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):	1500.44	Chloride (Cl):	2000.00
Potassium (K):	17.00	Sulfate (SO_4):	300.00
Magnesium (Mg):	51.00	Bicarbonate (HCO_3):	780.80
Calcium (Ca):	103.00	Carbonate (CO_3):	
Strontium (Sr):	3.60	Acetic Acid (CH_3COO)	
Barium (Ba):	1.50	Propionic Acid (C_2H_5COO)	
Iron (Fe):	8.20	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.40	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.05	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.21	Silica (SiO_2):	20.54

Notes:
B=1.3 Al=0 Li=.18

(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	1.10	38.36	1.74	0.88	0.00	0.00	1.74	5.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.10	37.39	1.60	0.87	0.00	0.00	1.79	5.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.13	39.56	1.47	0.86	0.00	0.00	1.88	5.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.18	42.01	1.36	0.86	0.00	0.00	1.97	5.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.23	44.73	1.26	0.84	0.00	0.00	2.06	5.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.28	47.67	1.18	0.83	0.00	0.00	2.14	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.33	50.79	1.11	0.82	0.00	0.00	2.23	5.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.39	54.06	1.05	0.81	0.00	0.00	2.31	5.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.46	57.41	1.00	0.80	0.00	0.00	2.40	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.53	60.79	0.96	0.80	0.00	0.00	2.48	5.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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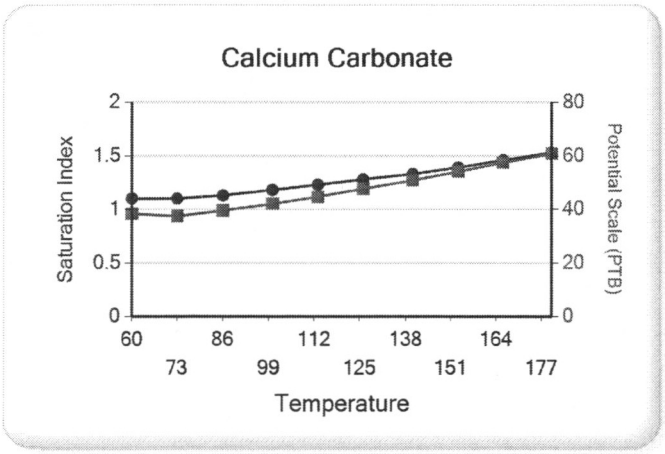
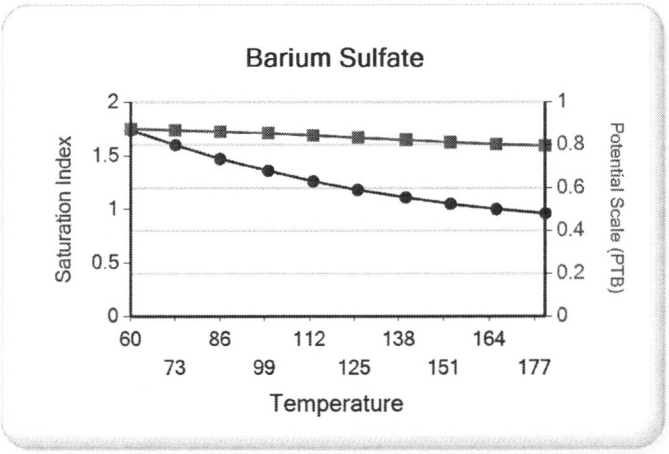
Water Analysis Report

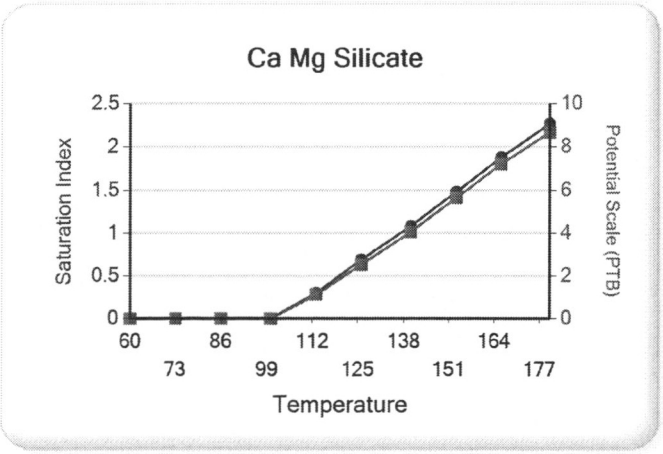
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.64	6.00
73.00	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	5.75	6.01
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.15	0.52	0.00	0.00	6.14	6.11
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.11	0.00	0.00	0.81	2.66	0.00	0.00	6.56	6.19
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.16	0.00	0.00	1.48	5.11	0.30	1.12	7.00	6.25
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.20	0.00	0.00	2.16	7.91	0.69	2.53	7.47	6.29
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.22	0.00	0.00	2.85	11.03	1.08	4.05	7.95	6.32
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.23	0.00	0.00	3.54	14.34	1.48	5.64	8.45	6.34
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.25	0.00	0.00	4.23	17.58	1.88	7.21	8.94	6.35
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.25	0.00	0.00	4.91	20.41	2.27	8.68	9.44	6.36

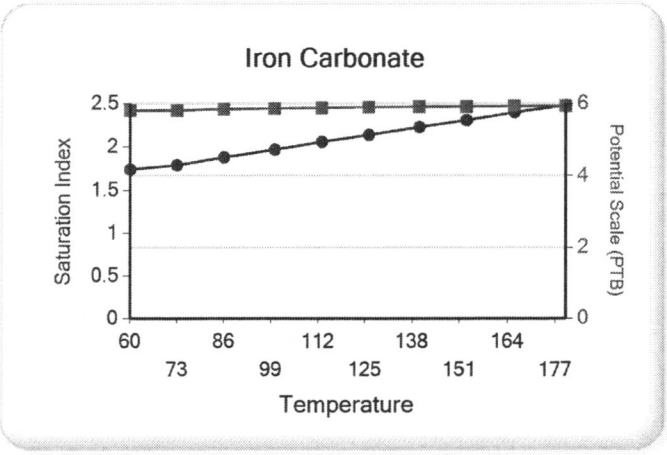
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

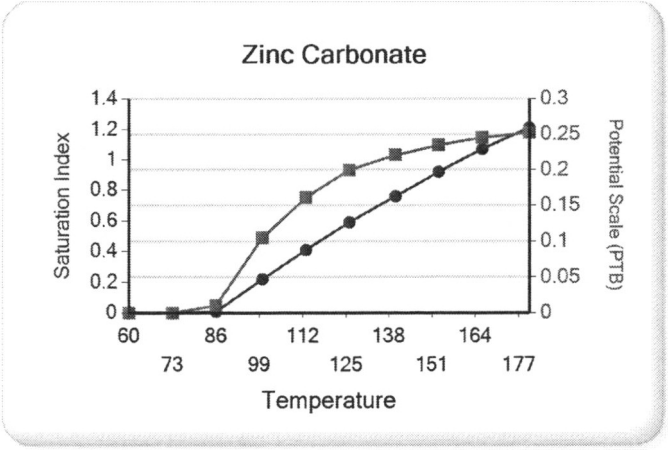
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

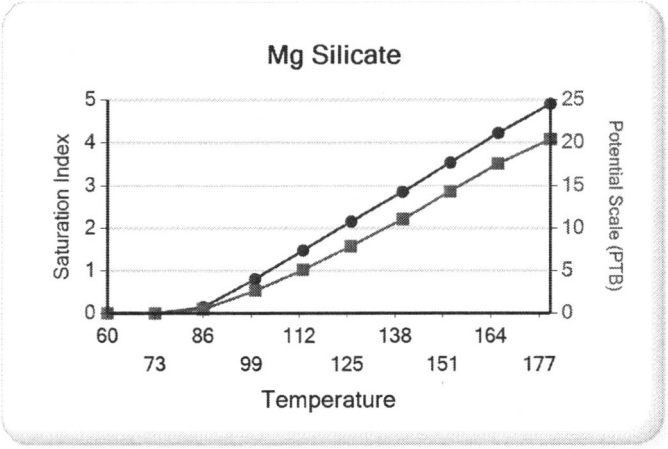


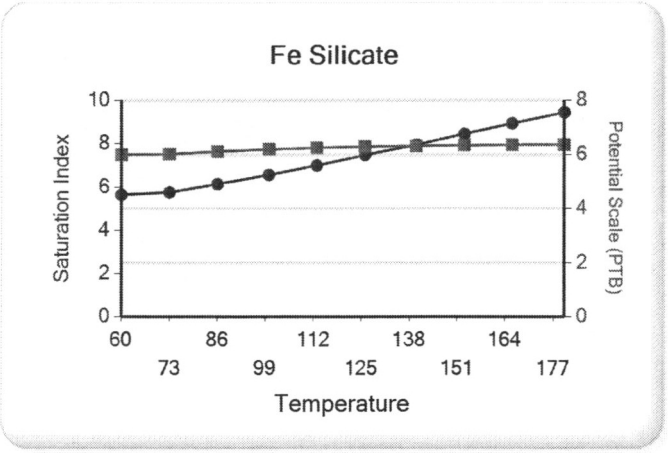







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.3
0.25
0.2
0.15
0.1
0.05
0
60
86
112
138
164
73
99
125
151
177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
5
4
3
2
1
0
25
20
15
10
5
0
60
86
112
138
164
73
99
125
151
177


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
10
8
6
4
2
0
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

Ref: 8P-W-GW

JAN 3 0 2007

JAN 30 2007

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

RE: Authorization to Inject
UIC Permit No. UT20736-00000
Well ID: UT20736-07116
Ute Tribal No. 21-07
Duchesne County, Utah

Dear Mr. Wall:

Thank you for submitting information pertaining to the newly constructed or converted Ute Tribal No. 21-07 enhanced recovery injection well to the Region 8 Ground Water Program office of the Environmental Protection Agency (EPA). The "Prior To Commencing Injection" requirements for the Ute Tribal No. 21-07 injection well required well owner and operator Petroglyph Operating Company, Inc. to submit the following information to the Director:

I. A successful mechanical integrity test (MIT) demonstrating Part I Internal MI,
II. Pore pressure calculation of the proposed injection zone, and
III. Completed EPA Form No. 7520-12.

All required information has been submitted, and has been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal No. 21-07 enhanced recovery injection well under the conditions of the Authorization for Additional Well and UIC Area Permit UT20736-00000 as modified.

As of this approval, responsibility for permit compliance and enforcement is transferred to the Region 8 UIC Technical Enforcement Program office. Therefore, please direct all future notification, reporting, monitoring and compliance correspondence to the following address, referencing your well and UIC Permit number on all correspondence regarding this well.

Technical Enforcement Program - UIC
U.S. EPA Region 8, Mail Code 8ENF-UFO
1595 Wynkoop Street
Denver, Colorado 80202-1129

The Director has determined that the maximum allowable surface injection pressure (MAIP) for the Ute Tribal No. 21-07 shall not exceed **1708** psig. Please be reminded that it is the responsibility of the owner/operator to be aware of, and to comply with, all conditions of Authorization for Additional Well UT20736-07116 and EPA UIC Area Permit UT20736-00000 and relevant modifications as issued.

If you have any questions regarding this Authorization, please call Linda Bowling of my staff at (303) 312-6254. For questions regarding notification, testing, monitoring, reporting or other Permit requirements, please contact Nathan Wiser of the UIC Technical Enforcement Program by calling (303) 312-6254.

Sincerely,

Steven J. Pratt
Director,
Ground Water Program

Maxine Natchees, Chairperson
Uintah & Ouray Business Committee
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, UT 84026

Chester Mills, Superintendent
BIA - Uintah & Ouray Indian Agency
P.O. Box 130
Fort Duchesne, UT 84026

Mr. Kenneth Smith
Executive Vice President and Chief Operating Officer
Petroglyph Energy, Inc.
555 S. Cole Blvd
Boise, ID 83709

Elaine Willie
Environmental Coordinator
Ute Indian Tribe
P.O. Box 460
Fort Duchesne, UT 84026

Gil Hunt
Technical Services Manager
Utah Division of Oil, Gas, and Mining
1594 West North Temple - Suite 1220
Salt Lake City, UT 84114-5801

Kirk Fleetwood, PE
BLM - Vernal District
170 South 500 East
Vernal, UT 84078

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

PS Form 3800, January 2001 See Reverse for Instructions

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