UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 500
DENVER, CO 80202-2466

CONCURRENCE COPY

MAY 3 1999

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mrs. Deanna Bell, Operations Coordinator
Petroglyph Operating Company, Inc.
4116 West 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
Ute Tribal #19-07 (UT04491)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

Dear Mrs. Bell

Thank you for submitting information pertaining to Ute Tribal #19-07 to the Environmental Protection Agency (EPA) Region VIII Groundwater 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,
2. Successfully run Mechanical Integrity Test (MIT)with pressure chart,
3. Injection zone fluid pore pressure survey.

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 #19-07 under the conditions of UIC Permit UT2736-00000. The Director has determined that the **maximum surface injection pressure for the Ute Tribal #19-07 shall not exceed 1985 psig.**

CEW 8P-W-GW 4/27/99

8P-W-GW mailed 5/3/99 LG

5/3/99

Printed on Recycled Paper

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. John Carson, 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. Carson at the address listed below, referencing EPA WELL ID: UT04491 on all reports and correspondence.

Mr. John Carson,
Technical Enforcement Program, Mail Code 8ENF-T
U.S. Environmental Protection Agency
999 18th Street, Suite 500
Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the permit, please contact Mr. Dan Jackson of my staff at 303.312.6155 or Mr. Carson at 303.312.6203.

Sincerely,

D. Edwin Hogle
Director, Groundwater Program
Office of Partnerships and
Regulatory Assistance

cc: Mr. Ronald Wopsock, 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

Is your RETURN ADDRESS completed on the reverse side?

SENDER: 5/3/99 CW 350 (435050) MAY 4 1999

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- 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.

Ute Tribal #19-01 & Ute Tribal #14-07

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:

Ms. Deanna Bell
Operations Coordinator
Petroglyph Operating Company, Inc
P.O. Box 607
Roosevelt, UT 84066

4a. Article Number: P 380 306 167

4b. Service Type
☐ Registered ■ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery: 5-7-99

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*
X Deanna Bell

8. Addressee's Address *(Only if requested and fee is paid)*
(neil 26)

JUN 4 1999

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

Inspection Report For Well: UT20736 - 04491

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~~ 12/11/2013

Others: Ajayi, Christopher — Time: 10:52 (am) / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevinson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 19-07		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 12/31/2002		
Oil Field:	Antelope Creek (Duchesne)		
Location:	SWNE S19 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/29/2012	***Allowable Inj Pressure:***	1985 /
Last MIT:	Pass 4/16/2009	***Annulus Pressure From Last MIT:***	1060

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 1/2/14
Initials DB

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 1949 / L: ____ psig Gauge Range: Scada psig	Gauge Owner:	[ ] EPA [x] Operator
Annulus Gauge:	[x] Yes [ ] No	Pressure: 0 psig Gauge Range: opened psig	Gauge Owner:	[x] EPA [ ] Operator
Bradenhead Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator
Pump Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator

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

U2 Entered
Date 12/17/13
Initial SL

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

TAB	GREEN	BLUE	CBI
		1	

Inspection Report For Well: UT20736 - 04491 (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

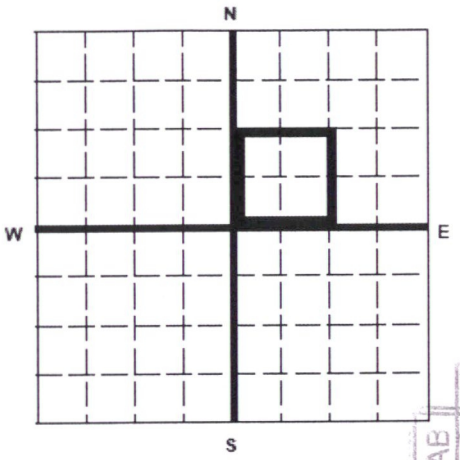
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-04491

Surface Location Description
___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 19 Township 5S Range 3W

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

Surface Location 1661 ft. frm (N/S) N Line of quarter section
and 2013 ft. from (E/W) E Line of quarter section.

U2 Entered
Date 4/4/17
Initial SB

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

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 19-07

GREEN BLUE RED
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	1857	1928	928		0	0
February	16	1891	1899	959		0	0
March	16	1929	1938	1140		0	0
April	16	1897	1913	953		0	0
May	16	1874	1884	928		0	0
June	16	1923	1923	822		0	0
July	16	1847	1850	785		0	0
August	16	1856	1886	899		0	0
September	16	1877	1887	870		0	0
October	16	1888	1893	959		0	0
November	16	1857	1906	775		0	0
December	16	1875	1886	923		0	0

Certification

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

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

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

multi-chem
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 19-07 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/5/2017**		
Sample ID:	**WA-345072**		

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

Sample Specifics

Test Date:	1/16/2017
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	0.9993
pH:	8.49
Calculated TDS (mg/L):	3014.78
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	10.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	817.91	Chloride (Cl):	418.00
Potassium (K):	18.38	Sulfate (SO_4):	90.00
Magnesium (Mg):	18.81	Bicarbonate (HCO_3):	1586.00
Calcium (Ca):	35.10	Carbonate (CO_3):	
Strontium (Sr):	3.58	Hydroxide(HO):	
Barium (Ba):	6.61	Acetic Acid (CH_3COO)	
Iron (Fe):	2.57	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	1.12	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.15	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.12	Bromine (Br):	
Aluminum (Al):	0.02	Silica (SiO_2):	16.43
Lithium (Li):	2.24	Calcium Carbonate ($CaCO_3$):	
Boron (B):	4.19	Phosphates (PO_4):	11.00
Silicon (Si):	7.68	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
180.00	50.00	1.94	29.83	1.32	3.74	3.65	1.42	3.02	1.87	0.00	0.00	0.00	0.00	0.00	0.00	10.35	0.59
167.00	267.00	1.84	29.51	1.34	3.75	3.62	1.42	2.90	1.86	0.00	0.00	0.00	0.00	0.00	0.00	10.45	0.59
153.00	483.00	1.75	29.21	1.37	3.76	3.61	1.42	2.79	1.86	0.00	0.00	0.00	0.00	0.00	0.00	10.58	0.59
140.00	700.00	1.68	28.87	1.41	3.77	3.61	1.42	2.68	1.86	0.00	0.00	0.00	0.00	0.00	0.00	10.72	0.59
127.00	917.00	1.61	28.49	1.46	3.80	3.62	1.42	2.58	1.86	0.00	0.00	0.00	0.00	0.00	0.00	10.88	0.59
113.00	1133.00	1.54	28.06	1.53	3.81	3.65	1.42	2.47	1.86	0.00	0.00	0.00	0.00	0.00	0.00	11.06	0.59
100.00	1350.00	1.48	27.62	1.60	3.83	3.70	1.42	2.37	1.86	0.00	0.00	0.00	0.00	0.00	0.00	11.26	0.59
87.00	1567.00	1.43	27.16	1.70	3.86	3.77	1.42	2.26	1.86	0.00	0.00	0.00	0.00	0.00	0.00	11.48	0.59
73.00	1783.00	1.38	26.71	1.81	3.87	3.85	1.42	2.17	1.85	0.00	0.00	0.00	0.00	0.00	0.00	11.72	0.59
60.00	2000.00	1.34	26.28	1.94	3.89	3.95	1.42	2.07	1.85	0.00	0.00	0.00	0.00	0.00	0.00	11.99	0.59

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

multi-chem®
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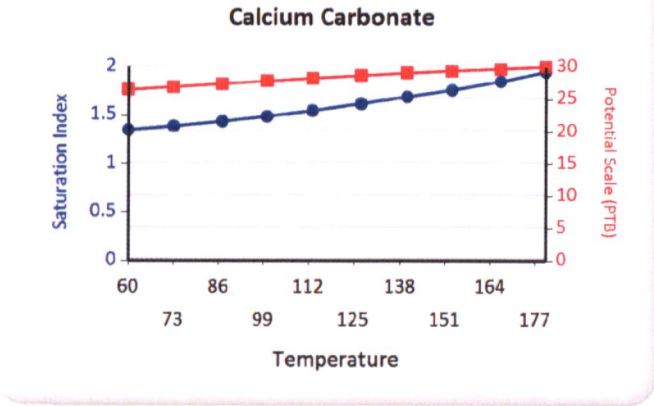
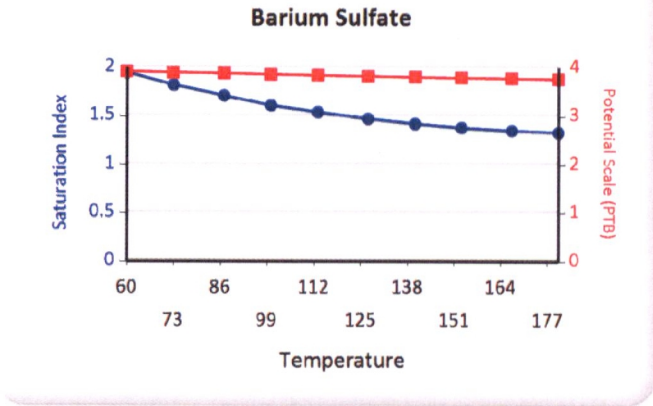
Water Analysis Report

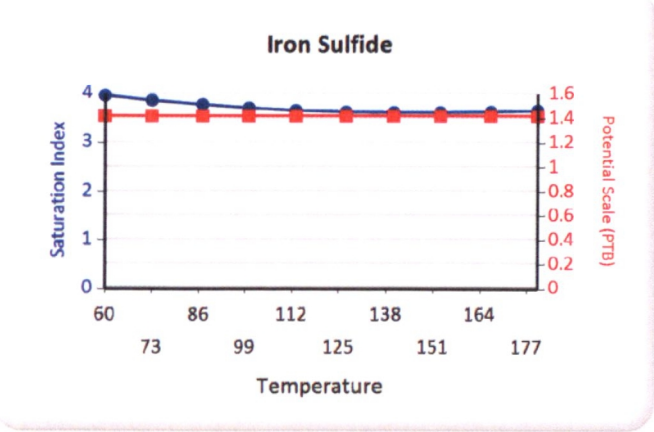
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.58	0.75	10.76	0.06	6.79	31.83	3.62	19.14	11.56	2.00
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.42	0.75	10.96	0.06	6.07	28.72	3.19	17.24	10.99	2.00
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.75	11.20	0.06	5.42	26.01	2.82	15.54	10.52	2.00
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.08	0.75	11.46	0.06	4.78	23.06	2.44	13.69	10.05	2.00
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.74	11.75	0.06	4.13	20.01	2.07	11.77	9.59	2.00
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70	0.74	12.07	0.06	3.48	16.95	1.70	9.82	9.14	2.00
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.50	0.73	12.42	0.06	2.83	13.90	1.34	7.87	8.70	1.99
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	0.72	12.79	0.06	2.18	10.89	0.98	5.91	8.27	1.99
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.69	13.21	0.06	1.53	7.85	0.62	3.92	7.86	1.99
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.64	13.66	0.06	0.88	4.72	0.27	1.88	7.45	1.99

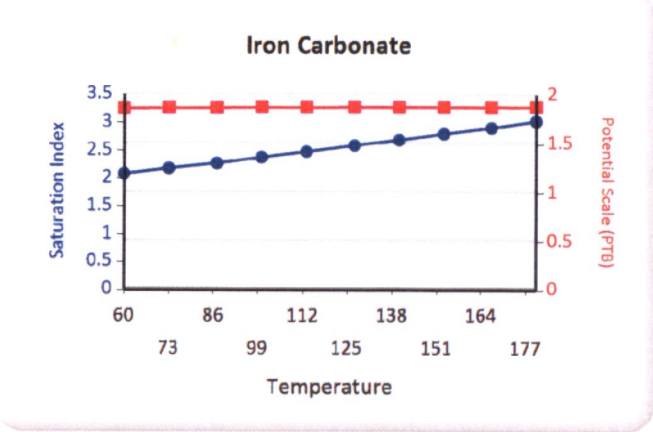
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

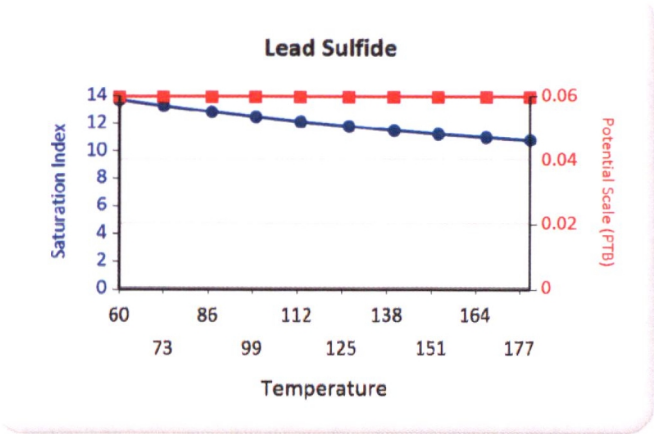
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

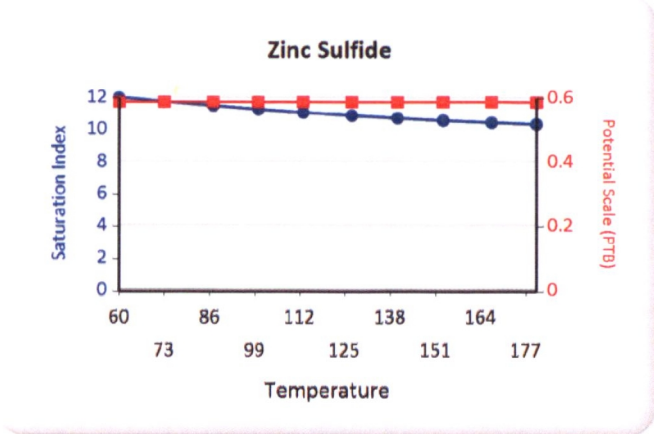


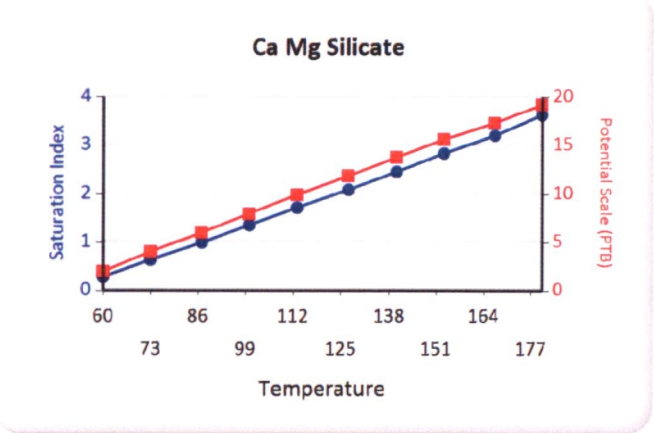


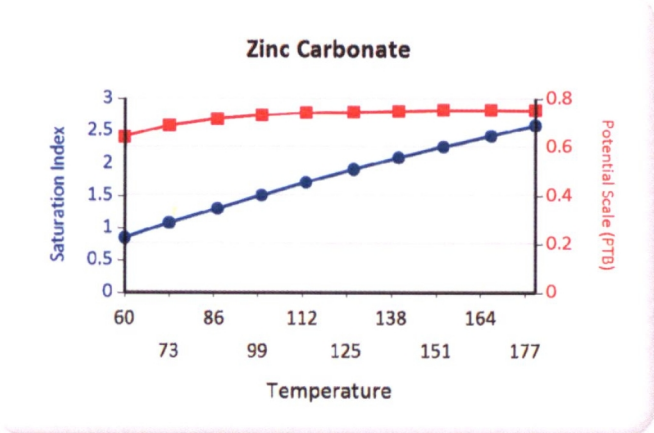


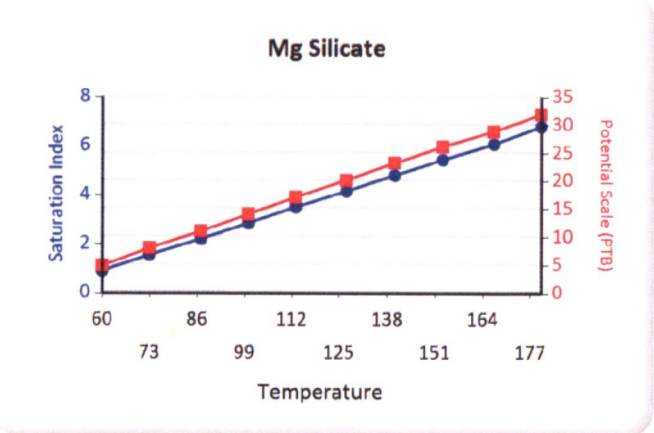


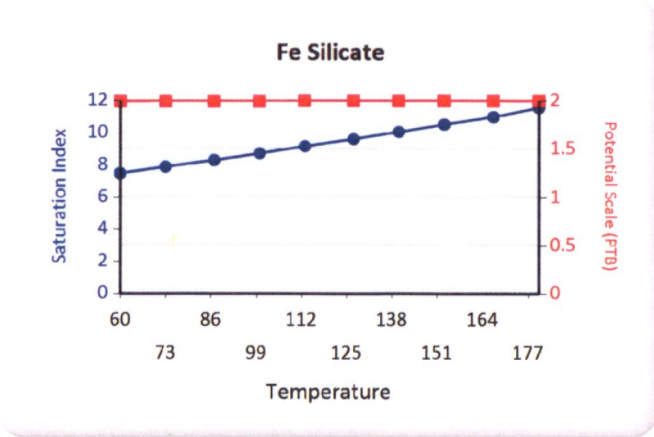

Lead Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
60 86 112 138 164
73 99 125 151 177


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


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


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


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


Fe Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
6
4
2
0
2
1.5
1
0.5
0
60
86
112
138
164
73
99
125
151
177

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

EPA

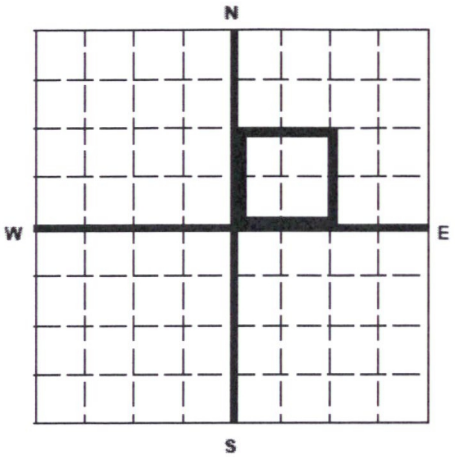
United States Environmental Protection Agency
Washington, DC 20460

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~~ 04491

Surface Location Description
___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 19 Township 5S Range 3W

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

Surface Location 1661 ft. frm (N/S) N Line of quarter section and 2013 ft. from (E/W) E Line of quarter section.

U2 Entered

Date 3/2/16

Initial DB

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 19-07

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1869	1884	1563		0	0
February	15	1893	1900	1558		0	0
March	15	1830	1944	1472		0	0
April	15	1863	1883	1361		0	0
May	15	1916	1957	1597		0	0
June	15	1920	1947	1464		0	0
July	15	1882	1923	1515		0	0
August	15	1881	1899	1308		0	0
September	15	1851	1917	1132		0	0
October	15	1895	1910	1404		0	0
November	15	1927	1942	1413		0	0
December	15	1911	1936	1276		0	0

Certification

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

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

TAB	GREEN	BLUE	CBI
		2	

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

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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 19-07 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327663**		

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):	1.0032
pH:	7.10
Calculated TDS (mg/L):	8486.40
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	24.00
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):	2818.08	Chloride (Cl):	4500.00
Potassium (K):	2.59	Sulfate (SO_4):	90.00
Magnesium (Mg):	88.84	Bicarbonate (HCO_3):	732.00
Calcium (Ca):	204.16	Carbonate (CO_3):	
Strontium (Sr):	5.38	Acetic Acid (CH_3COO)	
Barium (Ba):	0.46	Propionic Acid (C_2H_5COO)	
Iron (Fe):	13.40	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.24	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.52	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.06	Silica (SiO_2):	29.67
Aluminum (Al):	0.12	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	0.59	Phosphates (PO_4):	3.81
Boron (B):	0.47	Oxygen (O_2):	
Silicon (Si):	13.87		

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	1.02	79.01	0.00	0.00	0.00	0.00	1.89	9.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	0.85	66.22	0.00	0.00	0.00	0.00	1.70	9.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	0.74	57.86	0.00	0.00	0.00	0.00	1.57	9.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.64	49.72	0.00	0.00	0.00	0.00	1.45	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.54	41.91	0.00	0.00	0.00	0.00	1.32	9.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.45	34.52	0.00	0.00	0.00	0.00	1.19	8.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.36	27.64	0.03	0.02	0.00	0.00	1.06	8.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.28	21.32	0.13	0.07	0.00	0.00	0.94	8.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.21	15.61	0.24	0.12	0.00	0.00	0.82	7.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.14	10.54	0.38	0.16	0.00	0.00	0.70	7.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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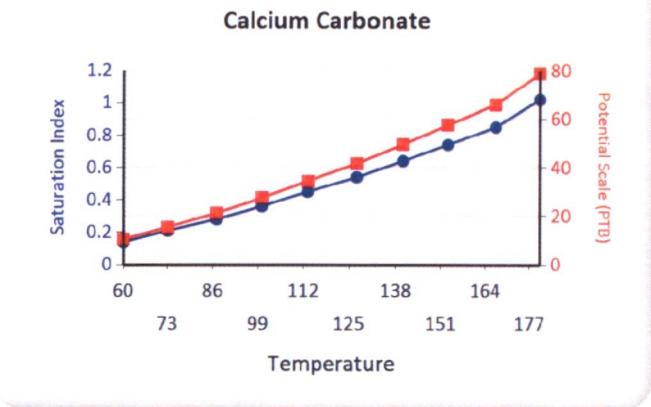
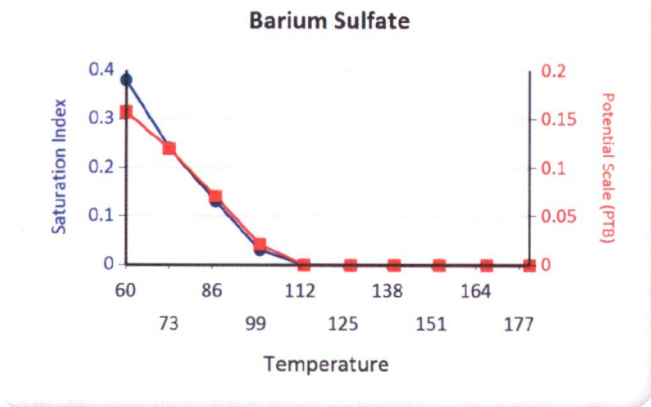
Water Analysis Report

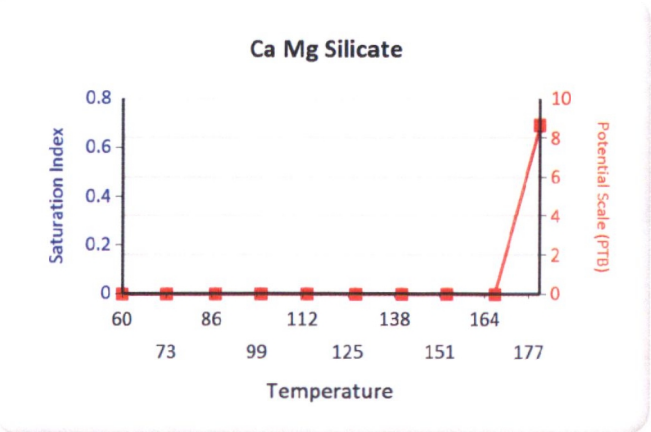
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.71	0.00	0.00	1.89	24.12	0.69	8.66	6.39	10.27
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.62	0.00	0.00	0.74	8.82	0.00	0.00	5.41	10.10
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.52	0.00	0.00	0.00	0.00	0.00	0.00	4.76	9.91
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.33	0.00	0.00	0.00	0.00	0.00	0.00	4.12	9.60
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00	3.50	9.12
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.89	8.43
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29	7.47
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.71	6.17
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15	4.54
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	2.58

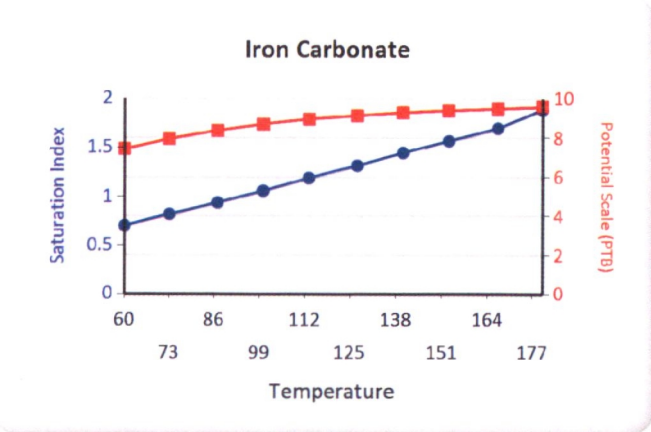
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

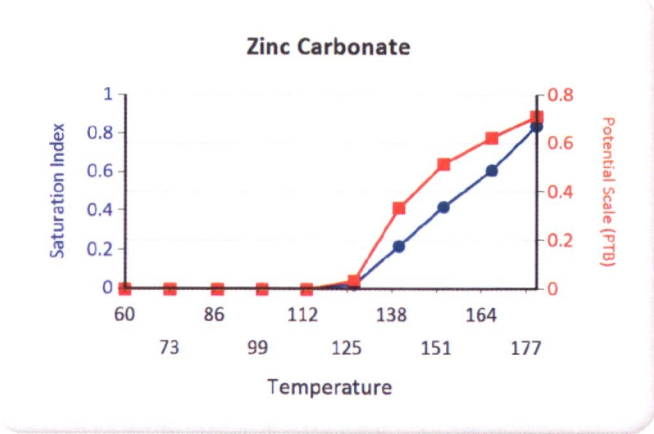
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Fe Silicate

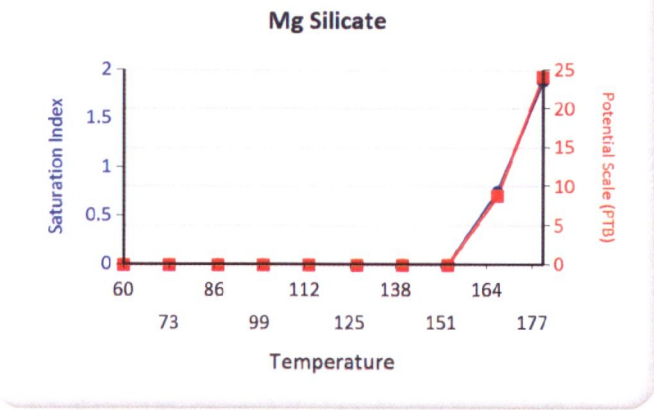


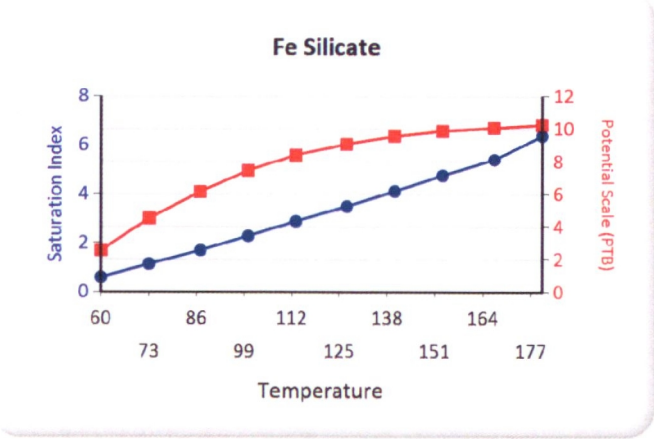







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
1
0.8
0.6
0.4
0.2
0
60
86
112
138
164
73
99
125
151
177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
2
1.5
1
0.5
0
25
20
15
10
5
60
86
112
138
164
73
99
125
151
177


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

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

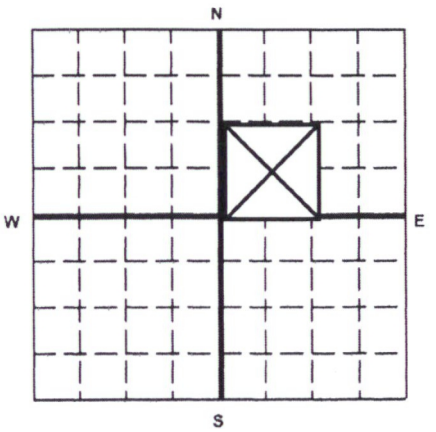
EPA

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	UT2736-04491

Surface Location Description

____ 1/4 of ____ 1/4 of SW 1/4 of NE 1/4 of Section 19 Township 5S Range 3W

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

Surface Location 1661 ft. frm (N/S) N Line of quarter section and 2013 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 19-07

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1908	1921	390		0	0
February	14	1899	1907	378		0	0
March	14	1714	1921	376		0	0
April	14	1756	1917	1542		0	0
May	14	1916	1923	1997		0	0
June	14	1893	1950	1575		0	0
July	14	1856	1878	1234		0	0
August	14	1880	1908	~~1376~~	1266 ing mnthly	0	0
September	14	1808	1851	949		0	0
October	14	1809	1851	1080		0	0
November	14	1864	1896	1686		0	0
December	14	1900	1919	1756		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 3/30/15
Initial GW

TAB	GREEN	BLUE	CBI
		2	

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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 19-07 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELLHEAD**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297440**		

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

Sample Specifics	
Test Date:	1/14/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.0042
pH:	8.10
Calculated TDS (mg/L):	10295.35
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):	3222.43	Chloride (Cl):	5000.00
Potassium (K):	48.38	Sulfate (SO_4):	81.00
Magnesium (Mg):	21.26	Bicarbonate (HCO_3):	1830.00
Calcium (Ca):	38.56	Carbonate (CO_3):	
Strontium (Sr):	5.65	Acetic Acid (CH_3COO)	
Barium (Ba):	14.58	Propionic Acid (C_2H_5COO)	
Iron (Fe):	7.10	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.50	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.12	Silica (SiO_2):	24.77

Notes:
B=5.95 Al=.05 Li=1.82

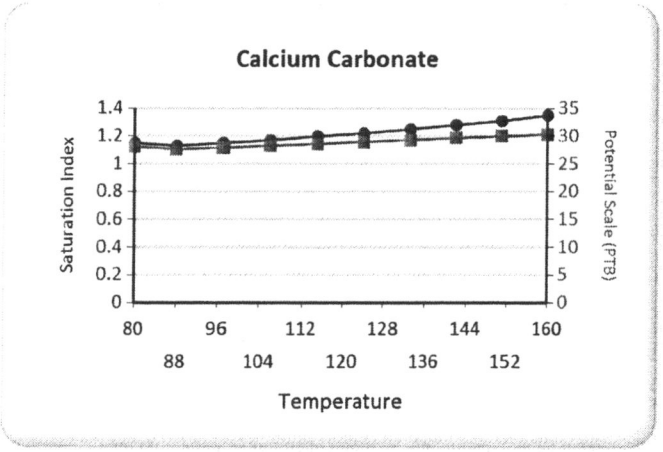
(PTB = Pounds per Thousand Barrels)

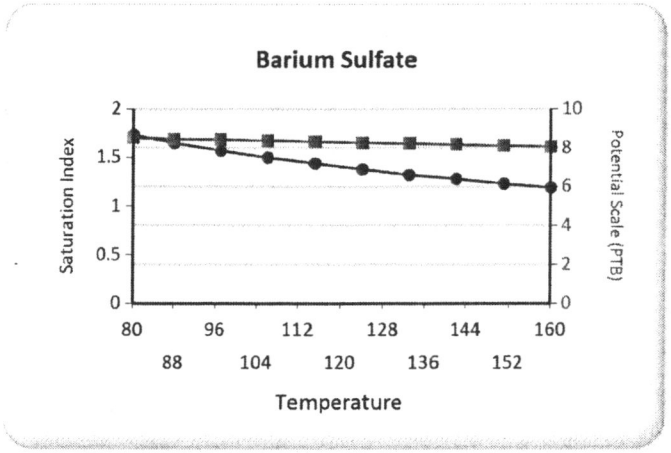
		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	1.15	28.12	1.73	8.50	3.49	3.91	2.30	5.13	0.00	0.00	0.00	0.00	0.00	0.00	10.90	0.79
88.00	157.00	1.13	27.59	1.65	8.46	3.39	3.90	2.32	5.13	0.00	0.00	0.00	0.00	0.00	0.00	10.70	0.79
97.00	300.00	1.15	27.92	1.57	8.42	3.33	3.90	2.37	5.14	0.00	0.00	0.00	0.00	0.00	0.00	10.54	0.79
106.00	443.00	1.17	28.26	1.50	8.37	3.29	3.90	2.42	5.14	0.00	0.00	0.00	0.00	0.00	0.00	10.39	0.79
115.00	585.00	1.20	28.61	1.44	8.32	3.25	3.90	2.46	5.14	0.00	0.00	0.00	0.00	0.00	0.00	10.25	0.79
124.00	728.00	1.22	28.96	1.38	8.27	3.22	3.90	2.51	5.15	0.00	0.00	0.00	0.00	0.00	0.00	10.12	0.79
133.00	871.00	1.25	29.31	1.32	8.22	3.20	3.90	2.56	5.15	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.79
142.00	1014.00	1.28	29.65	1.28	8.16	3.18	3.90	2.61	5.15	0.00	0.00	0.00	0.00	0.00	0.00	9.89	0.79
151.00	1157.00	1.31	29.99	1.23	8.11	3.17	3.90	2.65	5.15	0.00	0.00	0.00	0.00	0.00	0.00	9.78	0.79
160.00	1300.00	1.35	30.31	1.19	8.05	3.16	3.90	2.70	5.15	0.00	0.00	0.00	0.00	0.00	0.00	9.68	0.79

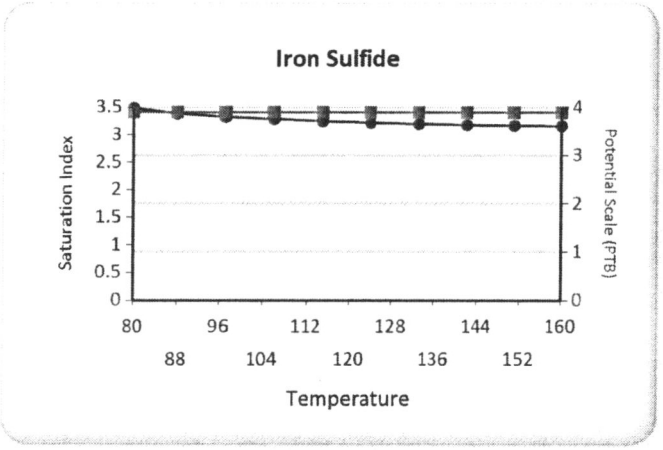
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.87	0.00	0.00	0.00	0.00	0.00	0.00	7.03	5.47
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.90	0.00	0.00	0.00	0.00	0.00	0.00	7.03	5.47
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.93	0.00	0.00	0.23	1.49	0.00	0.00	7.27	5.48
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.94	0.00	0.00	0.64	3.82	0.00	0.00	7.52	5.49
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	0.96	0.00	0.00	1.05	6.19	0.04	0.50	7.78	5.50
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	0.97	0.00	0.00	1.47	8.60	0.28	1.95	8.05	5.50
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54	0.98	0.00	0.00	1.89	11.03	0.51	3.40	8.33	5.51
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.98	0.00	0.00	2.31	13.46	0.75	4.84	8.62	5.51
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.99	0.00	0.00	2.74	15.85	0.99	6.25	8.91	5.51
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.99	0.00	0.00	3.16	18.17	1.23	7.61	9.20	5.51

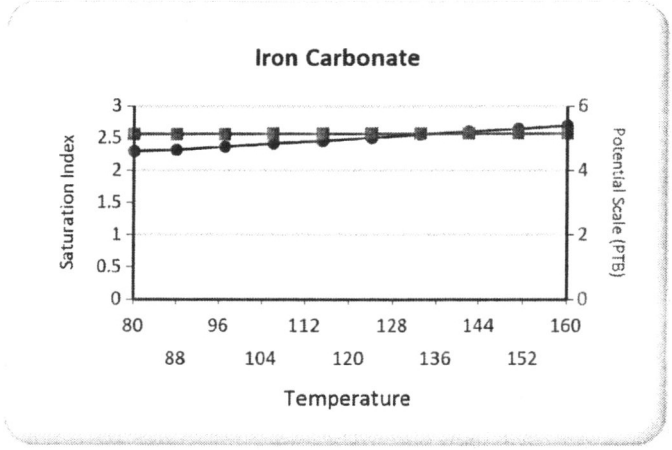
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Fe Silicate

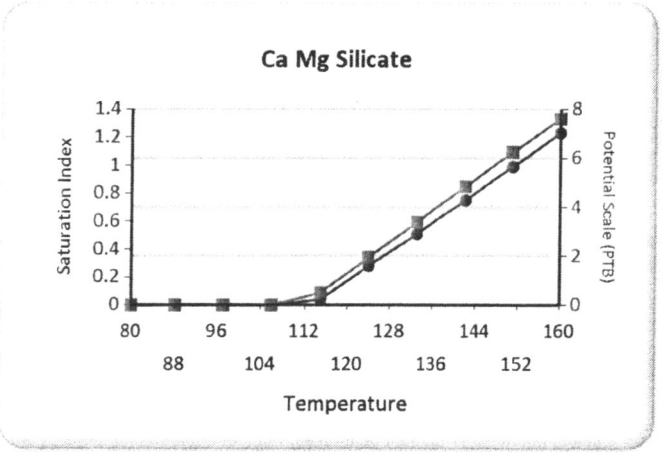
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

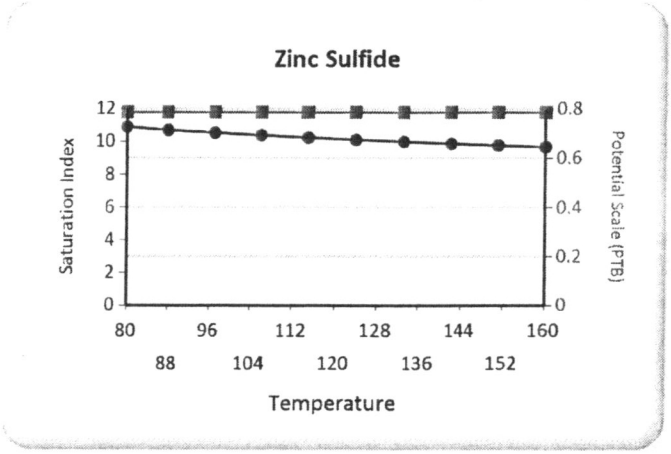


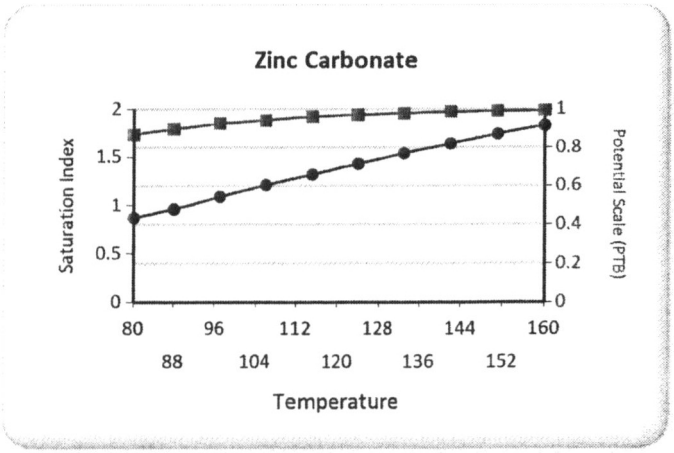


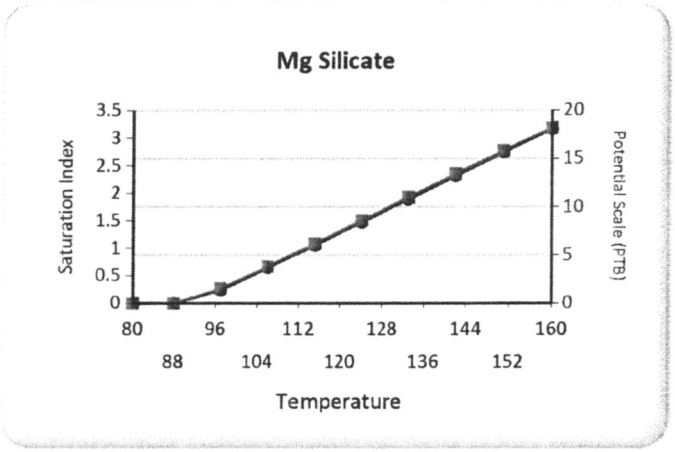


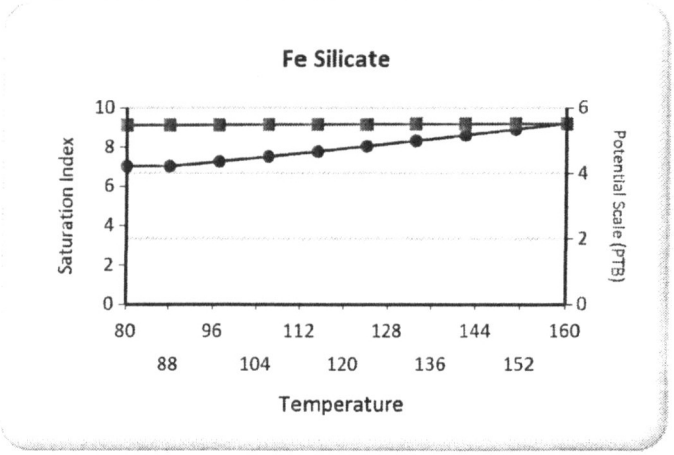







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
0
0.5
1
1.5
2
0.2
0.4
0.6
0.8
80
88
96
104
112
120
128
136
144
152
160


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


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

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

EPA

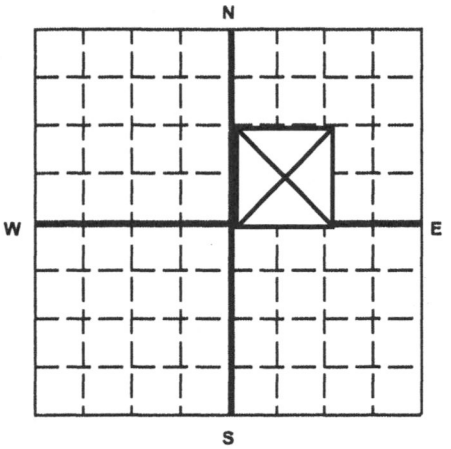
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-04491

Surface Location Description
___ 1/4 of ___ 1/4 of SW 1/4 of NE 1/4 of Section 19 Township 5S Range 3W

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

Surface Location 1661 ft. frm (N/S) N Line of quarter section
and 2013 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 19-07

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1883	1895	95		0	0
February	13	1899	1948	185		0	0
March	13	1896	1908	130		0	0
April	13	1929	1951	426		0	0
May	13	1937	1948	416		0	0
June	13	1905	1950	173		0	0
July	13	1918	1937	313		0	0
August	13	1909	1951	312		0	0
September	13	1858	1953	390		0	0
October	13	1846	1926	287		0	0
November	13	1918	1930	385		0	0
December	13	1923	1945	386		0	0

Certification

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

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

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

GREEN BLUE CB TAB 2

02 Entered
Date 3/20/14
Initial DB

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 19-07 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-262952**

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

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

Sample Specifics	
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.006
pH:	8.30
Calculated TDS (mg/L):	12783.22
CO2 in Gas (%):	
Dissolved CO2 (mg/L)):	0.00
H2S in Gas (%):	
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4494.84	Chloride (Cl):	6000.00
Potassium (K):	100.00	Sulfate (SO_4):	153.00
Magnesium (Mg):	24.00	Bicarbonate (HCO_3):	1903.20
Calcium (Ca):	64.00	Carbonate (CO_3):	
Strontium (Sr):	5.70	Acetic Acid (CH_3COO)	
Barium (Ba):	10.00	Propionic Acid (C_2H_5COO)	
Iron (Fe):	2.20	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.31	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.02	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.27	Silica (SiO_2):	25.68

Notes:
B=6.2 Al=0 Li=1.4

(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	1.47	47.49	1.94	5.88	0.00	0.00	1.79	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.47	47.22	1.80	5.86	0.00	0.00	1.85	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.49	47.87	1.67	5.82	0.00	0.00	1.93	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.52	48.58	1.56	5.78	0.00	0.00	2.00	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.55	49.29	1.46	5.74	0.00	0.00	2.07	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.59	50.02	1.37	5.69	0.00	0.00	2.13	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.63	50.72	1.30	5.64	0.00	0.00	2.20	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.67	51.40	1.24	5.60	0.00	0.00	2.26	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.72	52.03	1.18	5.55	0.00	0.00	2.33	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.77	52.61	1.14	5.51	0.00	0.00	2.39	1.59	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

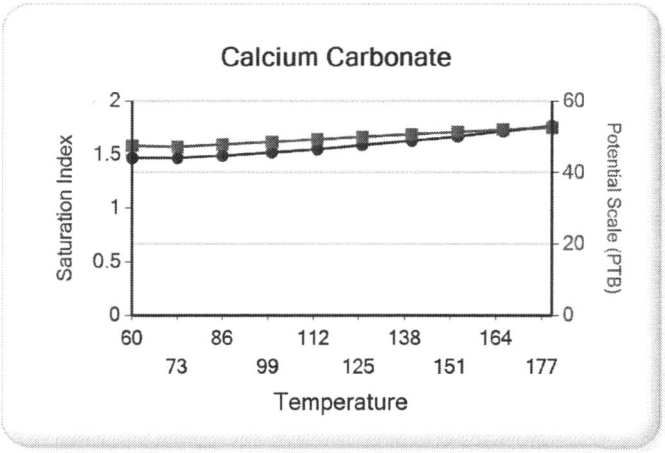
multi-chem®
A HALLIBURTON SERVICE

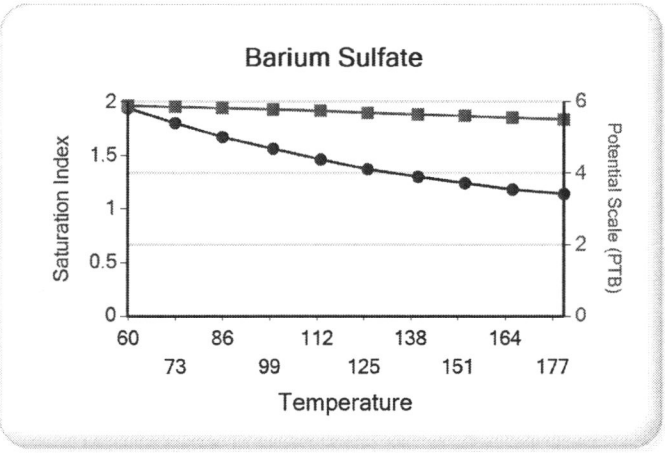
Water Analysis Report

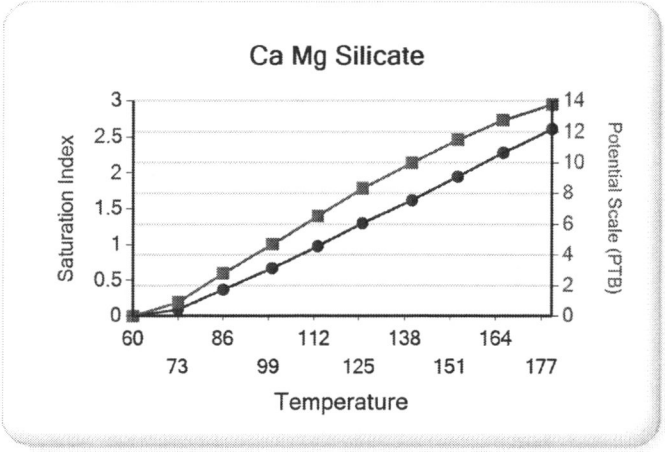
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.59	0.00	0.00	6.06	1.69
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.07	0.00	0.00	0.50	3.46	0.09	0.89	6.25	1.69
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.12	0.00	0.00	1.05	6.81	0.37	2.78	6.54	1.70
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.15	0.00	0.00	1.61	10.13	0.67	4.68	6.86	1.70
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.17	0.00	0.00	2.18	13.42	0.98	6.54	7.20	1.70
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.18	0.00	0.00	2.76	16.66	1.30	8.32	7.56	1.71
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	0.19	0.00	0.00	3.35	19.78	1.62	9.99	7.94	1.71
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	0.20	0.00	0.00	3.93	22.71	1.95	11.48	8.33	1.71
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	0.20	0.00	0.00	4.52	25.30	2.28	12.75	8.72	1.71
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	0.20	0.00	0.00	5.10	27.43	2.61	13.77	9.12	1.71

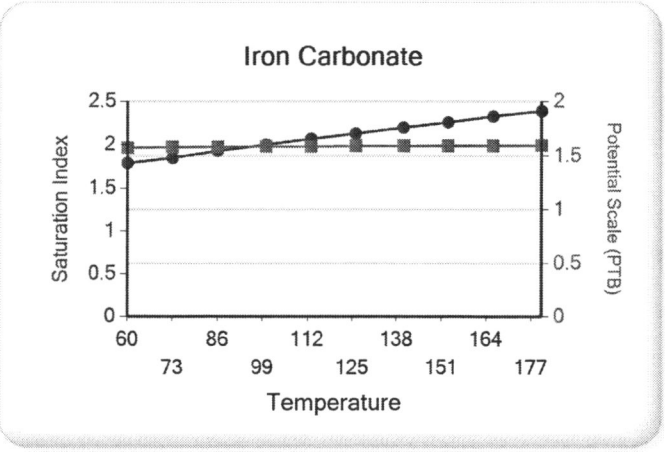
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Mg Silicate Fe Silicate

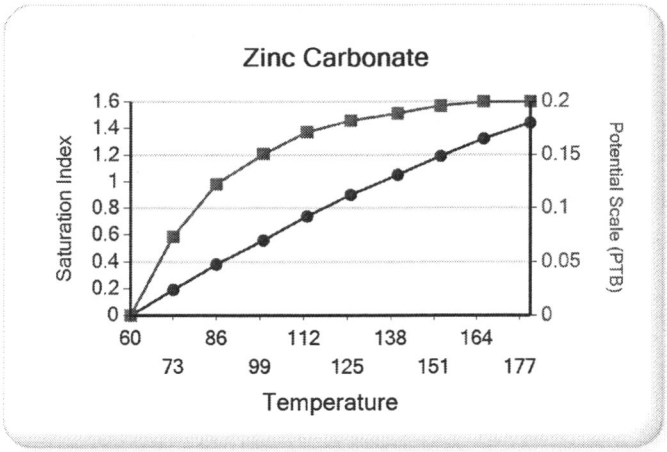
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

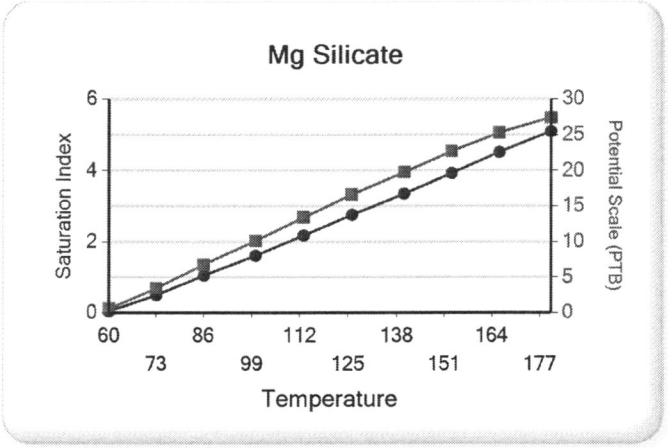


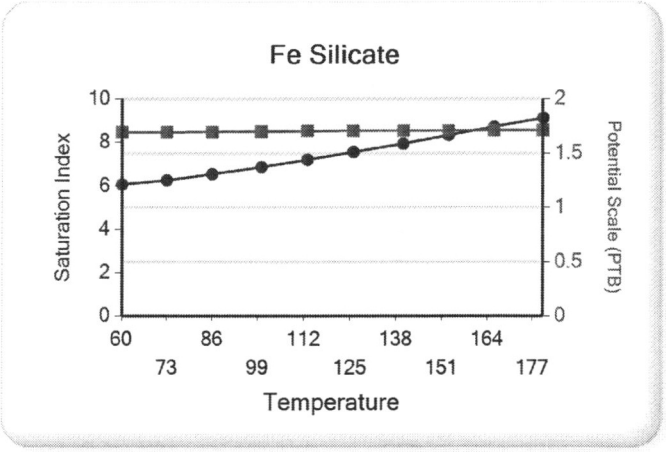







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.2
0.15
0.1
0.05
0
60
86
112
138
164
73
99
125
151
177


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

April 24, 2014

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

RE: EPA AREA PERMIT NO. UT2736-04491
Mechanical Integrity Test
Standard Five year retesting for Ute Tribal 19-07

Mr. Breffle:
The enclose Mechanical Integrity Test was performed on the above referenced well on April 15, 2014. 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 19-07

U2 Entered
Date 4/29/14
Initial

GREEN	BLUE	CBI
	2	

RECEIVED

APR 29 2014

Office of Enforcement, Compliance and Environmental Justice (UFO)

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: 4/15/14
Test conducted by: CHAD STEVENSON
Others present: _____

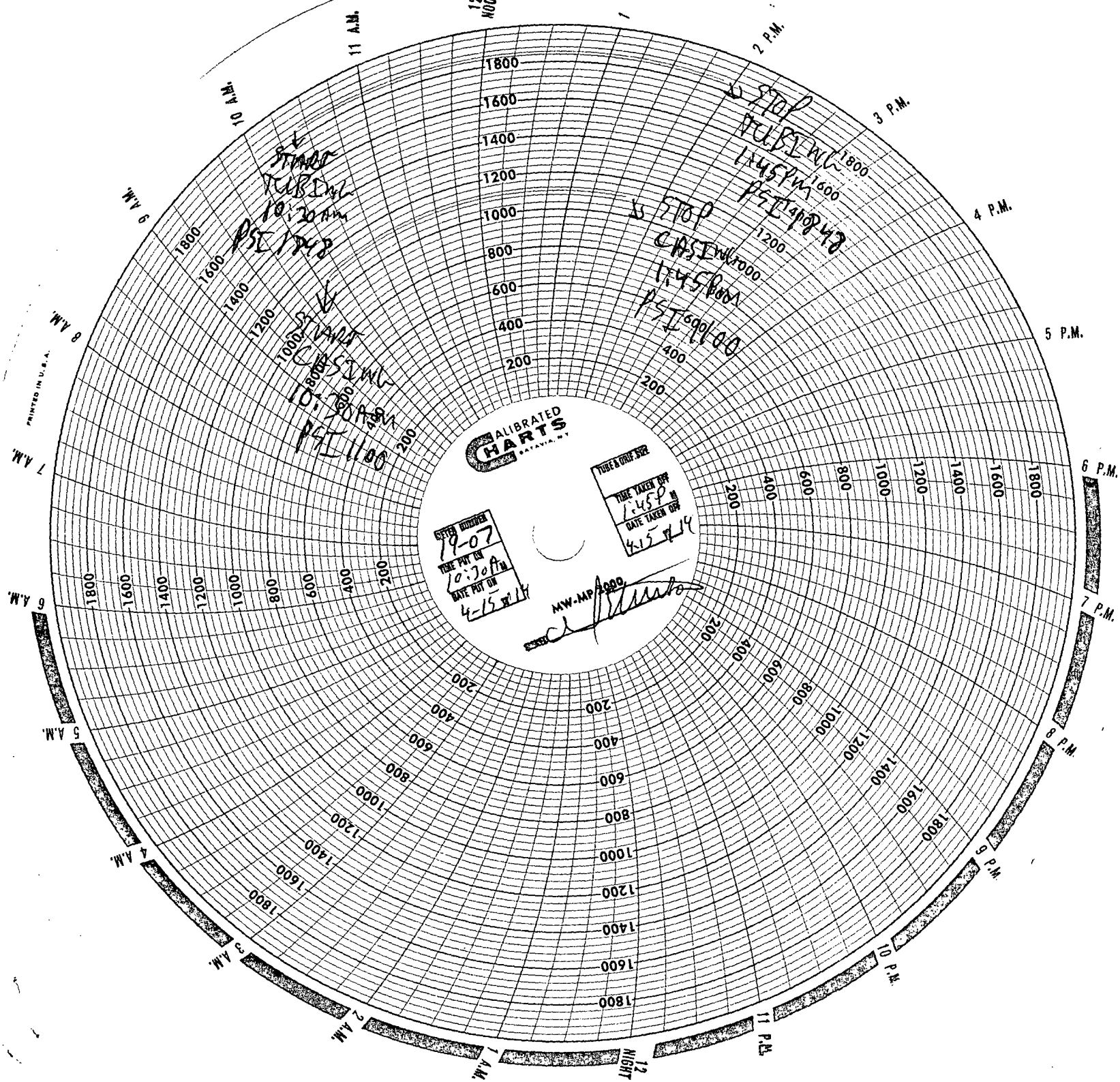
Well Name: 19-07 Type: ER SWD **Status: AC TA UC**
Field: ANTELOPE CREEK
Location: 19-07 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: / / **Maximum Allowable Pressure:** _____ **PSIG**

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

Well injecting during test? If Yes, rate: 86 **bpd**
Pre-test annulus pressure: _____ **psig**

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1848 psig	psig	psig
End of test pressure	1848 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	1100 psig	psig	psig
5 minutes	1100 psig	psig	psig
10 minutes	1100 psig	psig	psig
15 minutes	1100 psig	psig	psig
20 minutes	1100 psig	psig	psig
25 minutes	1100 psig	psig	psig
30 minutes	1100 psig	psig	psig
3 1/2 minutes	1100 psig	psig	psig
____ minutes	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

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


CALIBRATED CHARTS BATAVIA, N.Y.
MW-MP 1000
PRINTED IN U.S.A.
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.
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
STEP NUMBER
19-07
TIME PUT ON
10:30 AM
DATE PUT ON
4-15-14
TIME TAKEN OFF
1:45 PM
DATE TAKEN OFF
4-15-14
STOP TUBING 10:30 AM PSI 1900
STOP CASING 10:30 AM PSI 1100
STOP TUBING 1:45 PM PSI 1900
STOP CASING 1:45 PM PSI 1100

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 500
DENVER, CO 80202-2466

MAY 3 1999

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mrs. Deanna Bell, Operations Coordinator
Petroglyph Operating Company, Inc.
4116 West 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
Ute Tribal #19-07 (UT04491)
Antelope Creek Field
EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

Dear Mrs. Bell

Thank you for submitting information pertaining to Ute Tribal #19-07 to the Environmental Protection Agency (EPA) Region VIII Groundwater 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,
2. Successfully run Mechanical Integrity Test (MIT)with pressure chart,
3. Injection zone fluid pore pressure survey.

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 #19-07 under the conditions of UIC Permit UT2736-00000. The Director has determined that the **maximum surface injection pressure for the Ute Tribal #19-07 shall not exceed 1985 psig.**

Printed on Recycled Paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 500
DENVER, CO 80202-2

MAY 3 1999

Scan under
UT 30736 - 04491
Authorization to Inject -
Final 5/3/1999

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mrs. Deanna Bell, Operations Coordinator
Petroglyph Operating Company, Inc.
4116 West 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: AUTHORIZATION TO COMMENCE INJECTION
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EPA AREA PERMIT UT2736-00000
Duchesne County, Utah

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Printed on Recycled Paper

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. John Carson, 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. Carson at the address listed below, referencing EPA WELL ID: UT04491 on all reports and correspondence.

Mr. John Carson,
Technical Enforcement Program, Mail Code 8ENF-T
U.S. Environmental Protection Agency
999 18th Street, Suite 500
Denver, Colorado, USA, 80202-2466

If you have any questions concerning this authorization or the permit, please contact Mr. Dan Jackson of my staff at 303.312.6155 or Mr. Carson at 303.312.6203.

Sincerely,

D. Edwin Hogle
Director, Groundwater Program
Office of Partnerships and
Regulatory Assistance

cc: Mr. Ronald Wopsock, 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