Inspection Report For Well: UT20736 - 04551

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

This form was printed on 9/24/2013

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

Others: Ajayi, Christopher — Time: 10:25 (am) / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevinson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 16-04		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 2/26/2001		
Oil Field:	Antelope Creek (Duchesne)		
Location:	NWNW S16 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1900 /
Last MIT:	Pass 3/3/2012	***Annulus Pressure From Last MIT:***	1050

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: **(Select One)**

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

ICIS Entered
Date 12/19/13
Initials DB

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 1816 / L: ____ psig Gauge Range: Scale psig	Gauge Owner:	[ ] EPA [x] Operator
Annulus Gauge:	[x] Yes [ ] No	Pressure: 0 psig Gauge Range: opened psig	Gauge Owner:	[x] EPA [ ] Operator
Bradenhead Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator
Pump Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator

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

U2 Entered
Date 12/17/13
Initial JR

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

TAB	GREEN	BLUE	CBI
		1	

Inspection Report For Well: UT20736 - 04551 (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

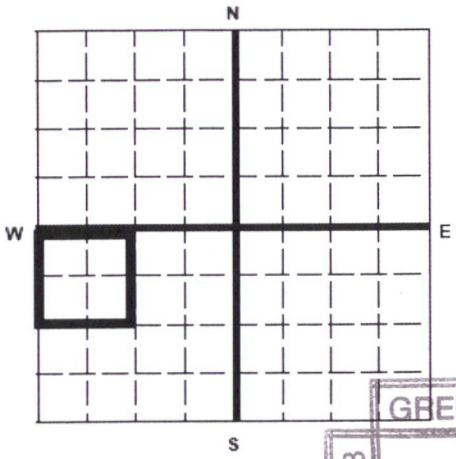
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-04551

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

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

Surface Location 788 ft. frm (N/S) N Line of quarter section
and 533 ft. from (E/W) W Line of quarter section.

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

U2 Entered
Date 4/3/17
Initial DB

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-04

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	1817	1830	766		0	0
February	16	1838	1841	709		0	0
March	16	1837	1851	743		0	0
April	16	1848	1855	759		0	0
May	16	1825	1835	745		0	0
June	16	1840	1868	585		0	0
July	16	1828	1847	507		0	0
August	16	1767	1846	611		0	0
September	16	1821	1835	552		0	0
October	16	1836	1841	586		0	0
November	16	1805	1834	563		0	0
December	16	1828	1857	494		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

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 16-04 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345362**		

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

Sample Specifics

Test Date:	1/25/2017
System Temperature 1 (°F):	300
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	130
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0057
pH:	8.40
Calculated TDS (mg/L):	12163.92
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):	4166.44	Chloride (Cl):	5000.00
Potassium (K):	34.51	Sulfate (SO_4):	2.00
Magnesium (Mg):	12.18	Bicarbonate (HCO_3):	2806.00
Calcium (Ca):	41.83	Carbonate (CO_3):	
Strontium (Sr):	5.37	Hydroxide(HO):	
Barium (Ba):	30.44	Acetic Acid (CH_3COO)	
Iron (Fe):	34.41	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	1.52	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.36	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.28	Bromine (Br):	
Aluminum (Al):	0.93	Silica (SiO_2):	28.58
Lithium (Li):	3.19	Calcium Carbonate ($CaCO_3$):	
Boron (B):	5.11	Phosphates (PO_4):	5.64
Silicon (Si):	13.36	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	1.67	35.21	0.01	0.03	0.00	0.00	3.75	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
149.00	267.00	1.72	35.38	0.00	0.00	0.00	0.00	3.84	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
168.00	483.00	1.79	35.58	0.00	0.00	0.00	0.00	3.93	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
187.00	700.00	1.87	35.77	0.00	0.00	0.00	0.00	4.01	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
206.00	917.00	1.95	35.94	0.00	0.00	0.00	0.00	4.10	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
224.00	1133.00	2.05	36.09	0.00	0.00	0.00	0.00	4.18	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
243.00	1350.00	2.15	36.21	0.00	0.00	0.00	0.00	4.25	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
262.00	1567.00	2.26	36.31	0.00	0.00	0.00	0.00	4.32	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
281.00	1783.00	2.38	36.39	0.00	0.00	0.00	0.00	4.38	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2000.00	2.50	36.45	0.00	0.00	0.00	0.00	4.44	25.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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1553 East Highway 40
Vernal, UT 84078

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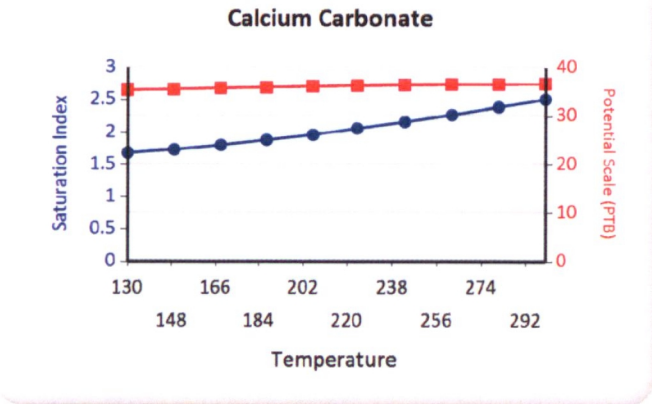
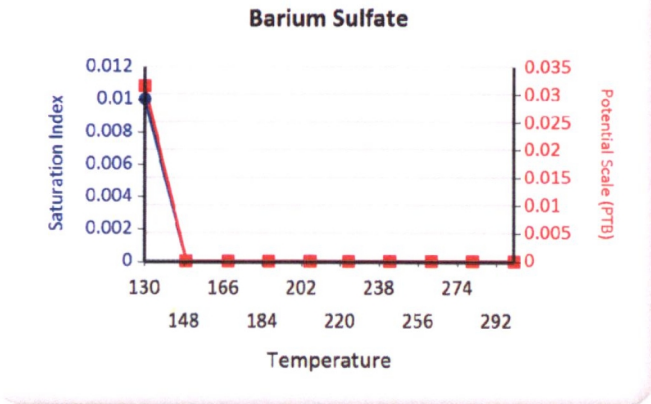
Water Analysis Report

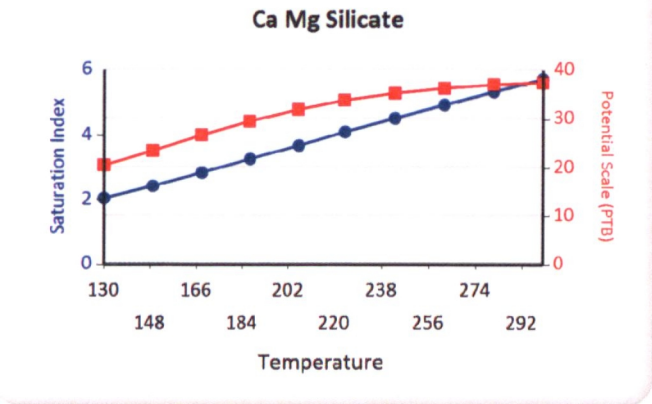
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	1.94	1.01	0.00	0.00	3.43	19.67	2.03	20.34	12.92	26.76
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.14	1.01	0.00	0.00	4.15	21.44	2.41	23.30	13.35	26.76
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.32	1.02	0.00	0.00	4.90	22.70	2.83	26.49	13.83	26.76
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49	1.02	0.00	0.00	5.64	23.44	3.25	29.33	14.33	26.76
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	1.02	0.00	0.00	6.38	23.86	3.66	31.73	14.84	26.76
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78	1.02	0.00	0.00	7.11	24.08	4.08	33.65	15.36	26.76
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	2.90	1.02	0.00	0.00	7.82	24.20	4.50	35.10	15.88	26.76
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	3.01	1.02	0.00	0.00	8.52	24.26	4.91	36.13	16.39	26.76
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	3.10	1.02	0.00	0.00	9.19	24.30	5.31	36.85	16.90	26.76
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	3.18	1.02	0.00	0.00	9.84	24.31	5.70	37.33	17.40	26.76

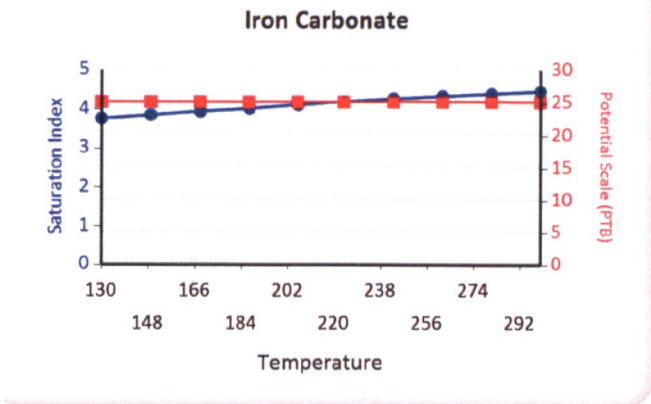
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

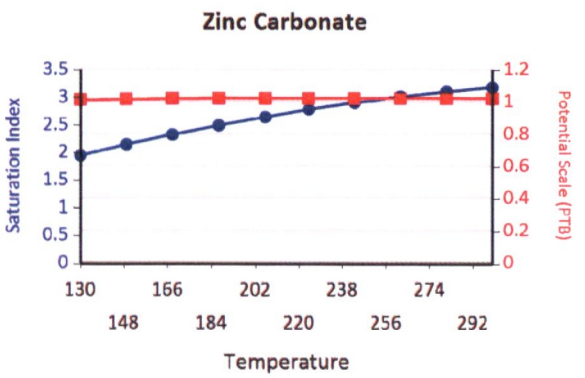
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

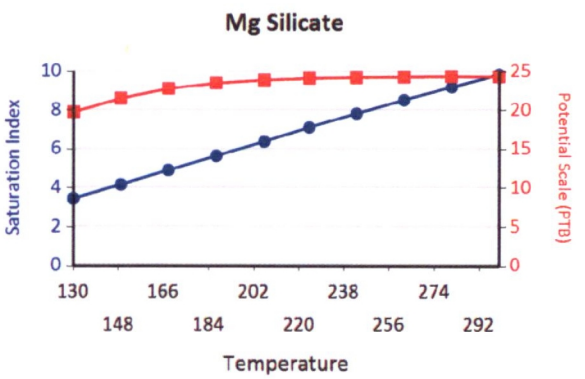


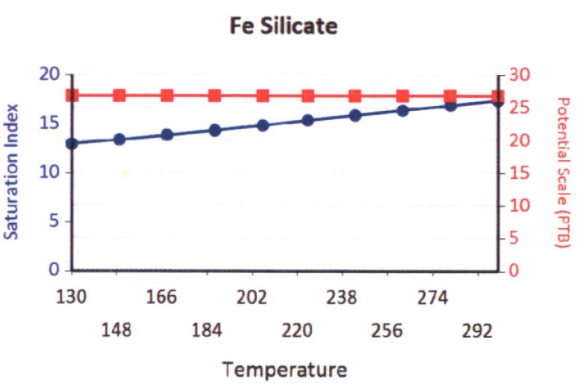







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
130 166 202 238 274
148 184 220 256 292


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


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

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 / 2 / 17
Test conducted by: CHAD STEVENSON
Others present: _____

Well Name: 16-04 UT20736-04551 Type: ER SWD **Status: AC TA UC**
Field: ANTELOPE CREEK
Location: 16-04 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ___ / ___ / ___ **Maximum Allowable Pressure:** _____ **PSIG**

	GREEN	BLUE	CBI
TAB		2	

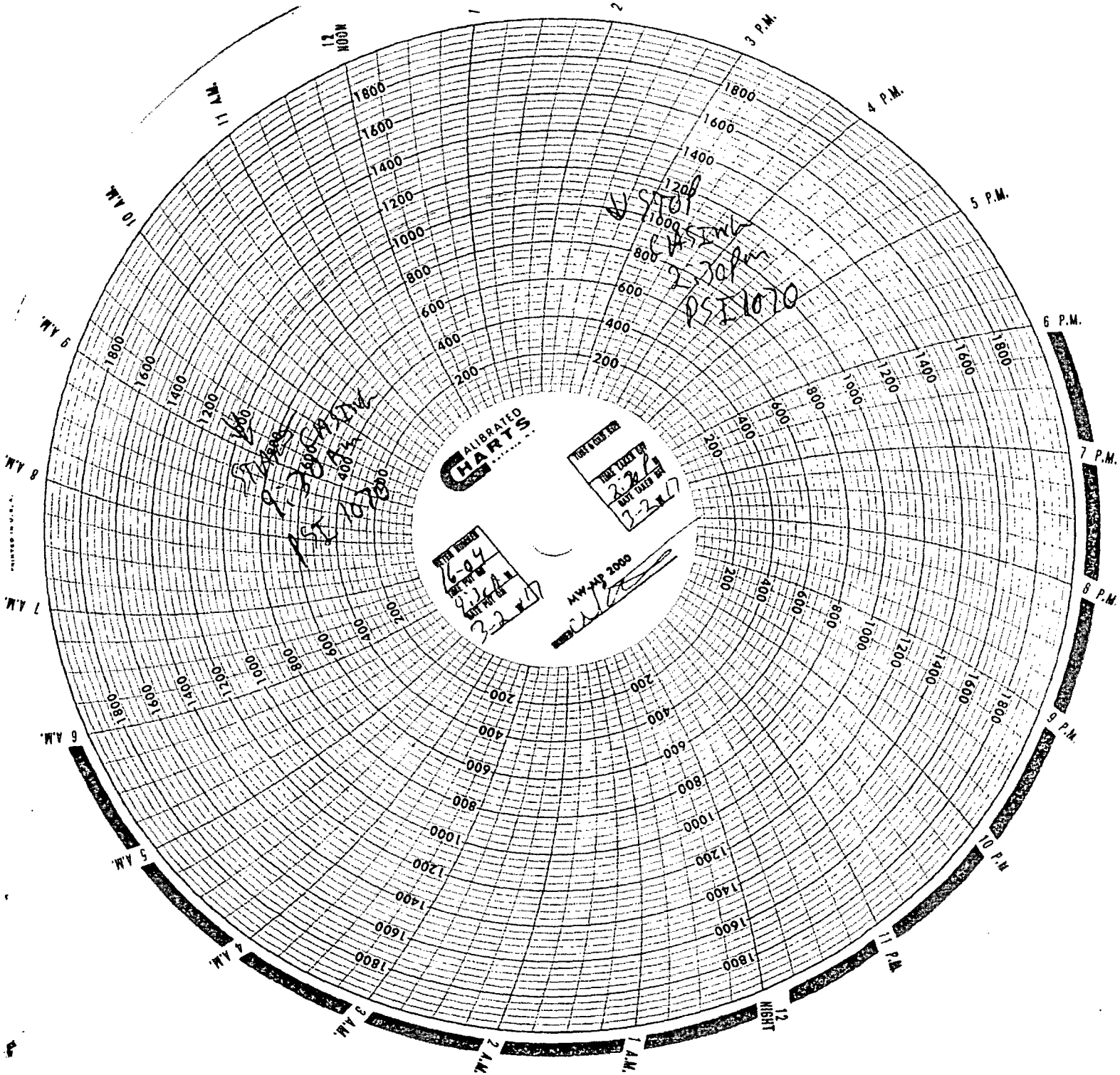
Regularly scheduled test? [X] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [ ] Yes [ ] No

U2 Entered
Date 3/20/17
Initial DS

Well injecting during test? If Yes, rate: 25 **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1862 psig	psig	psig
End of test pressure	1862 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1070 psig	psig	psig
5 minutes	1070 psig	psig	psig
10 minutes	1070 psig	psig	psig
15 minutes	1070 psig	psig	psig
20 minutes	1070 psig	psig	psig
25 minutes	1070 psig	psig	psig
30 minutes	1070 psig	psig	psig
5 HOURS minutes	1070 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.**



12 NOON
1
2
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.
ALIBRATED CHARTS
MW-MP 2000
STOP CASING 2:30 pm PSI 1070
STOP CASING 9:30 AM PSI 1070

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

EPA

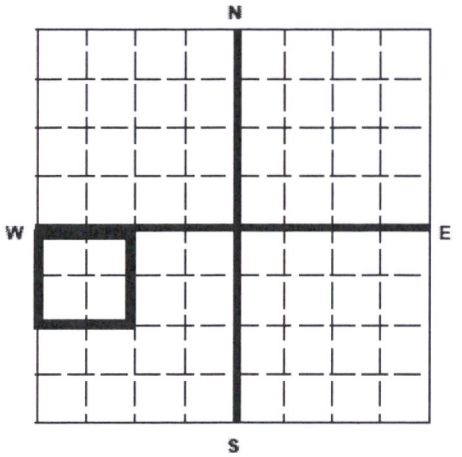
United States Environmental Protection Agency
Washington, DC 20460

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~~ ~~04451~~ 04551

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

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

Surface Location 788 ft. frm (N/S) N Line of quarter section
and 533 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

U2 Entered
Date 3/6/16
Initial DB

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-04

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	15	1685	1788	1150		0	0
February	15	1831	1857	1270		0	0
March	15	1827	1858	1276		0	0
April	15	1787	1828	1044		0	0
May	15	1809	1832	1127		0	0
June	15	1831	1865	1142		0	0
July	15	1811	1821	1041		0	0
August	15	1818	1835	1062		0	0
September	15	1815	1832	930		0	0
October	15	1814	1819	929		0	0
November	15	1815	1846	883		0	0
December	15	1821	1831	868		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

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

TAB	GREEN	BLUE	OBI
		2	

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

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A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 16-04 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327643**		

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):	1.0065
pH:	8.30
Calculated TDS (mg/L):	13326.63
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):	4695.17	Chloride (Cl):	6000.00
Potassium (K):	31.66	Sulfate (SO_4):	20.00
Magnesium (Mg):	14.85	Bicarbonate (HCO_3):	2440.00
Calcium (Ca):	45.01	Carbonate (CO_3):	
Strontium (Sr):	6.20	Acetic Acid (CH_3COO)	
Barium (Ba):	32.14	Propionic Acid (C_2H_5COO)	
Iron (Fe):	12.79	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.04	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.56	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.05	Silica (SiO_2):	26.16
Aluminum (Al):	0.02	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.06	Phosphates (PO_4):	5.79
Boron (B):	4.75	Oxygen (O_2):	
Silicon (Si):	12.23		

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	1.76	38.07	0.81	10.87	0.00	0.00	3.41	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	1.67	37.65	0.83	11.09	0.00	0.00	3.31	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	1.59	37.28	0.87	11.37	0.00	0.00	3.21	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	1.53	36.86	0.91	11.70	0.00	0.00	3.12	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	1.46	36.40	0.97	12.09	0.00	0.00	3.02	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	1.40	35.90	1.04	12.53	0.00	0.00	2.93	9.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	1.35	35.37	1.12	13.00	0.00	0.00	2.83	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	1.30	34.83	1.22	13.51	0.00	0.00	2.74	9.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	1.26	34.29	1.33	14.03	0.00	0.00	2.65	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	1.22	33.75	1.46	14.55	0.00	0.00	2.56	9.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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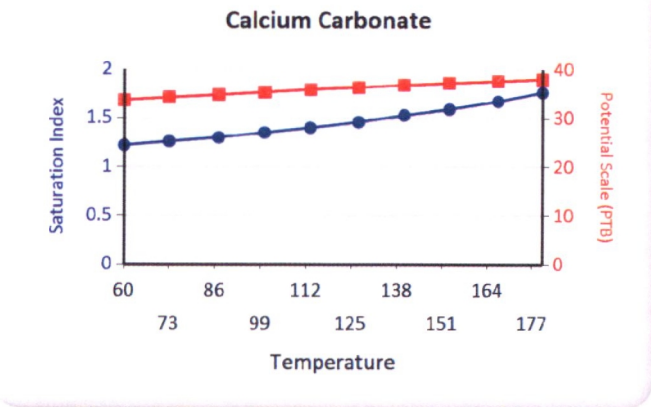
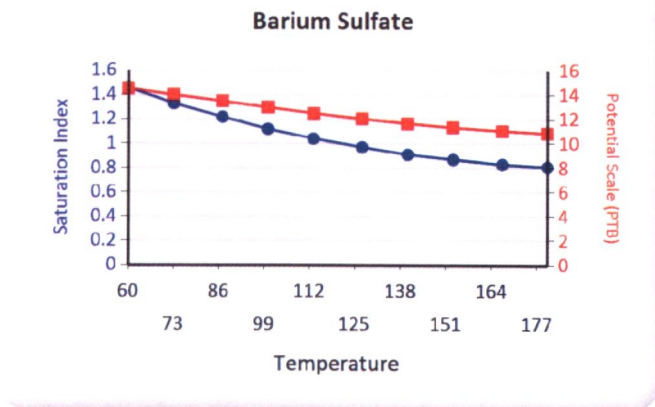
Water Analysis Report

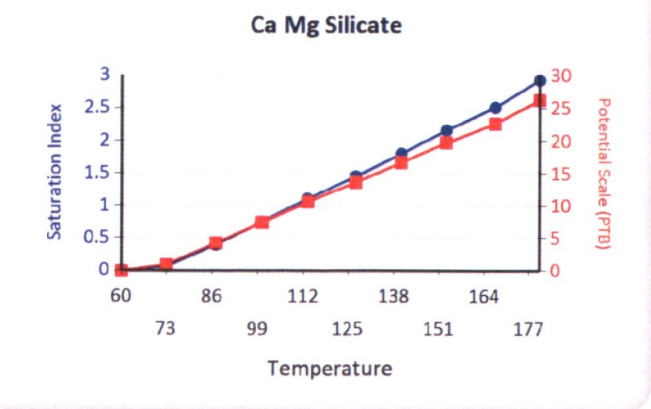
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.43	1.37	0.00	0.00	5.22	27.28	2.93	26.31	12.35	9.95
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	1.36	0.00	0.00	4.51	25.41	2.51	22.71	11.81	9.94
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.12	1.36	0.00	0.00	3.90	23.32	2.16	19.79	11.38	9.94
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	1.36	0.00	0.00	3.28	20.68	1.80	16.76	10.95	9.94
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	1.35	0.00	0.00	2.65	17.54	1.45	13.68	10.53	9.94
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.34	0.00	0.00	2.03	14.00	1.10	10.57	10.11	9.94
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41	1.32	0.00	0.00	1.40	10.11	0.75	7.43	9.71	9.94
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	1.29	0.00	0.00	0.77	5.90	0.40	4.24	9.31	9.93
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.23	0.00	0.00	0.13	1.33	0.06	0.96	8.92	9.92
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	1.13	0.00	0.00	0.00	0.00	0.00	0.00	8.54	9.92

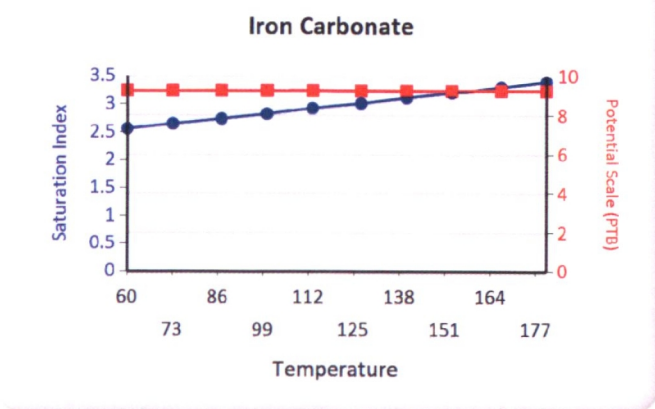
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

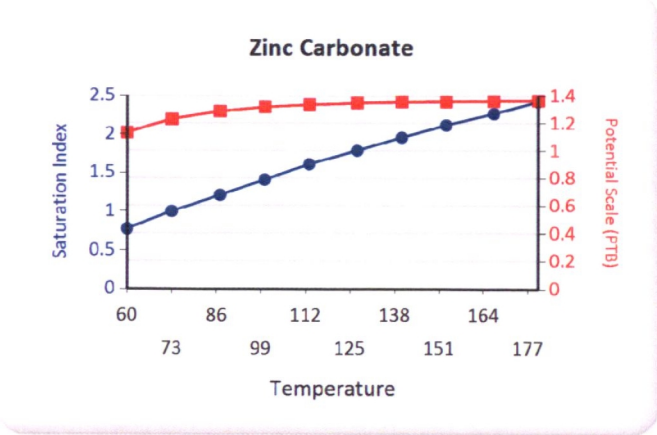
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Fe Silicate

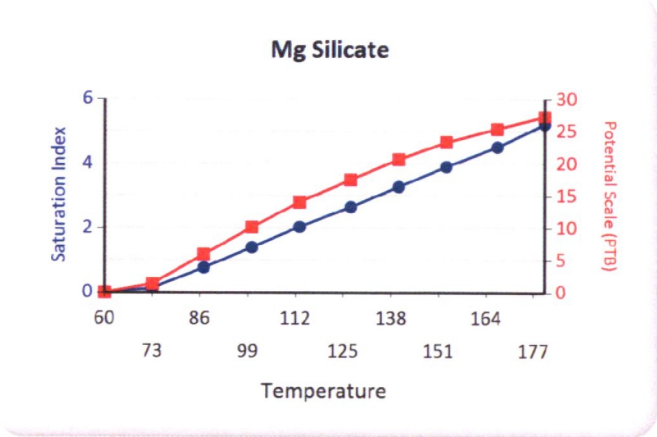


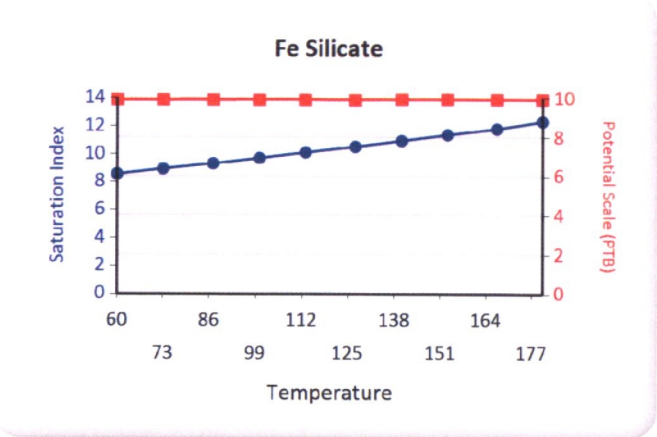







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
2.5
2
1.5
1
0.5
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
60
86
112
138
164
73
99
125
151
177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
6
4
2
0
30
25
20
15
10
5
0
60
86
112
138
164
73
99
125
151
177


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

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

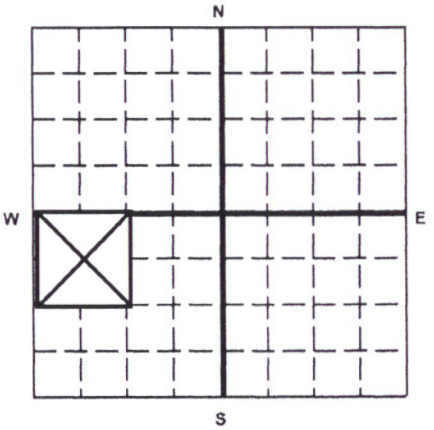
EPA

United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

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

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04551

Surface Location Description

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

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

Surface Location 788 ft. frm (N/S) N Line of quarter section and 533 ft. from (E/W) W Line of quarter section.

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

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

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-04

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1833	1856	1266		0	0
February	14	1849	1852	1178		0	0
March	14	1821	1825	1301		0	0
April	14	1850	1859	1441		0	0
May	14	1849	1848	1513		0	0
June	14	1828	1853	1469		0	0
July	14	1763	1820	1098		0	0
August	14	1838	1870	1123		0	0
September	14	1811	1860	859		0	24
October	14	1786	1758	1095		0	0
November	14	1806	1866	1171		0	0
December	14	1851	1860	1379		0	0

Certification

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

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

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

U2 Entered
Date 3/20/15
Initial GW

	GREEN	BLUE	CBI
TAB		2	

Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
2014 EPA Annual Injection Report

Well Name: Ute Tribal 16-04

UIC Permit Number: UT2736-04551

API Number: 43-013-31789

Cause of Pressure and Mitigation Measures:
This well reported a small amount of pressure during the month of September. The pressure was most likely due to formation temperature. It was relieved and did not return.

PETROGLYPH

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 16-04 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297516**		

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

Sample Specifics	
Test Date:	1/14/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	0.9993
pH:	7.40
Calculated TDS (mg/L):	3331.66
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	24.00
H_2S in Gas (%):	
H2S in Water (mg/L):	5.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	274.44	Chloride (Cl):	1000.00
Potassium (K):	5.20	Sulfate (SO_4):	853.00
Magnesium (Mg):	69.83	Bicarbonate (HCO_3):	976.00
Calcium (Ca):	124.30	Carbonate (CO_3):	
Strontium (Sr):	4.06	Acetic Acid (CH_3COO)	
Barium (Ba):	0.58	Propionic Acid (C_2H_5COO)	
Iron (Fe):	4.94	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.39	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.02	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.13	Silica (SiO_2):	17.77

Notes:
B=.93 Al=.06 Li=.25

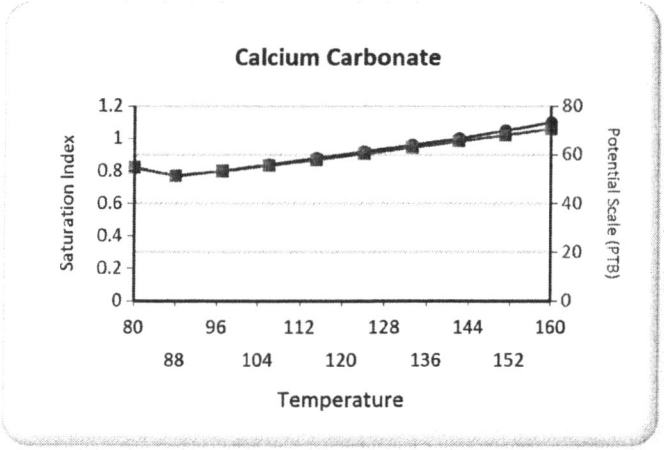
(PTB = Pounds per Thousand Barrels)

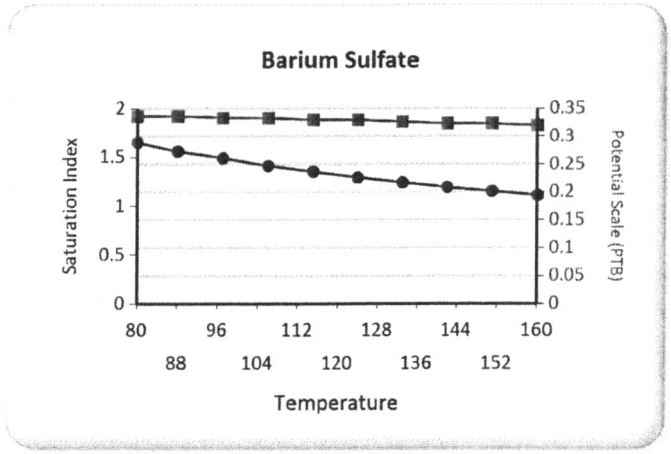
		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.82	54.89	1.65	0.34	2.60	2.71	1.27	3.38	0.00	0.00	0.00	0.00	0.00	0.00	10.27	0.73
88.00	157.00	0.77	51.18	1.56	0.34	2.46	2.70	1.25	3.37	0.00	0.00	0.00	0.00	0.00	0.00	10.02	0.73
97.00	300.00	0.80	53.31	1.49	0.33	2.43	2.70	1.31	3.40	0.00	0.00	0.00	0.00	0.00	0.00	9.89	0.73
106.00	443.00	0.84	55.58	1.41	0.33	2.40	2.70	1.38	3.43	0.00	0.00	0.00	0.00	0.00	0.00	9.76	0.73
115.00	585.00	0.88	57.94	1.35	0.33	2.39	2.70	1.44	3.45	0.00	0.00	0.00	0.00	0.00	0.00	9.64	0.73
124.00	728.00	0.92	60.39	1.29	0.33	2.38	2.70	1.51	3.47	0.00	0.00	0.00	0.00	0.00	0.00	9.54	0.73
133.00	871.00	0.96	62.91	1.24	0.33	2.38	2.70	1.57	3.49	0.00	0.00	0.00	0.00	0.00	0.00	9.44	0.73
142.00	1014.00	1.00	65.48	1.19	0.32	2.38	2.70	1.64	3.50	0.00	0.00	0.00	0.00	0.00	0.00	9.35	0.73
151.00	1157.00	1.05	68.08	1.15	0.32	2.40	2.70	1.70	3.52	0.00	0.00	0.00	0.00	0.00	0.00	9.26	0.73
160.00	1300.00	1.10	70.70	1.11	0.32	2.41	2.70	1.76	3.53	0.00	0.00	0.00	0.00	0.00	0.00	9.19	0.73

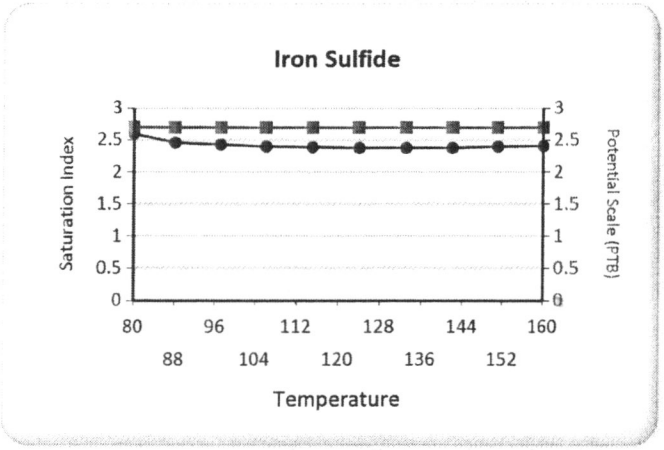
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.17	10.70	0.01	0.00	0.00	0.00	0.00	2.13	2.84
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.27	10.34	0.01	0.00	0.00	0.00	0.00	1.93	2.68
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.45	10.10	0.01	0.00	0.00	0.00	0.00	2.25	2.91
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.58	9.87	0.01	0.00	0.00	0.00	0.00	2.58	3.11
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.67	9.66	0.01	0.00	0.00	0.00	0.00	2.93	3.27
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.74	9.46	0.01	0.00	0.00	0.00	0.00	3.30	3.40
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.79	9.27	0.01	0.00	0.00	0.00	0.00	3.67	3.51
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.82	9.10	0.01	0.16	1.28	0.00	0.00	4.05	3.59
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.85	8.94	0.01	0.70	5.30	0.00	0.00	4.44	3.66
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15	0.87	8.79	0.01	1.24	9.17	0.00	0.00	4.83	3.70

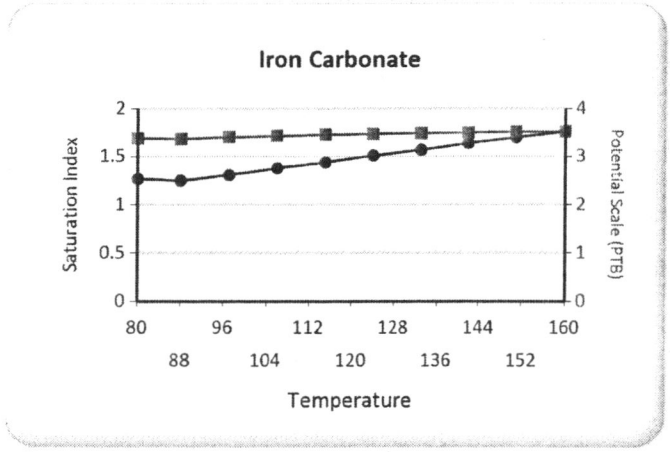
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Fe Silicate

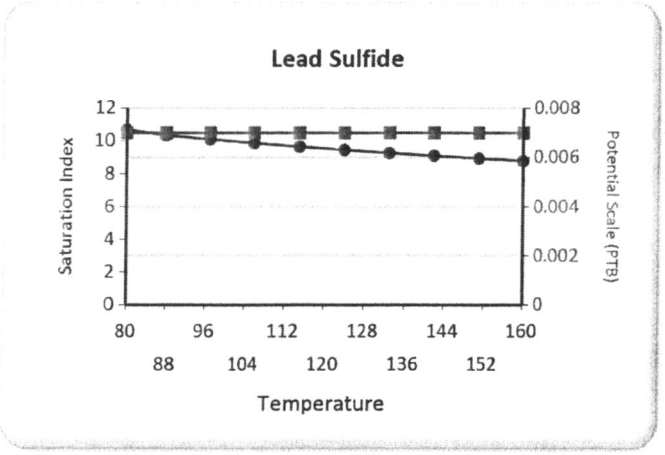
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Fe Silicate

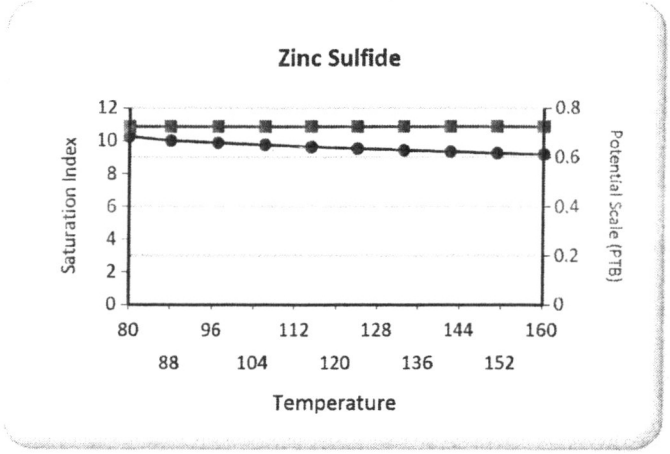


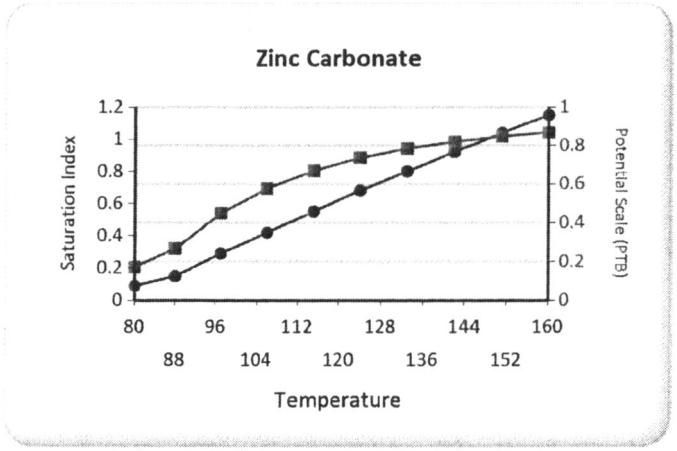


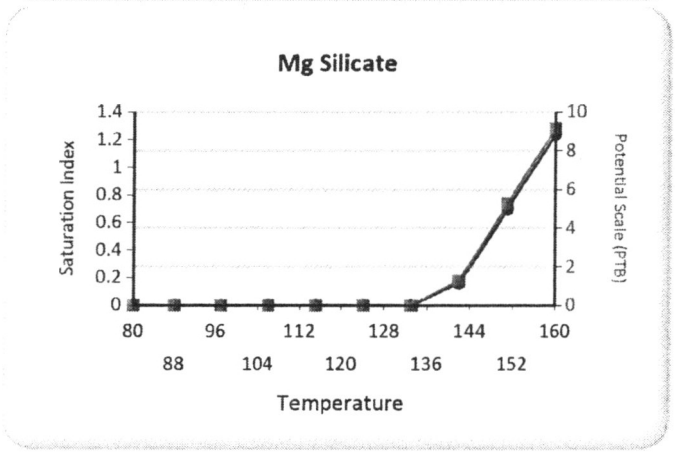


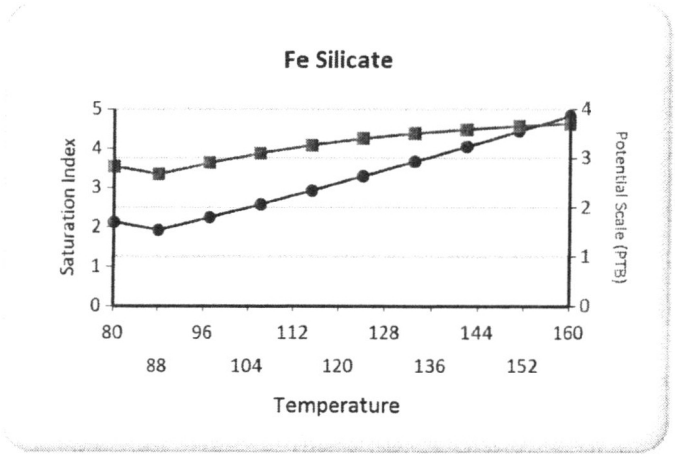







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
1.2
1
0.8
0.6
0.4
0.2
0
80
96
112
128
144
160
88
104
120
136
152


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
1.4
1.2
1
0.8
0.6
0.4
0.2
0
10
8
6
4
2
0
80
96
112
128
144
160
88
104
120
136
152


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
5
4
3
2
1
0
80
96
112
128
144
160
88
104
120
136
152

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

EPA

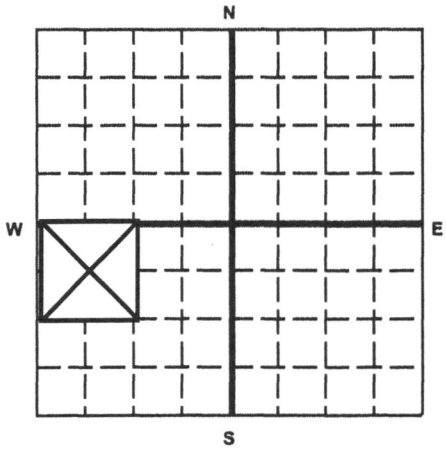
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-04551

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

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

Surface Location 788 ft. frm (N/S) N Line of quarter section
and 533 ft. from (E/W) W Line of quarter section.

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

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

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 16-04

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1795	1810	983		0	0
February	13	1811	1820	815		0	0
March	13	1806	1820	1258		0	0
April	13	1835	1844	1311		0	0
May	13	1835	1850	1219		0	0
June	13	1786	1828	913		0	0
July	13	1808	1839	1198		0	0
August	13	1825	1846	1224		0	0
September	13	1838	1868	1205		0	0
October	13	1816	1851	1196		0	0
November	13	1837	1845	1273		0	0
December	13	1824	1835	1213		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	GREEN	BLUE	CB
		✓	

U2 Entered
Date 3/18/14
Initial JB

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

multi-chem®
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 16-04 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-263385**

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):	1.000
pH:	7.90
Calculated TDS (mg/L):	3900.74
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):	494.00	Chloride (Cl):	2000.00
Potassium (K):	18.00	Sulfate (SO_4):	290.00
Magnesium (Mg):	62.00	Bicarbonate (HCO_3):	878.40
Calcium (Ca):	128.00	Carbonate (CO_3):	
Strontium (Sr):	4.00	Acetic Acid (CH_3COO)	
Barium (Ba):	0.80	Propionic Acid (C_2H_5COO)	
Iron (Fe):	4.00	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.01	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.13	Silica (SiO_2):	21.40

Notes:
B=1 Al=.05 Li=.2

(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	1.22	55.77	1.54	0.46	0.00	0.00	1.47	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.21	54.57	1.40	0.46	0.00	0.00	1.52	2.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.25	57.27	1.27	0.45	0.00	0.00	1.61	2.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.30	60.31	1.15	0.44	0.00	0.00	1.70	2.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.36	63.62	1.06	0.43	0.00	0.00	1.80	2.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.41	67.16	0.98	0.43	0.00	0.00	1.89	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.48	70.86	0.91	0.42	0.00	0.00	1.98	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.54	74.67	0.85	0.41	0.00	0.00	2.07	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.62	78.51	0.80	0.40	0.00	0.00	2.16	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.69	82.33	0.77	0.40	0.00	0.00	2.25	2.89	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

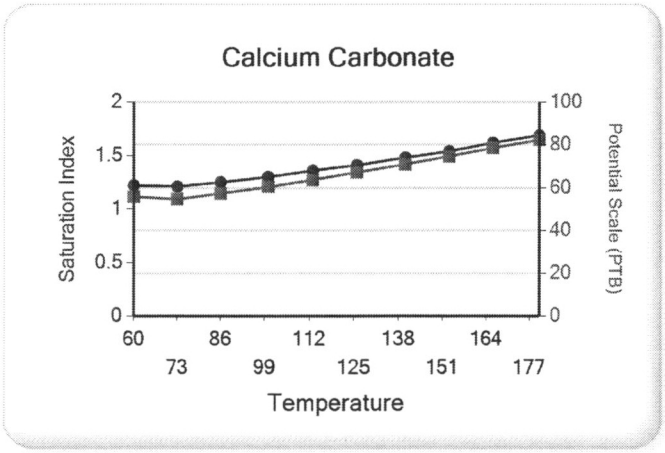
multi-chem®
A HALLIBURTON SERVICE

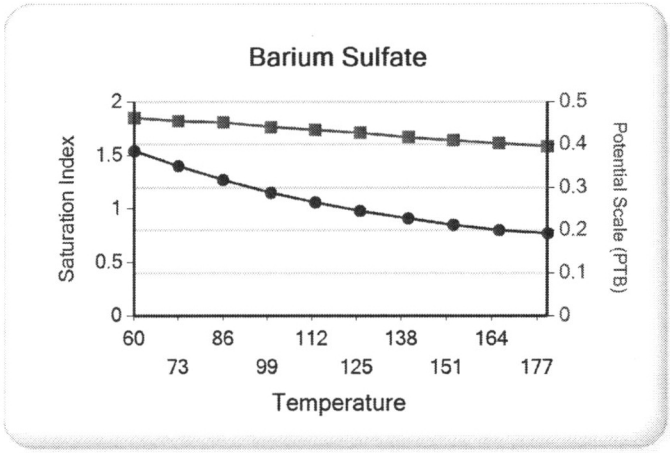
Water Analysis Report

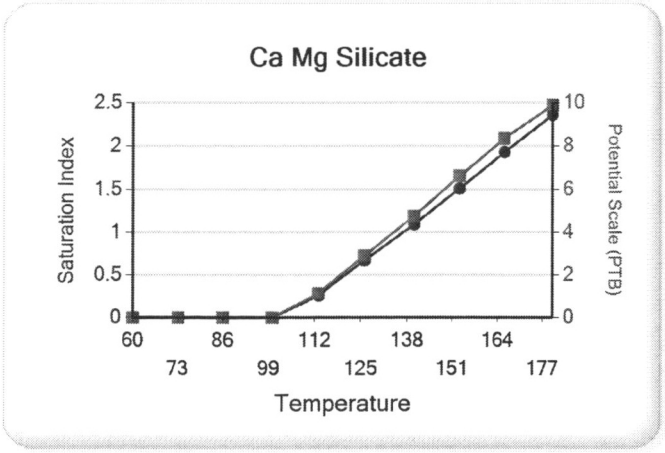
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.33	2.91
73.00	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	4.42	2.92
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.83	2.97
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	2.75	0.00	0.00	5.28	3.01
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	5.90	0.26	1.14	5.76	3.04
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11	9.43	0.67	2.90	6.26	3.07
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.83	13.23	1.09	4.75	6.78	3.08
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.56	17.04	1.51	6.61	7.31	3.09
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.29	20.43	1.93	8.36	7.85	3.10
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.01	22.98	2.36	9.89	8.39	3.10

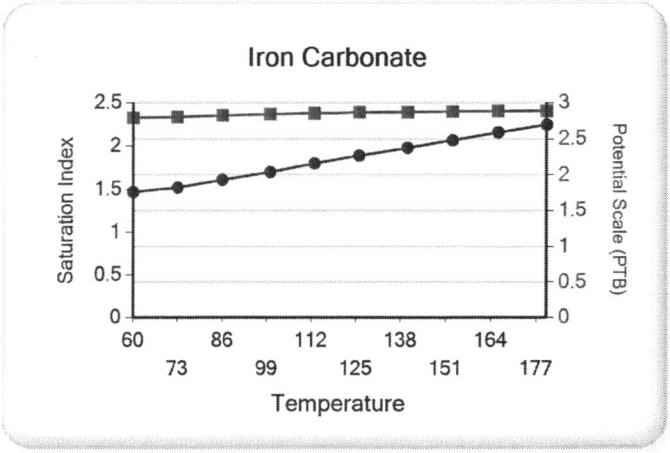
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

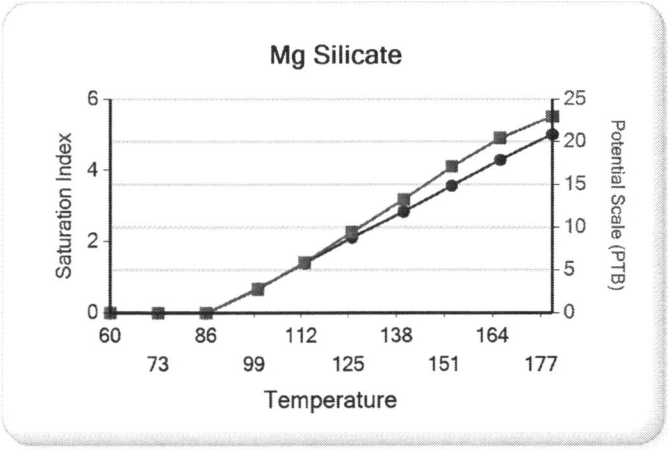
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

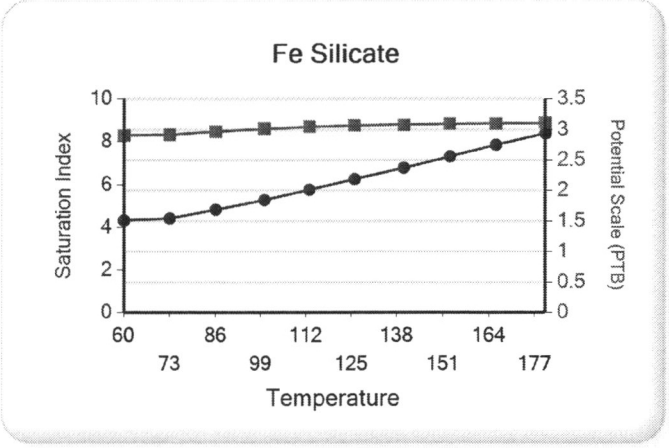









Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
0
2
4
6
0
5
10
15
20
25
60
73
86
99
112
125
138
151
164
177


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
0
2
4
6
8
10
0
0.5
1
1.5
2
2.5
3
3.5
60
73
86
99
112
125
138
151
164
177

March 8, 2012

RECEIVED
MAR 13 2012
Office of Enforcement
Compliance & Evironmental Justice

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

RE: EPA AREA PERMIT NO. UT2736-04551
Mechanical Integrity Test
Standard Five year retesting for Ute Tribal 16-04

Mr. Breffle:
The enclose Mechanical Integrity Test was performed on the above referenced well on March 3, 2012. This MIT was performed because the well was due for the regular five year Mechanical Integrity Test.

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

Sincerely,
Petroglyph Operating Co., Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

Encl: MIT for the Ute Tribal 16-04

GR
2

U2 Entered
Date 4/10/12
Initial DB

Mechanical Integrity Test
Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency
Underground Injection Control Program, UIC Direct Implementation Program 8P-W-GW
999 18th Street, Suite 500 Denver, CO 80202-2466

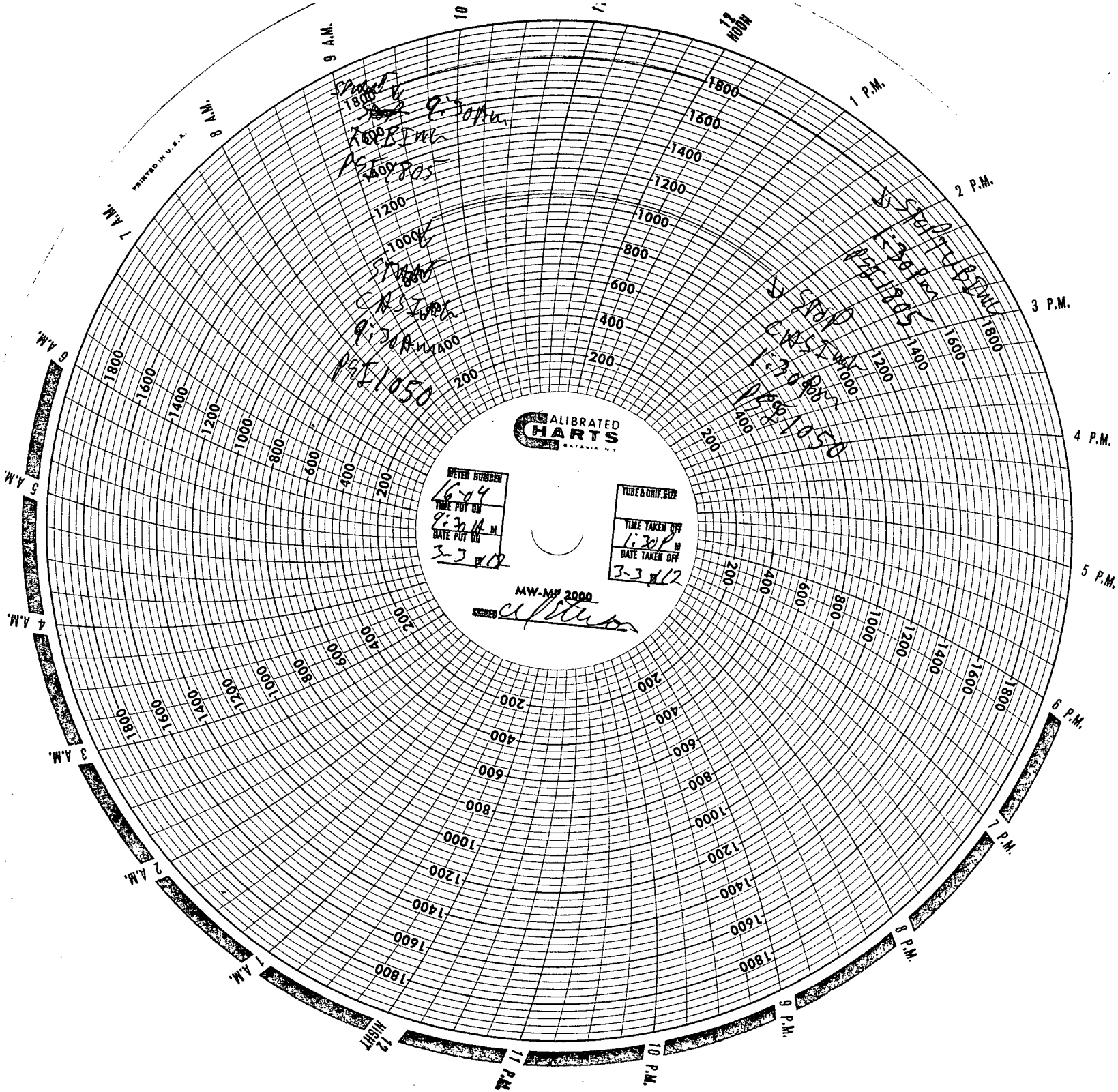
EPA Witness: _____ Date: 3.13.2012
Test conducted by: CHAD STEVENSON
Others present: _____

Well Name: 16-04 Type: ER SWD Status: AC TA UC
Field: ANTELOPE CREEK
Location: 16-04 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: / / Maximum Allowable Pressure: _____ PSIG

Is this a regularly scheduled test? [X] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [ ] Yes [ ] No
Well injecting during test? [X] Yes [ ] No If Yes, rate: 37 bpd

Pre-test casing/tubing annulus pressure: _____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE			
Initial Pressure	1805 psig	psig	psig
End of test pressure	1705 psig	psig	psig
CASING / TUBING ANNULUS PRESSURE			
0 minutes	1050 psig	psig	psig
5 minutes	1050 psig	psig	psig
10 minutes	1050 psig	psig	psig
15 minutes	1050 psig	psig	psig
20 minutes	1050 psig	psig	psig
25 minutes	1050 psig	psig	psig
30 minutes	1050 psig	psig	psig
4 HOURS minutes	1050 psig	psig	psig
minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] P...	



CALIBRATED CHARTS
BATAVIA N.Y.
METER NUMBER
16-04
TIME PUT ON
9:30 AM
DATE PUT ON
3-3 of 12
TUBE & ORIF. SIZE
TIME TAKEN OFF
1:30 P M
DATE TAKEN OFF
3-3 of 12
MW-MP 2000
SIGNED
PRINTED IN U.S.A.
9 A.M.
8 A.M.
7 A.M.
6 A.M.
5 A.M.
4 A.M.
3 A.M.
2 A.M.
1 A.M.
12 NIGHT
11 P.M.
10 P.M.
9 P.M.
8 P.M.
7 P.M.
6 P.M.
5 P.M.
4 P.M.
3 P.M.
2 P.M.
1 P.M.
12 NOON
STOP TUBING
1:30 PM
PSI 1805
STOP CASING
1:30 PM
PSI 1050
STOP
9:30 AM
TUBING
PSI 1805
STOP
CASING
9:30 AM
PSI 1050

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

FEB 26 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
Ute Tribal #16-04 (UT04551)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting information pertaining to Ute Tribal #16-04 to the Environmental Protection Agency (EPA) Region VIII Ground Water Program. Requirements of UIC Area Permit UT2736-00000 Part II Sections (C)(2) "Prior To Commencing Injection" required submittal of the following information:

1. **Well Rework Record (*EPA Form 7520-12*) with after conversion well schematic;** and

2. the well has successfully completed and passed a Mechanical Integrity Test (MIT), with pressure chart demonstrating **Part I (internal) mechanical integrity;** and

3. a **pore pressure survey has been determined** of the injection zones.

The conversion plan for this production well has been reviewed, and found satisfactory. EPA analysis of the cement bond log (CBL) for this well identified a minimum interval of adequate cement above, within and below the confining zone (3973' to 4097'), pursuant to Region VIII Ground Water Section Guidance No. 34.

Printed on Recycled Paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE
DENVER, CO 80202-24

Scan under
UT20736 - 04551
220 "Authorization to Inject - Final" 4/26/2001

FEB 26 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
Ute Tribal #16-04 (UT04551)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

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2. the well has successfully completed and passed a Mechanical Integrity Test (MIT), with pressure chart demonstrating **Part I (internal) mechanical integrity**; and

3. a **pore pressure survey has been determined** of the injection zones.

The conversion plan for this production well has been reviewed, and found satisfactory. EPA analysis of the cement bond log (CBL) for this well identified a minimum interval of adequate cement above, within and below the confining zone (3973' to 4097'), pursuant to Region VIII Ground Water Section Guidance No. 34.

Printed on Recycled Paper

Therefore, it is determinant that the annulus cement in the Ute Tribal #16-04 provides an effective barrier to upper movement of fluids through vertical channels adjacent to the wellbore.

All required information has been submitted, and has been reviewed and approved by the EPA. Petroglyph has complied with all pertinent conditions of UIC Area Permit UT2736-00000 Part II Section (C)(2). Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal #16-04 under the conditions of UIC Area Permit UT2736-00000. The Director has determined that the **maximum surface injection pressure for the Ute Tribal #16-04 shall not exceed 1900 psig.** per Final Area Permit UT2736-00000, Part II, Section C.5.(b).

Please be reminded that it is the responsibility of the permittee to be aware of, and to comply with, all conditions of the Permit. Effective upon receipt of this letter, EPA administration of this well is transferred to Mr. Al Craver, Compliance Officer in the Office of Enforcement, Compliance, and Environmental Justice Technical Enforcement Program, who is your point of contact for routine compliance matters and reports.

Please send all reporting forms and other required correspondence to Mr. Craver at the address listed below, referencing **EPA WELL ID: UT04551** on all reports and correspondence.

Mr. Al Craver,
Technical Enforcement Program, Mail Code 8ENF-T
U.S. Environmental Protection Agency
999 18th Street, Suite 300
Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the Permit, please contact Mr. Paul Osborne of my staff at 303.312.6125 or Mr. Craver at 303.312.7821.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

cc: Mr. Ronald McCook, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
BLM - Vernal District Office

2/27/01 CW 3939C- 3940C (UTE TRIBAL #16-04)(UT2736-04551)

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

FEB 27 2001

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. BOX 607
Roosevelt, UT 84066

4a. Article Number

Z 159 952 303

4b. Service Type

☐ Registered ☐ Insured
XX Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

3/2/01

5. Signature (Addressee)

ISS #2 DEMER/DO PROC 2004

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

(rec'd 26)

MAR 7 2001

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 DOMESTIC RETURN RECEIPT

2/27/01 Certified mail to Micheal Safford Petroglyph Operating Co., Inc.
Mailed together;
Original green card - (3939C)
1. UTE TRIBAL #16-4 (UT2736-04551)

2. UTE TRIBAL #16-10 (UT2736-04503) (3940C)

Z 159 952 303

US Postal Service 2/27/01 CW 3939C - 3940C

Receipt for Certified Mail

No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to Mr. Micheal Safford	
Street & Number Operations Coordinator	
Post Office, State, & ZIP Code Petroglyph Operating Co., Inc.	
P.O. BOX 607	
Postage Roosevelt, UT 84066	
Certified Fee ORIGINAL GREEN CARD	
Special Delivery Fee UTE TRIBAL #16-4	
Restricted Delivery Fee (UT2736-04551)	
Return Receipt Showing to Whom & Date Delivered (3939C)	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, April 1995

Z 159 952 303

US Postal Service 2/27/01 CW 3939C - 3940C

Receipt for Certified Mail

No Insurance Coverage Provided.
Do not use for International Mail (See reverse)

Sent to Mr. Micheal Safford	
Street & Number Operations Coordinator	
Post Office, State, & ZIP Code Petroglyph Operating Co., Inc.	
P.O. BOX 607	
Postage Roosevelt, UT 84066	
Certified Fee ORIGINAL GREEN CARD	
Special Delivery Fee UTE TRIBAL #16-4	
Restricted Delivery Fee (UT2736-04551)	
Return Receipt Showing to Whom & Date Delivered (3939C)	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, April 1995

UIC Permit Routing Slip Date: _____

Action: AUTHORIZATION TO INJECT

	To:		Mailcode	Initials	Date
1.	Permit Writer Chuck Williams		8P-W-GW	CEW.	2/12/01
2.	Technical Review	☒ DWJ ☒ PSO ☐ CT	8P-W-GW	X	2/21/2001
3.	L. Clutts	proof read	8P-W-GW	~~[illegible]~~	~~[illegible]~~
4.	D. Hogle	**SIGNATURE**	8P-W-GW	[illegible]	2/26/01
5.	L. Clutts	date stamp & mail documents	8P-W-GW	LC	2/27/01
6.	Permit Writer CEW LC	make copies	8P-W-GW	LC	2/27/01
7.	L. Clutts	mail copies	8P-W-GW	LC	2/27/01
8.	Permit Writer CEW	File	8P-W-GW		

Well Name: Ute Tribal #16-04 **Reservation:** U-0

UIC Permit Number: UT2736-04551 **Applicant:** Petroglyph

Contents of routing package for: AUTHORIZATION TO INJECT

LEFT SIDE

- **Concurrence copy** of Authorization
- **Reading File copy** of Authorization
- **Prior to Injection Requirements - Submitted Documentation**
- **FORM 3**
- **Mailing List**

RIGHT SIDE

- **Authorization To Inject *(Signature)***

COMMENTS _____

Permit Writer: Chuck Williams

65-63
65-68

C-23 Pmt. ?

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466

FEB 26 2001

CONCURRENCE COPY

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

Re: **AUTHORIZATION TO COMMENCE INJECTION**
Ute Tribal #16-04 (UT04551)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting information pertaining to Ute Tribal #16-04 to the Environmental Protection Agency (EPA) Region VIII Ground Water Program. Requirements of UIC Area Permit UT2736-00000 Part II Sections (C)(2) "Prior To Commencing Injection" required submittal of the following information:

1. **Well Rework Record (*EPA Form 7520-12*) with after conversion well schematic**; and

2. the well has successfully completed and passed a Mechanical Integrity Test (MIT), with pressure chart demonstrating **Part I (internal) mechanical integrity**; and

3. a **pore pressure survey has been determined** of the injection zones.

The conversion plan for this production well has been reviewed, and found satisfactory. EPA analysis of the cement bond log (CBL) for this well identified a minimum interval of adequate cement above, within and below the confining zone (3973' to 4097'), pursuant to Region VIII Ground Water Section Guidance No. 34.

Concur

CEW. 2/12/01

2/21/2001
8-P-W-DW

Faxed & mailed 2/26/01 & 2/27/01 (26)

2/26/01

Printed on Recycled Paper

Therefore, it is determinant that the annulus cement in the Ute Tribal #16-04 provides an effective barrier to upper movement of fluids through vertical channels adjacent to the wellbore.

All required information has been submitted, and has been reviewed and approved by the EPA. Petroglyph has complied with all pertinent conditions of UIC Area Permit UT2736-00000 Part II Section (C)(2). Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal #16-04 under the conditions of UIC Area Permit UT2736-00000. The Director has determined that the **maximum surface injection pressure for the Ute Tribal #16-04 shall not exceed 1900 psig.** per Final Area Permit UT2736-00000, Part II, Section C.5.(b).

Please be reminded that it is the responsibility of the permittee to be aware of, and to comply with, all conditions of the Permit. Effective upon receipt of this letter, EPA administration of this well is transferred to Mr. Al Craver, Compliance Officer in the Office of Enforcement, Compliance, and Environmental Justice Technical Enforcement Program, who is your point of contact for routine compliance matters and reports.

Please send all reporting forms and other required correspondence to Mr. Craver at the address listed below, referencing **EPA WELL ID: UT04551** on all reports and correspondence.

Mr. Al Craver,
Technical Enforcement Program, Mail Code 8ENF-T
U.S. Environmental Protection Agency
999 18th Street, Suite 300
Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the Permit, please contact Mr. Paul Osborne of my staff at 303.312.6125 or Mr. Craver at 303.312.7821.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

cc: Mr. Ronald McCook, Chairman
Uintah & Ouray Business Committee
Ute Indian Tribe

Ms. Elaine Willie, Environmental Director
Ute Indian Tribe

Mr. Norman Cambridge
BIA - Uintah & Ouray Agency

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
BLM - Vernal District Office