Inspection Report For Well: UT20736 - 07121

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: 1:36 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevenson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 29-02		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 6/23/2007		
Oil Field:	Antelope Creek (Duchesne)		
Location:	NWNE S29 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1325 /
Last MIT:	Pass 2/28/2012	***Annulus Pressure From Last MIT:***	1020

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 12/27/13
Initials RB

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 585 / 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)
- [ ] Active
- [ ] Being Reworked
- [x] Not Injecting
- [ ] Production
- [ ] Plugged and Abandoned
- [ ] Under Construction

U2 Entered
Date 12/17/13
Initial

GREEN	BLUE	CBI
	1	

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

Inspection Report For Well: UT20736 - 07121 (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

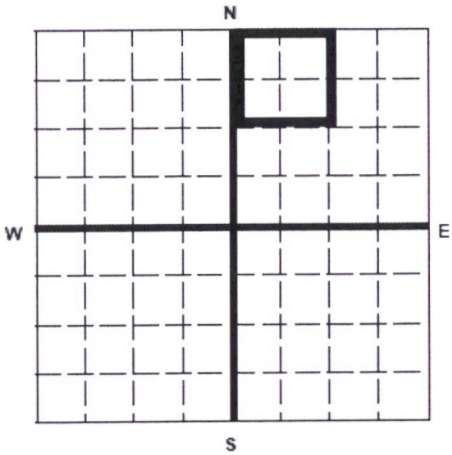
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-07121

Surface Location Description
___ 1/4 of ___ 1/4 of NW 1/4 of NE 1/4 of Section 29 Township 5S Range 3W

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

Surface Location 622 ft. frm (N/S) N Line of quarter section
and 2075 ft. from (E/W) E 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 29-02

		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	870	882	1		0	0
February	16	1146	1252	21		0	0
March	16	1096	1246	14		0	0
April	16	1093	1257	19		0	0
May	16	1069	1124	19		0	0
June	16	995	1231	18		0	0
July	16	1033	1091	5		0	0
August	16	1090	1155	19		0	0
September	16	1098	1163	10		0	0
October	16	1113	1261	16		0	0
November	16	1060	1169	0		0	0
December	16	1107	1292	5		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 CB TAB 2

UIC Entered
Date 4/6/17
Initial DB

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 29-02,DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345384**		

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):	1.0003
pH:	8.20
Calculated TDS (mg/L):	4385.89
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):	1410.82	Chloride (Cl):	1500.00
Potassium (K):	8.16	Sulfate (SO_4):	40.00
Magnesium (Mg):	16.30	Bicarbonate (HCO_3):	1342.00
Calcium (Ca):	24.06	Carbonate (CO_3):	
Strontium (Sr):	1.75	Hydroxide(HO):	
Barium (Ba):	5.98	Acetic Acid (CH_3COO)	
Iron (Fe):	23.06	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	1.91	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.19	Bromine (Br):	
Aluminum (Al):	0.02	Silica (SiO_2):	11.66
Lithium (Li):	2.68	Calcium Carbonate ($CaCO_3$):	
Boron (B):	1.86	Phosphates (PO_4):	5.09
Silicon (Si):	5.45	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	1.15	17.90	0.98	3.15	0.00	0.00	3.21	16.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149.00	267.00	1.21	18.35	0.89	3.06	0.00	0.00	3.32	16.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168.00	483.00	1.30	18.91	0.82	2.97	0.00	0.00	3.43	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187.00	700.00	1.41	19.40	0.76	2.89	0.00	0.00	3.54	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206.00	917.00	1.51	19.81	0.73	2.84	0.00	0.00	3.65	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224.00	1133.00	1.63	20.14	0.71	2.80	0.00	0.00	3.75	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243.00	1350.00	1.75	20.39	0.70	2.79	0.00	0.00	3.85	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262.00	1567.00	1.88	20.58	0.70	2.80	0.00	0.00	3.94	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281.00	1783.00	2.00	20.71	0.72	2.82	0.00	0.00	4.02	16.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2000.00	2.13	20.81	0.74	2.85	0.00	0.00	4.09	16.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

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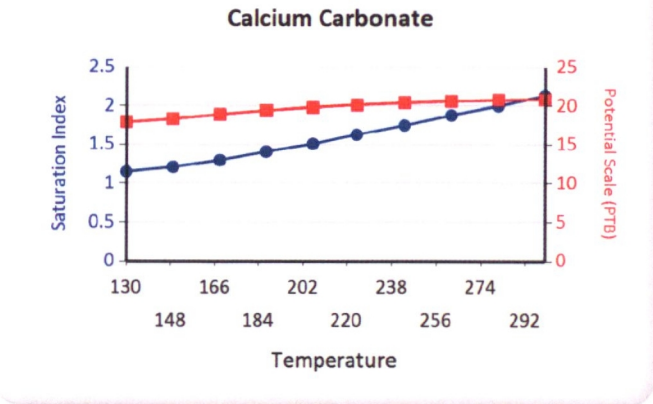
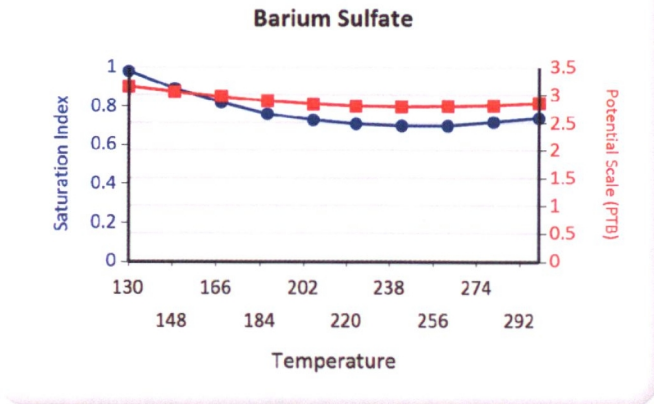
Water Analysis Report

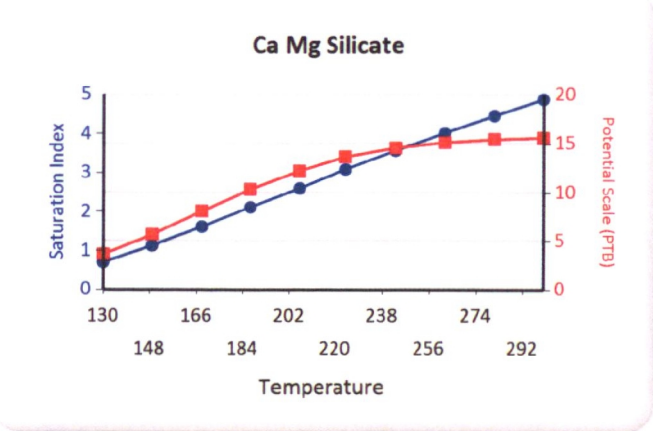
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82	1.27	0.00	0.00	2.34	10.44	0.70	3.61	10.73	17.86
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	1.27	0.00	0.00	3.12	13.82	1.13	5.65	11.23	17.89
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25	1.28	0.00	0.00	3.98	17.77	1.62	8.06	11.84	17.91
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	1.28	0.00	0.00	4.84	21.35	2.12	10.30	12.47	17.92
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.62	1.28	0.00	0.00	5.69	24.33	2.61	12.20	13.09	17.93
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78	1.28	0.00	0.00	6.51	26.59	3.09	13.62	13.72	17.93
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	2.92	1.28	0.00	0.00	7.31	28.17	3.57	14.55	14.33	17.93
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	3.05	1.28	0.00	0.00	8.07	29.19	4.02	15.10	14.93	17.94
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	3.16	1.28	0.00	0.00	8.80	29.77	4.46	15.41	15.50	17.94
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	1.28	0.00	0.00	9.50	30.05	4.88	15.57	16.05	17.94

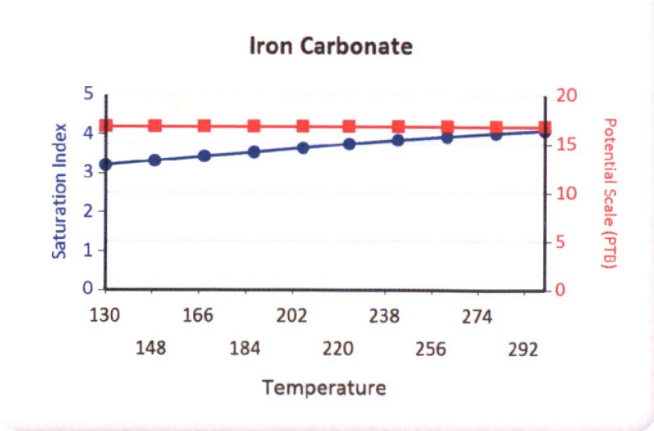
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

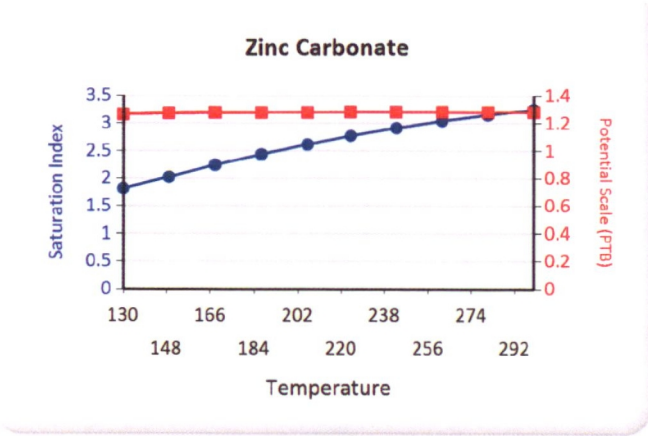
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

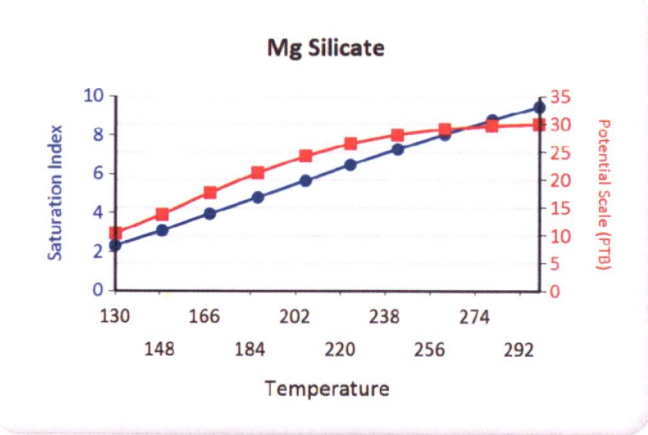


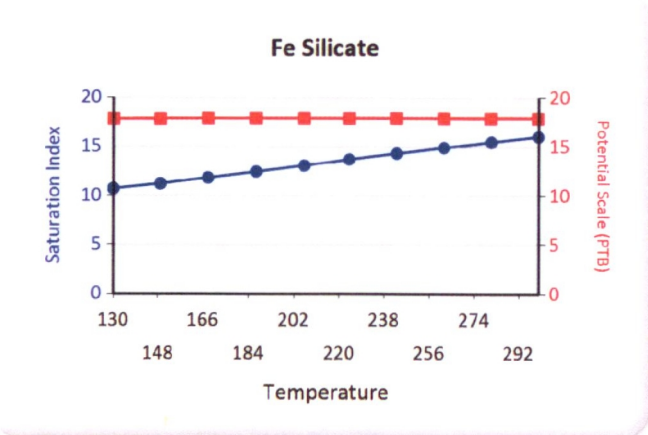







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
3.5
3
2.5
2
1.5
1
0.5
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
130
148
166
184
202
220
238
256
274
292


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
10
8
6
4
2
0
35
30
25
20
15
10
5
0
130
148
166
184
202
220
238
256
274
292


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

PETROGLYPH EXECUTIVE OFFICES

June 1, 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 04-01
- Ute Tribal 08-06
- Ute Tribal 16-16
- Ute Tribal 18-14
- Ute Tribal 28-11
- Ute Tribal 29-02 UT20236-07121
- Ute Tribal 29-08A
- Ute Tribal 29-10
- Ute Tribal 29-11
- Ute Tribal 29-15
- Ute Tribal 30-16
- Ute Tribal 33-16D3

U2 Entered
Date 6/14/17
Initial

Best Regards,

Nicole Colby
Manager, Land & Regulatory Compliance

	GREEN	BLUE	CBI
TAB		2	

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

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

EPA Witness: _____ Date: 3/27/17
Test conducted by: CHAD STEVENSON
Others present: _____

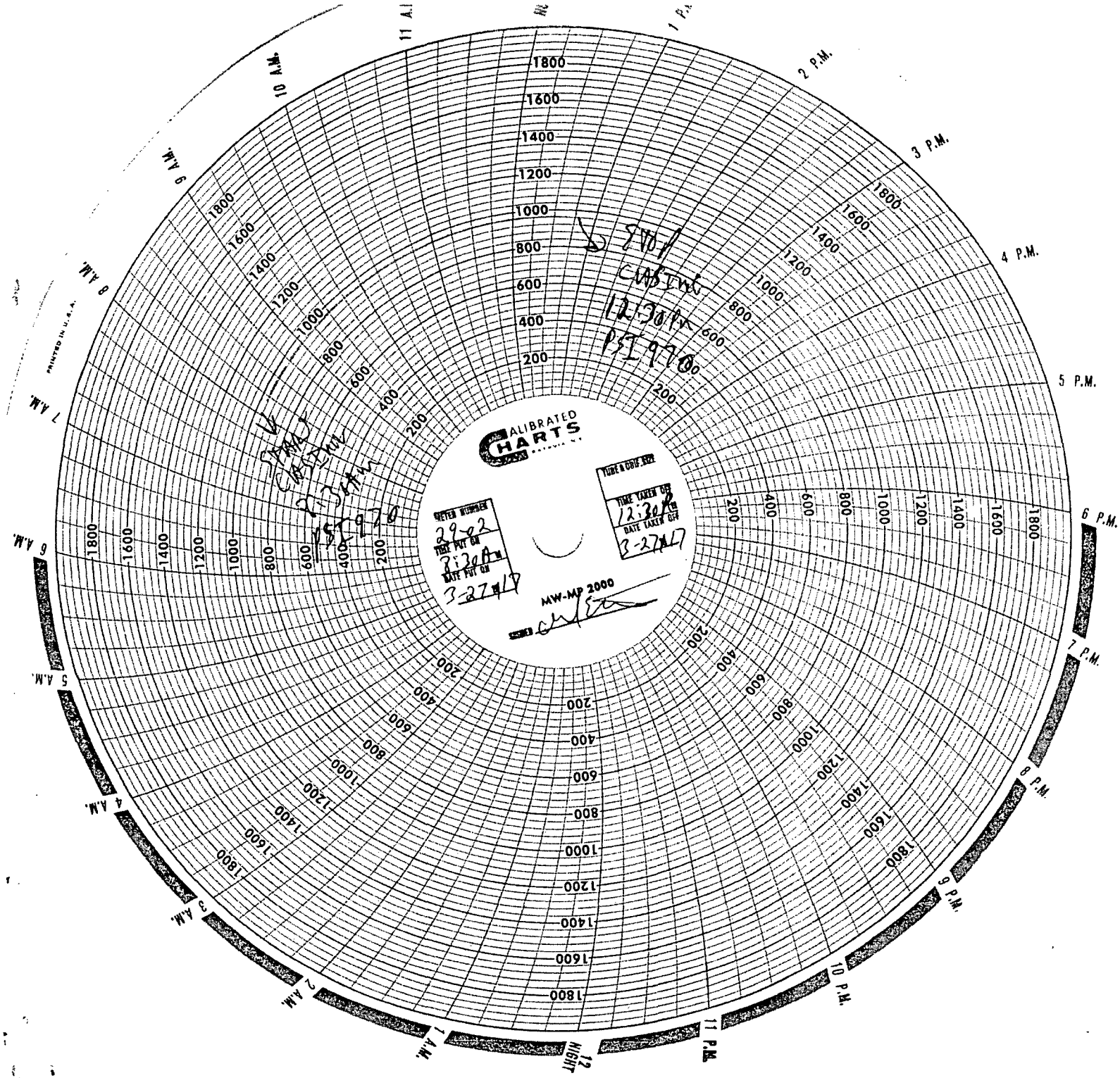
Well Name: 29-02 **Type:** ER SWD **Status:** AC TA UC
Field: ANTELOPE CREEK
Location: 29-02 **Sec:** ____ **T** ____ **N / S** **R** ____ **E / W** **County:** DUCHESNE **State:** UT
Operator: PETROGLYPH ENERGY
Last MIT: / / **Maximum Allowable Pressure:** _____ **PSIG**

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

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	295 psig	psig	psig
End of test pressure	295 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	970 psig	psig	psig
5 minutes	970 psig	psig	psig
10 minutes	970 psig	psig	psig
15 minutes	970 psig	psig	psig
20 minutes	970 psig	psig	psig
25 minutes	970 psig	psig	psig
30 minutes	970 psig	psig	psig
4 HOURS ~~minutes~~	970 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
2982
TEST PUT ON
12:30 PM
DATE PUT ON
3-27-97
TUBE & ORIFICE SIZE
TIME TAKEN OFF
12:30 PM
DATE TAKEN OFF
3-27-97
MW-MP 2000
PRINTED IN U.S.A.
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
1800
1600
1400
1200
1000
800
600
400
200
START CASING 12:30 PM PSI 970
STOP CASING 12:30 PM PSI 970

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

EPA

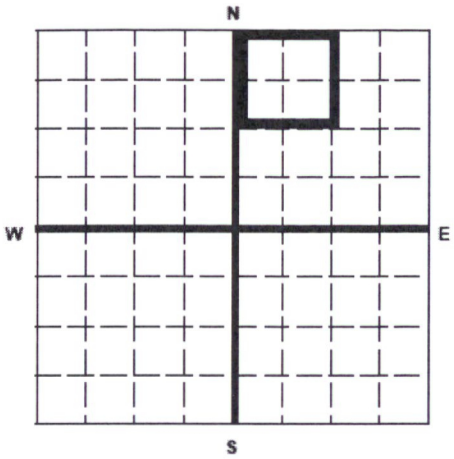
United States Environmental Protection Agency
Washington, DC 20460

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~~ 07121

Surface Location Description
___ 1/4 of ___ 1/4 of NW 1/4 of NE 1/4 of Section 29 Township 5S Range 3W

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

Surface Location 622 ft. frm (N/S) N Line of quarter section
and 2075 ft. from (E/W) E Line of quarter section.

U2 Entered
Date 3/2/16
Initial DJ

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 29-02

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	1036	1054	1		0	0
February	15	1149	1292	4		0	0
March	15	1164	1282	9		0	0
April	15	1028	1120	0		0	0
May	15	1092	1220	9		0	0
June	15	956	995	0		0	0
July	15	1133	1172	14		0	0
August	15	1013	1036	4		0	0
September	15	1143	1223	6		0	0
October	15	1088	1296	5		0	0
November	15	999	1043	0		0	0
December	15	916	952	0		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 29-02,DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327668**		

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):	1.0064
pH:	8.70
Calculated TDS (mg/L):	13148.50
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	40.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4567.27	Chloride (Cl):	5500.00
Potassium (K):	33.46	Sulfate (SO_4):	480.00
Magnesium (Mg):	32.26	Bicarbonate (HCO_3):	2440.00
Calcium (Ca):	51.73	Carbonate (CO_3):	
Strontium (Sr):	5.49	Acetic Acid (CH_3COO)	
Barium (Ba):	9.59	Propionic Acid (C_2H_5COO)	
Iron (Fe):	1.11	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.13	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.31	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.50	Silica (SiO_2):	25.65
Aluminum (Al):	0.01	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.47	Phosphates (PO_4):	12.57
Boron (B):	3.71	Oxygen (O_2):	
Silicon (Si):	11.99		

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	2.07	44.62	1.62	5.57	3.72	0.61	2.58	0.81	0.00	0.00	0.00	0.00	0.00	0.00	10.73	0.59
167.00	267.00	2.00	44.49	1.64	5.58	3.71	0.61	2.50	0.81	0.00	0.00	0.00	0.00	0.00	0.00	10.86	0.59
153.00	483.00	1.94	44.36	1.67	5.59	3.72	0.61	2.41	0.80	0.00	0.00	0.00	0.00	0.00	0.00	11.01	0.59
140.00	700.00	1.88	44.22	1.71	5.60	3.75	0.61	2.32	0.80	0.00	0.00	0.00	0.00	0.00	0.00	11.17	0.59
127.00	917.00	1.83	44.07	1.76	5.61	3.78	0.61	2.24	0.80	0.00	0.00	0.00	0.00	0.00	0.00	11.35	0.59
113.00	1133.00	1.78	43.92	1.82	5.63	3.83	0.61	2.15	0.80	0.00	0.00	0.00	0.00	0.00	0.00	11.55	0.59
100.00	1350.00	1.73	43.77	1.89	5.64	3.90	0.61	2.06	0.80	0.00	0.00	0.00	0.00	0.00	0.00	11.77	0.59
87.00	1567.00	1.69	43.62	1.98	5.65	3.98	0.61	1.97	0.80	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.59
73.00	1783.00	1.65	43.47	2.09	5.66	4.07	0.61	1.88	0.80	0.00	0.00	0.00	0.00	0.00	0.00	12.26	0.59
60.00	2000.00	1.62	43.33	2.21	5.68	4.19	0.61	1.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00	12.54	0.59

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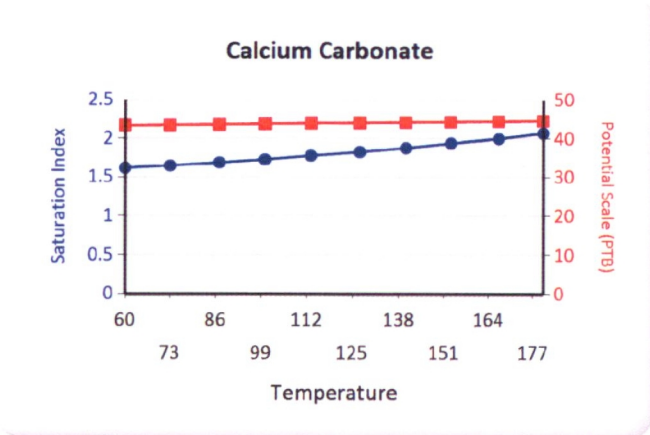
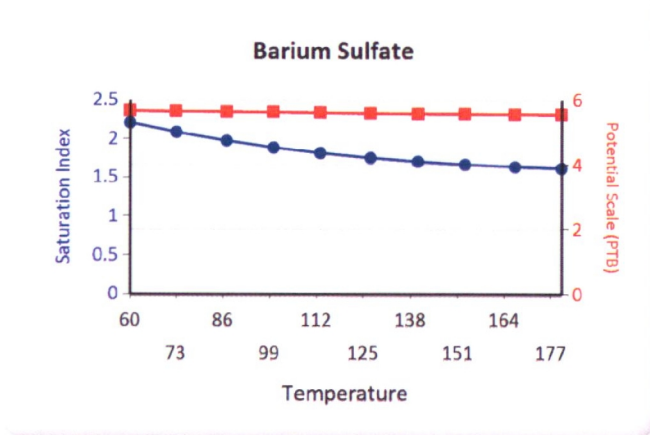
Water Analysis Report

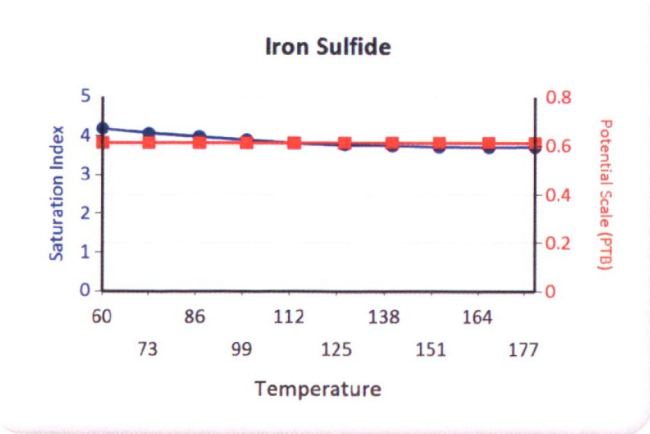
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.46	0.76	11.45	0.13	8.07	59.66	4.51	33.71	10.92	0.86
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33	0.76	11.68	0.13	7.49	57.59	4.18	33.16	10.51	0.86
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	0.75	11.94	0.13	6.94	55.53	3.86	32.48	10.13	0.86
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	0.75	12.23	0.13	6.38	53.13	3.55	31.56	9.76	0.86
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	0.75	12.54	0.13	5.81	50.40	3.24	30.38	9.39	0.86
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69	0.74	12.87	0.13	5.24	47.35	2.92	28.93	9.02	0.86
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51	0.74	13.23	0.13	4.67	43.96	2.61	27.19	8.66	0.86
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	0.72	13.63	0.13	4.08	40.22	2.30	25.16	8.31	0.86
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.70	14.05	0.13	3.49	36.08	1.99	22.85	7.96	0.86
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	0.66	14.52	0.13	2.90	31.46	1.67	20.22	7.61	0.86

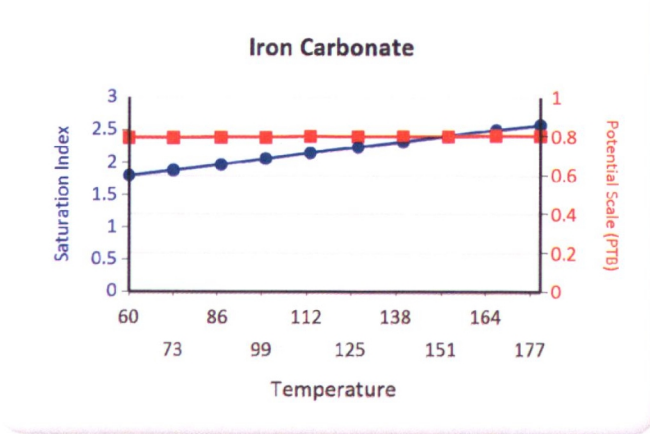
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

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









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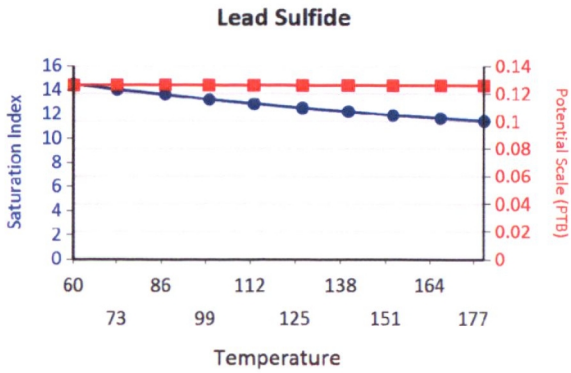
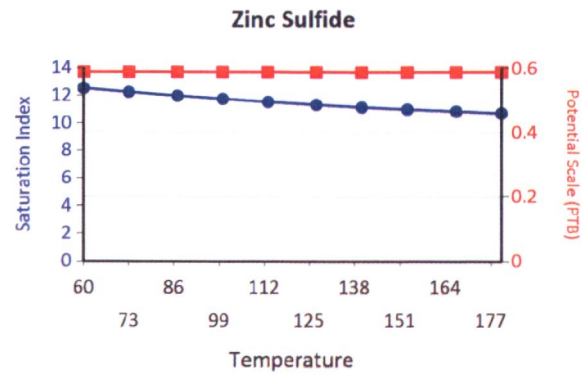
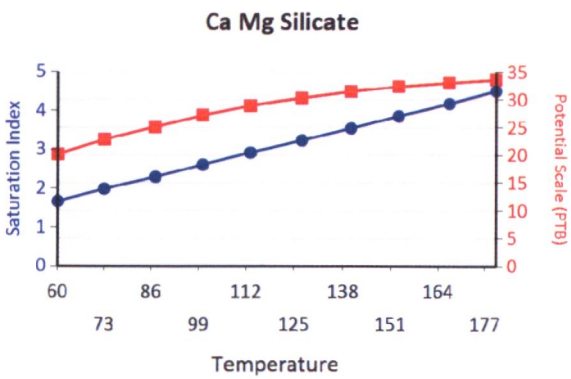
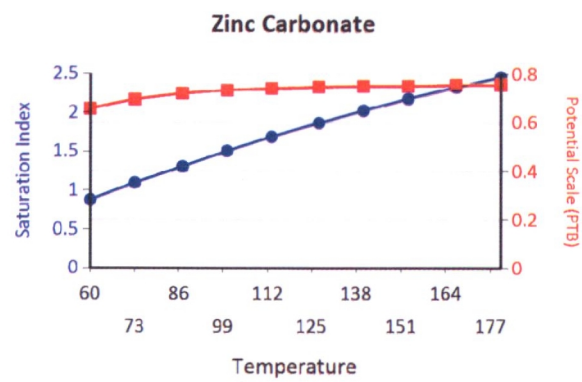
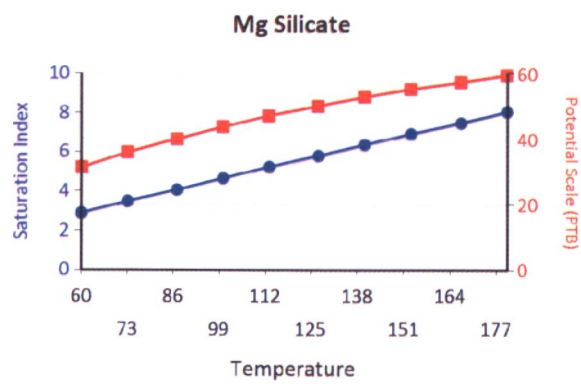
Water Analysis Report

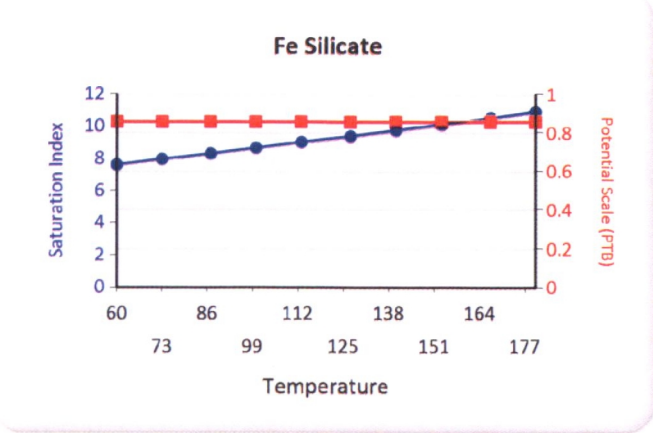











Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
6
4
2
0
1
0.8
0.6
0.4
0.2
0
60
86
112
138
164
73
99
125
151
177

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

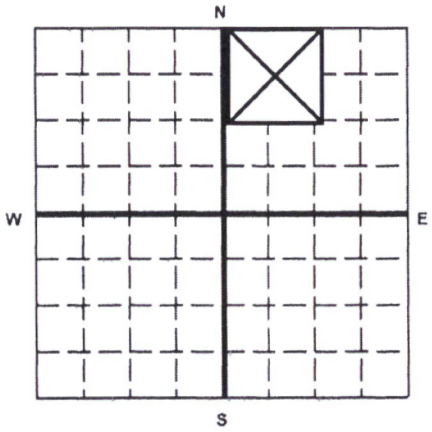
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-07121

Surface Location Description

___ 1/4 of ___ 1/4 of NW 1/4 of NE 1/4 of Section 29 Township 5S Range 3W

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

Surface Location 622 ft. frm (N/S) N Line of quarter section and 2075 ft. from (E/W) E 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 29-02

		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	572	579	0		0	0
February	14	565	568	0		0	0
March	14	559	565	0		0	0
April	14	872	1173	33		0	0
May	14	1161	1288	23		0	0
June	14	1155	1290	15		0	0
July	14	990	1263	19		0	0
August	14	1180	1281	8		0	0
September	14	1155	1172	17		0	0
October	14	1054	1244	15		0	0
November	14	956	1168	16		0	0
December	14	1081	1270	9		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		2/10/2015

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

U2 Entered
Date 3/31/15
Initial MW

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 29-02,DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-298192**		

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

Sample Specifics	
Test Date:	1/21/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.0026
pH:	8.00
Calculated TDS (mg/L):	8205.08
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	5.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2163.62	Chloride (Cl):	4000.00
Potassium (K):	36.02	Sulfate (SO_4):	153.00
Magnesium (Mg):	37.15	Bicarbonate (HCO_3):	1708.00
Calcium (Ca):	46.74	Carbonate (CO_3):	
Strontium (Sr):	4.46	Acetic Acid (CH_3COO)	
Barium (Ba):	6.33	Propionic Acid (C_2H_5COO)	
Iron (Fe):	26.55	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.19	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.42	Silica (SiO_2):	22.60

Notes:
B=4.5 Al=0 Li=1.22

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		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	1.16	33.37	1.73	3.70	4.00	4.54	2.81	19.26	0.00	0.00	0.00	0.00	0.00	0.00	9.95	0.10
88.00	157.00	1.13	32.59	1.65	3.68	3.89	4.54	2.81	19.26	0.00	0.00	0.00	0.00	0.00	0.00	9.74	0.10
97.00	300.00	1.16	33.06	1.57	3.67	3.84	4.54	2.86	19.26	0.00	0.00	0.00	0.00	0.00	0.00	9.58	0.10
106.00	443.00	1.18	33.55	1.50	3.65	3.80	4.54	2.92	19.27	0.00	0.00	0.00	0.00	0.00	0.00	9.44	0.10
115.00	585.00	1.21	34.04	1.44	3.63	3.76	4.54	2.97	19.27	0.00	0.00	0.00	0.00	0.00	0.00	9.31	0.10
124.00	728.00	1.24	34.54	1.38	3.61	3.74	4.54	3.02	19.28	0.00	0.00	0.00	0.00	0.00	0.00	9.18	0.10
133.00	871.00	1.27	35.04	1.33	3.59	3.72	4.54	3.07	19.28	0.00	0.00	0.00	0.00	0.00	0.00	9.07	0.10
142.00	1014.00	1.30	35.52	1.28	3.57	3.71	4.54	3.13	19.28	0.00	0.00	0.00	0.00	0.00	0.00	8.96	0.10
151.00	1157.00	1.34	35.99	1.24	3.55	3.70	4.54	3.18	19.29	0.00	0.00	0.00	0.00	0.00	0.00	8.86	0.10
160.00	1300.00	1.38	36.45	1.20	3.53	3.70	4.54	3.23	19.29	0.00	0.00	0.00	0.00	0.00	0.00	8.76	0.10

		Hemihydrate $CaSO_4 \sim 0.5H_2O$		Anhydrate $CaSO_4$		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.18	19.98
88.00	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	8.13	19.89
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.03	0.00	0.00	0.35	2.19	0.00	0.00	8.39	20.03
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.06	0.00	0.00	0.78	4.76	0.00	0.00	8.66	20.15
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.07	0.00	0.00	1.22	7.42	0.00	0.00	8.95	20.26
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	0.08	0.00	0.00	1.66	10.15	0.22	1.47	9.24	20.34
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.09	0.00	0.00	2.11	12.91	0.47	2.97	9.54	20.41
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.10	0.00	0.00	2.55	15.62	0.72	4.45	9.85	20.47
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.11	0.00	0.00	3.00	18.20	0.98	5.90	10.17	20.51
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.11	0.00	0.00	3.45	20.54	1.24	7.28	10.49	20.54

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Vernal, UT 84078

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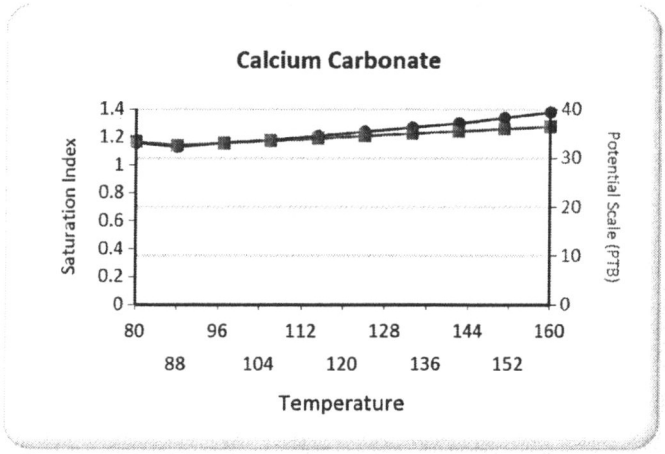
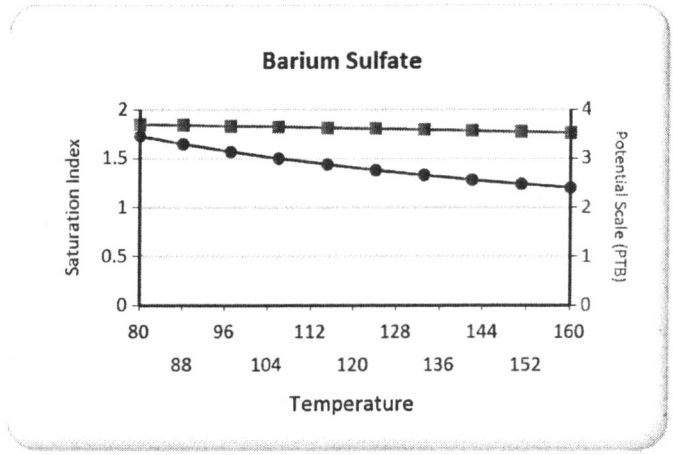
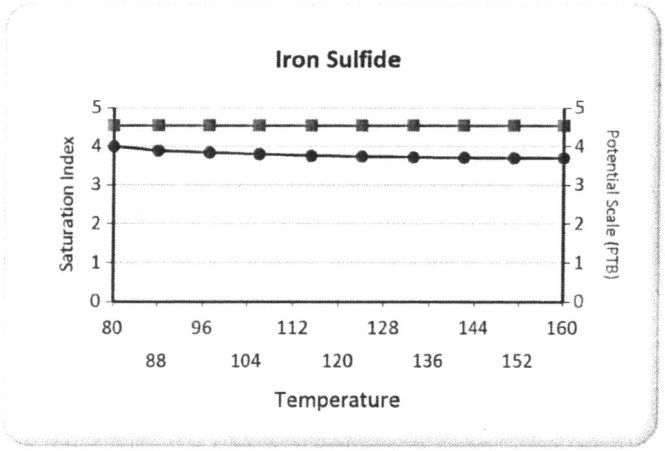
Water Analysis Report

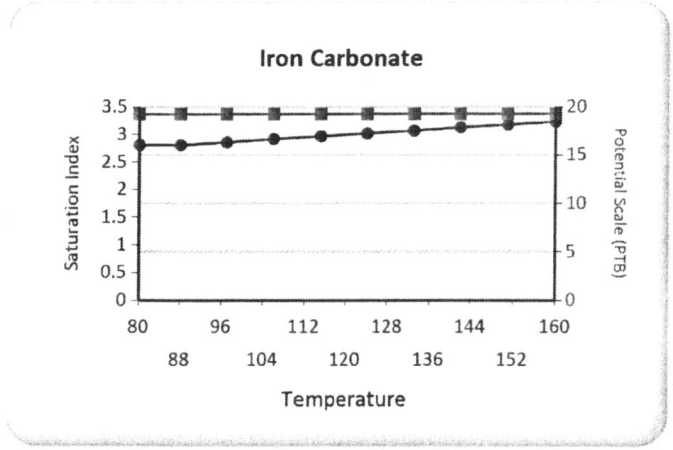
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Fe Silicate

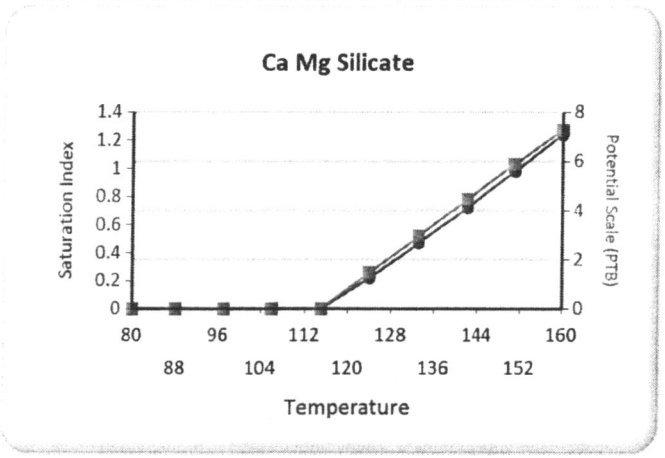
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

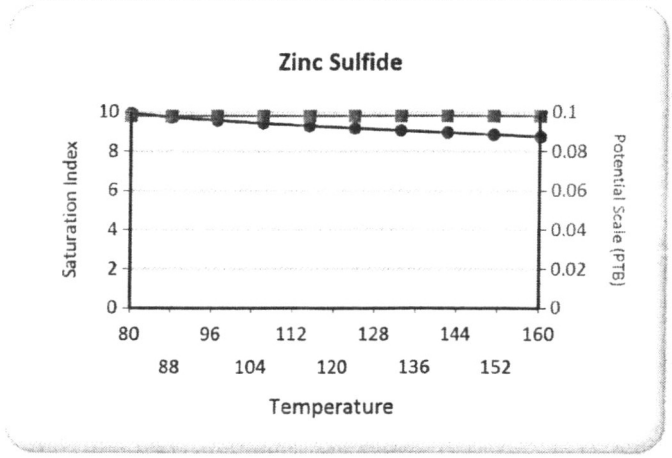


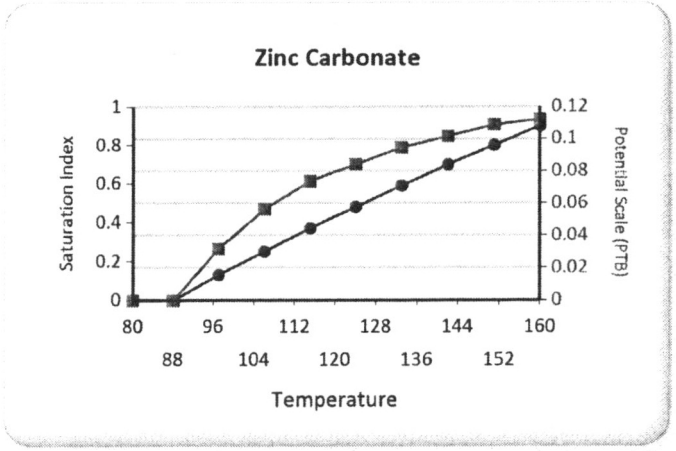


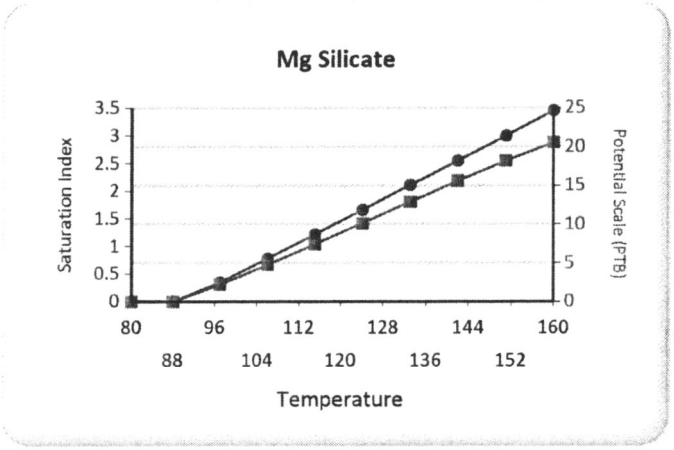


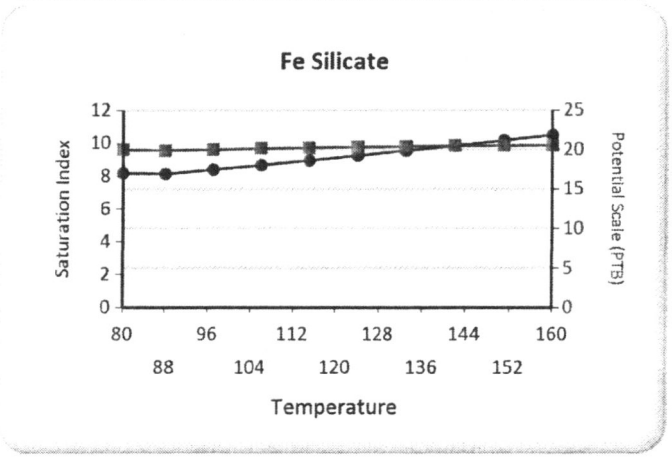







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
1
0.8
0.6
0.4
0.2
0
0.12
0.1
0.08
0.06
0.04
0.02
0
80
88
96
104
112
120
128
136
144
152
160


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
3.5
3
2.5
2
1.5
1
0.5
0
25
20
15
10
5
0
80
88
96
104
112
120
128
136
144
152
160


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
6
4
2
0
25
20
15
10
5
0
80
88
96
104
112
120
128
136
144
152
160

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

EPA

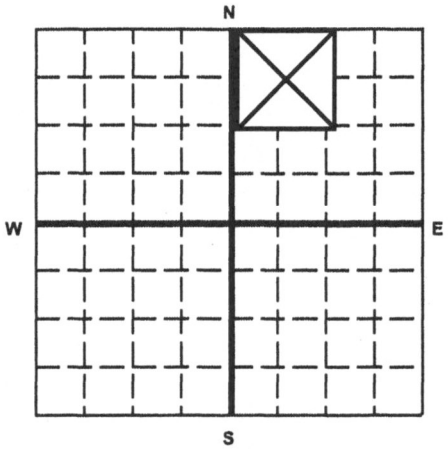
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-07121

Surface Location Description
___ 1/4 of ___ 1/4 of NW 1/4 of NE 1/4 of Section 29 Township 5S Range 3W

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

Surface Location 622 ft. frm (N/S) N Line of quarter section
and 2075 ft. from (E/W) E 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 29-02

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	722	737	0		0	0
February	13	699	708	0		0	0
March	13	681	690	0		0	0
April	13	664	675	0		0	0
May	13	645	654	0		0	0
June	13	633	639	0		0	0
July	13	621	627	0		0	0
August	13	609	615	0		0	0
September	13	598	606	0		0	0
October	13	594	598	0		0	0
November	13	569	594	0		0	0
December	13	581	586	0		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		2/11/2014

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

UIC Entered
Date 3/21/14
Initial

TAB GREEN BLUE ODI
2

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

multi-chem®
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 29-02 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-263029**

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

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

Sample Specifics	
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	0.999
pH:	8.70
Calculated TDS (mg/L):	2774.53
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H_2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	890.64	Chloride (Cl):	1000.00
Potassium (K):	22.00	Sulfate (SO_4):	16.00
Magnesium (Mg):	13.00	Bicarbonate (HCO_3):	780.80
Calcium (Ca):	10.00	Carbonate (CO_3):	
Strontium (Sr):	1.20	Acetic Acid (CH_3COO)	
Barium (Ba):	1.40	Propionic Acid (C_2H_5COO)	
Iron (Fe):	11.00	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.41	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.26	Silica (SiO_2):	27.82

Notes:
B=.7 Al=.01 Li=.15

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.90	7.14	0.66	0.64	0.00	0.00	2.66	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	0.91	7.17	0.52	0.57	0.00	0.00	2.73	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	0.93	7.24	0.39	0.48	0.00	0.00	2.81	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	0.95	7.33	0.28	0.38	0.00	0.00	2.88	7.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	0.98	7.42	0.18	0.28	0.00	0.00	2.95	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.02	7.52	0.10	0.17	0.00	0.00	3.02	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.05	7.62	0.04	0.07	0.00	0.00	3.08	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.09	7.73	0.00	0.00	0.00	0.00	3.15	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.14	7.83	0.00	0.00	0.00	0.00	3.21	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.18	7.92	0.00	0.00	0.00	0.00	3.27	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Vernal, UT 84078

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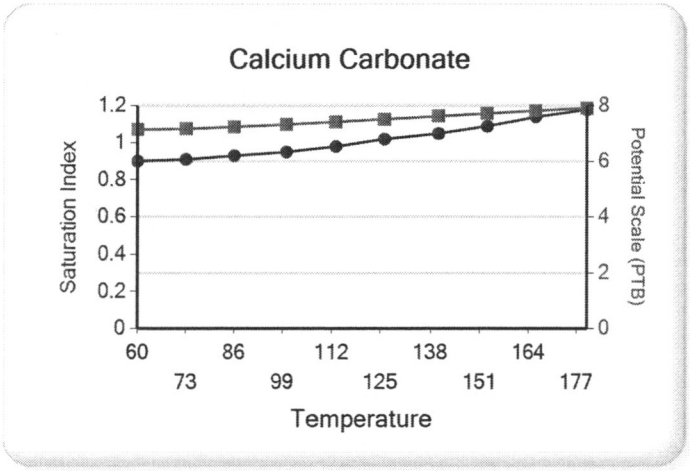
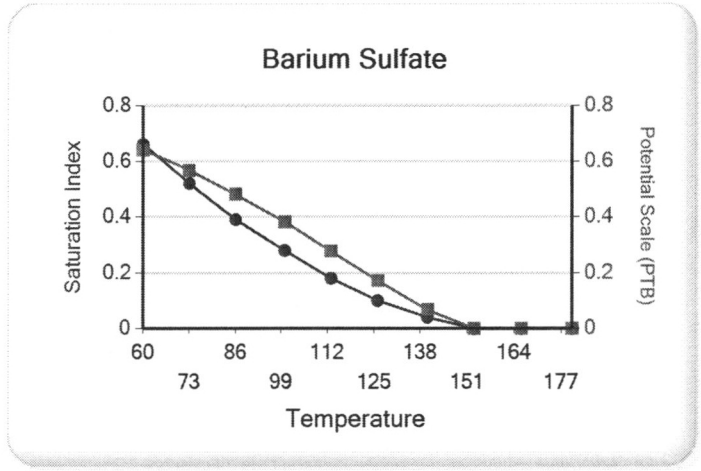
Water Analysis Report

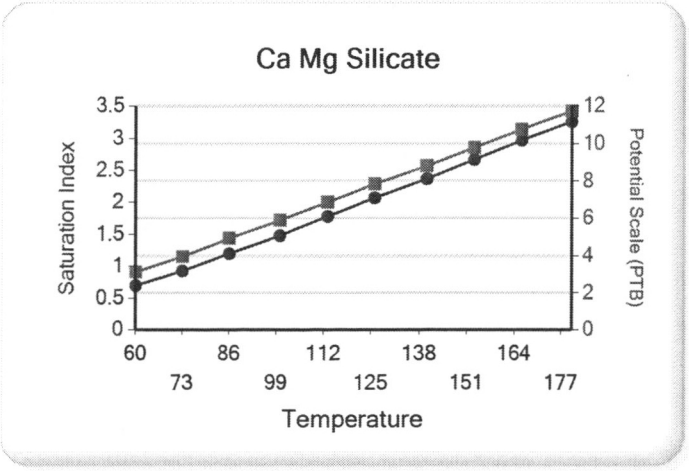
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.18	0.00	0.00	2.13	7.47	0.70	3.13	10.79	8.54
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.21	0.00	0.00	2.61	8.70	0.93	3.96	11.01	8.55
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.24	0.00	0.00	3.13	10.13	1.20	4.92	11.29	8.55
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.25	0.00	0.00	3.67	11.57	1.48	5.89	11.59	8.55
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.26	0.00	0.00	4.21	13.04	1.78	6.86	11.92	8.55
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37	0.26	0.00	0.00	4.76	14.55	2.07	7.84	12.26	8.55
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.27	0.00	0.00	5.31	16.10	2.37	8.81	12.61	8.55
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.66	0.27	0.00	0.00	5.85	17.69	2.67	9.79	12.96	8.55
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	0.27	0.00	0.00	6.38	19.26	2.97	10.77	13.32	8.56
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.91	0.27	0.00	0.00	6.90	20.76	3.26	11.74	13.66	8.56

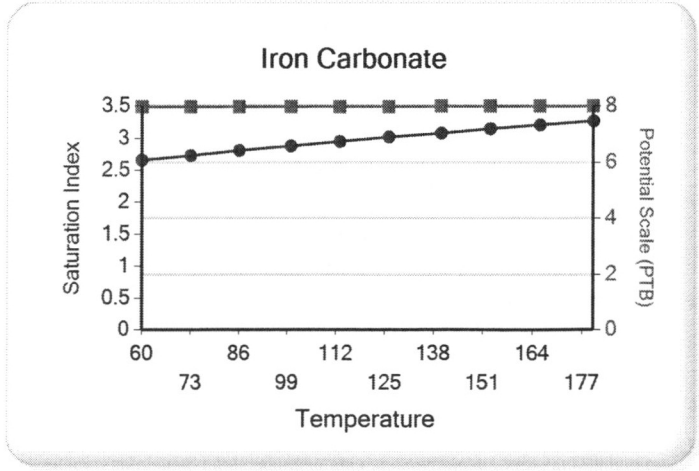
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

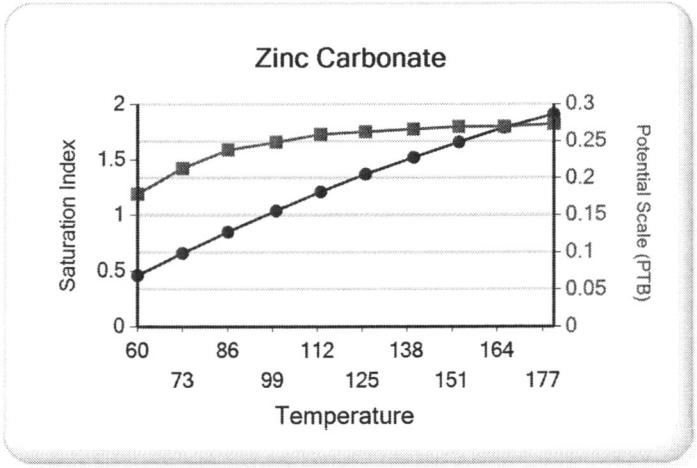
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

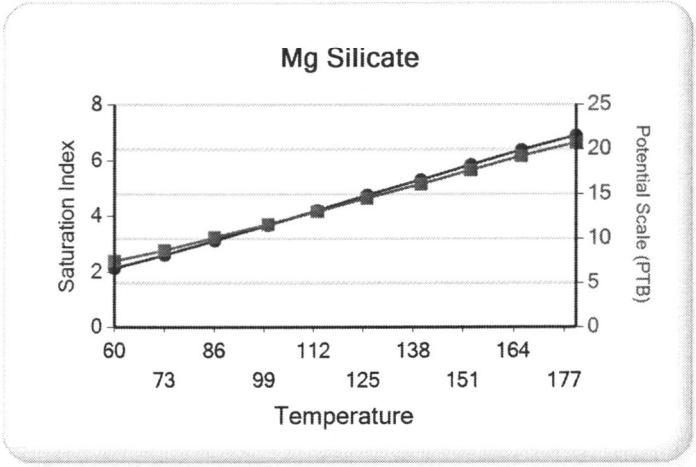


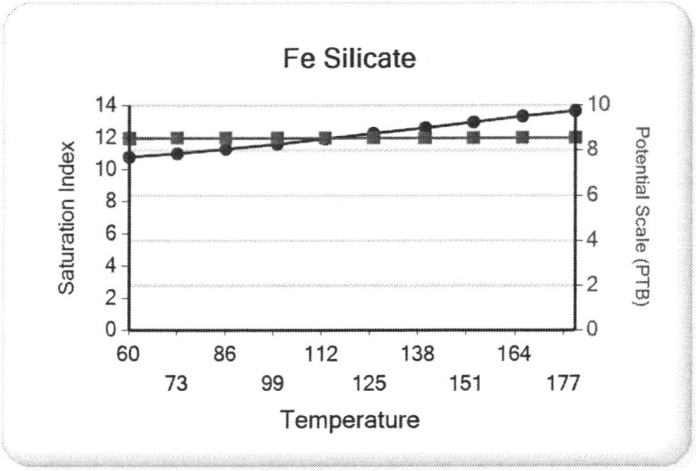







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
0
0.5
1
1.5
2
0
0.05
0.1
0.15
0.2
0.25
0.3
60
73
86
99
112
125
138
151
164
177


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


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

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

JUL 23 2007

Ref: 8P-W-GW

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: UT20736-07121
Ute Tribal No. 29-02
Duchesne County, Utah

Dear Mr. Wall:

Thank you for submitting information pertaining to the newly constructed or converted Ute Tribal No. 29-02 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. 29-02 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. 29-02 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. 29-02 shall not exceed **1325** 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 UT20736-07121 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) 312-6211.

Sincerely,

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

cc:

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

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

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

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

Shawn Chapoose, Director
Land Use Department
Ute Indian Tribe

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

Fluid Minerals Engineering Office
BLM - Vernal Office

Lynn Becker, Director
Energy and Minerals Department
Ute Indian Tribe

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

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

Chester Mills, Superintendent
BIA - Uintah & Ouray Indian Agency

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

DENVER CO 802

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: P-W-GW UC JUL 23 2007 B

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

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X
☐ Agent
☐ Addressee

B. Received by (*Printed Name*) | C. Date of Delivery

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

ROOSEVELT UT 84066 JUL 25 2007 USPS

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

4. Restricted Delivery? (*Extra Fee*) ☐ Yes

2. Article Number
(*Transfer from service label*) 7005 1820 0005 4856 2913

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7005 1820 0005 4856 2913

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City, State, ZIP+4

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

PS Form 3800, June 2002 See Reverse for Instructions