Inspection Report For Well: UT20736 - 07122

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: 12/10/2013

Others: Ajayi, Christopher — Time: 1:31 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Steinson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 29-07		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 6/23/2007		
Oil Field:	Antelope Creek (Duchesne)		
Location:	SWNE S29 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1480 /
Last MIT:	Pass 5/1/2010	***Annulus Pressure From Last MIT:***	930

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: (Select One)

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

IGIS Entered
Date 12/27/13
Initials JB

OBSERVED VALUES:

Tubing Gauge:	[x] Yes [ ] No	Pressure: U: 721 / L: ____ psig Gauge Range: Scada psig	Gauge Owner:	[ ] EPA [x] Operator
Annulus Gauge:	[x] Yes [ ] No	Pressure: 0 psig Gauge Range: opened psig	Gauge Owner:	[x] EPA [ ] Operator
Bradenhead Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator
Pump Gauge:	[ ] Yes [ ] No	Pressure: ____ psig Gauge Range: ____ psig	Gauge Owner:	[ ] EPA [ ] Operator

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

U2 Entered
Date 12/17/13
Initial

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

TAB	GREEN	BLUE	CBI
		1	

Inspection Report For Well: UT20736 - 07122 (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

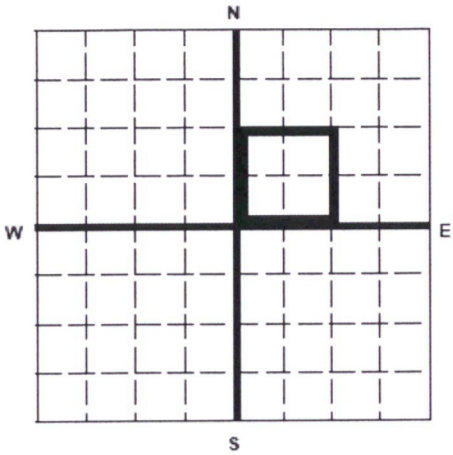
United States Environmental Protection Agency
Washington, DC 20460

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	UT2736-07122

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

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

Surface Location 1969 ft. frm (N/S) N Line of quarter section
and 2093 ft. from (E/W) E Line of quarter section.

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

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 29-07

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	308	344	0		0	0
February	16	309	350	0		0	0
March	16	315	344	0		0	0
April	16	308	352	0		0	0
May	16	318	357	0		0	0
June	16	309	315	0		0	0
July	16	302	304	0		0	0
August	16	301	304	0		0	0
September	16	309	318	0		0	0
October	16	311	315	0		0	0
November	16	309	319	0		0	0
December	16	310	321	0		0	0

Certification

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

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

GREEN BLUE CBI
TAB 2

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

Entered
Date 4/6/17
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 OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 29-07 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345314**		

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):	1.0028
pH:	8.20
Calculated TDS (mg/L):	7972.83
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	45.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2516.51	Chloride (Cl):	3000.00
Potassium (K):	17.57	Sulfate (SO_4):	0.00
Magnesium (Mg):	45.54	Bicarbonate (HCO_3):	2196.00
Calcium (Ca):	100.34	Carbonate (CO_3):	
Strontium (Sr):	6.40	Hydroxide(HO):	
Barium (Ba):	18.35	Acetic Acid (CH_3COO)	
Iron (Fe):	39.49	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	2.99	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.01	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.66	Bromine (Br):	
Aluminum (Al):	0.22	Silica (SiO_2):	28.97
Lithium (Li):	2.75	Calcium Carbonate ($CaCO_3$):	
Boron (B):	3.19	Phosphates (PO_4):	31.57
Silicon (Si):	13.54	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	1.84	80.93	0.00	0.00	5.10	21.79	3.58	28.70	0.00	0.00	0.00	0.00	0.00	0.00	11.47	1.56
149.00	267.00	1.89	81.83	0.00	0.00	5.04	21.79	3.67	28.70	0.00	0.00	0.00	0.00	0.00	0.00	11.21	1.56
168.00	483.00	1.98	83.11	0.00	0.00	5.03	21.79	3.77	28.71	0.00	0.00	0.00	0.00	0.00	0.00	11.00	1.56
187.00	700.00	2.07	84.21	0.00	0.00	5.03	21.79	3.88	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.82	1.56
206.00	917.00	2.17	85.14	0.00	0.00	5.06	21.79	3.98	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.66	1.56
224.00	1133.00	2.28	85.87	0.00	0.00	5.11	21.79	4.07	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.53	1.56
243.00	1350.00	2.40	86.43	0.00	0.00	5.17	21.79	4.16	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.41	1.56
262.00	1567.00	2.52	86.84	0.00	0.00	5.25	21.79	4.25	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.32	1.56
281.00	1783.00	2.65	87.14	0.00	0.00	5.34	21.79	4.32	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.24	1.56
300.00	2000.00	2.78	87.36	0.00	0.00	5.44	21.79	4.40	28.71	0.00	0.00	0.00	0.00	0.00	0.00	10.17	1.56

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

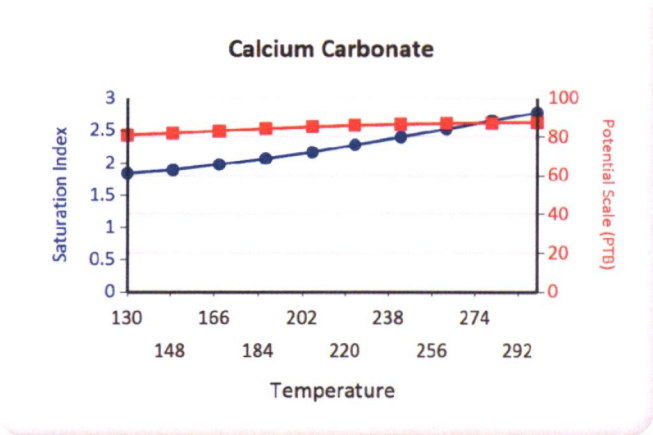
multi-chem®
A HALLIBURTON SERVICE

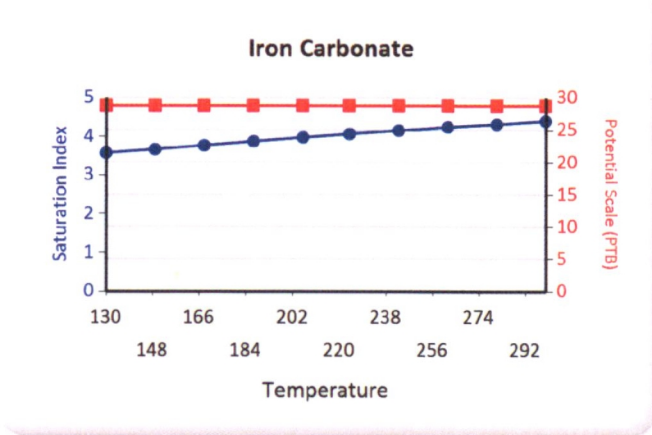
Water Analysis Report

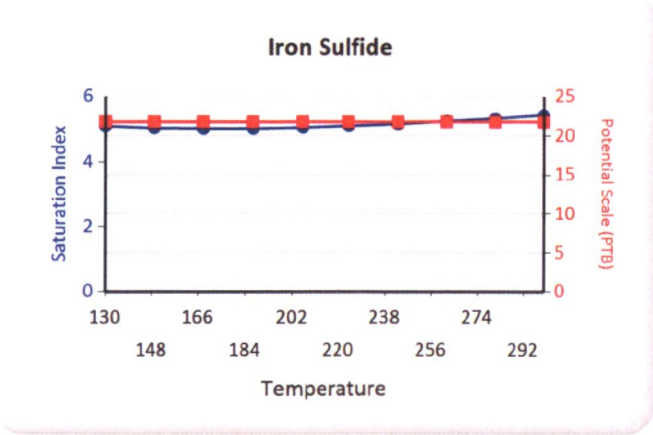
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.05	1.99	10.71	0.00	4.19	37.93	2.36	22.52	12.10	30.68
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.26	2.00	10.27	0.00	4.94	45.17	2.77	26.12	12.56	30.69
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.46	2.00	9.90	0.00	5.77	53.79	3.24	30.26	13.13	30.70
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	2.00	9.57	0.00	6.60	61.38	3.71	33.62	13.71	30.71
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81	2.01	9.28	0.00	7.42	67.33	4.19	35.98	14.31	30.71
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	2.97	2.01	9.02	0.00	8.22	71.37	4.66	37.44	14.91	30.71
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	3.10	2.01	8.80	0.00	9.01	73.61	5.13	38.27	15.51	30.71
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23	2.01	8.60	0.00	9.77	74.60	5.58	38.70	16.10	30.71
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	2.01	8.42	0.00	10.52	74.96	6.03	38.92	16.68	30.71
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42	2.01	8.26	0.00	11.23	75.08	6.46	39.03	17.25	30.71

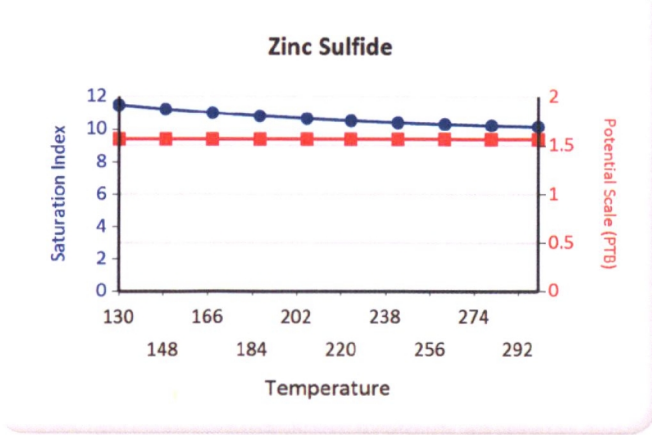
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

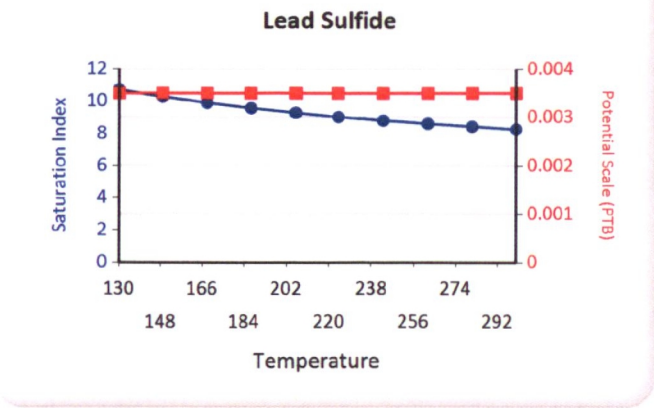
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

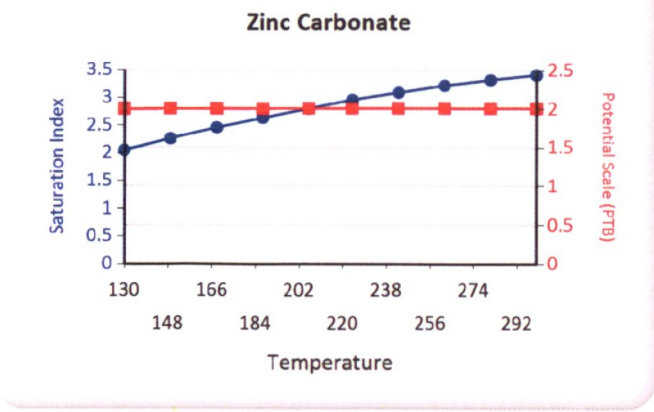


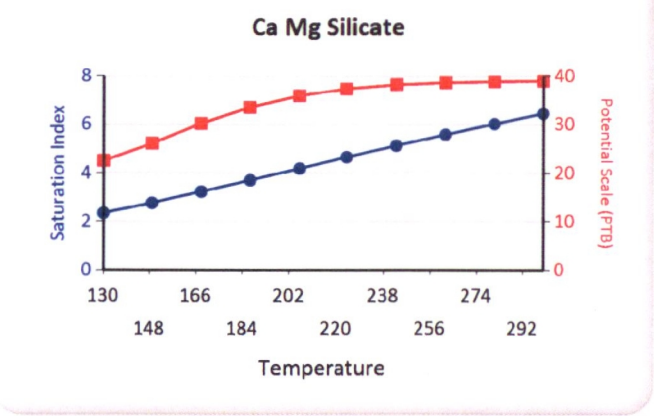


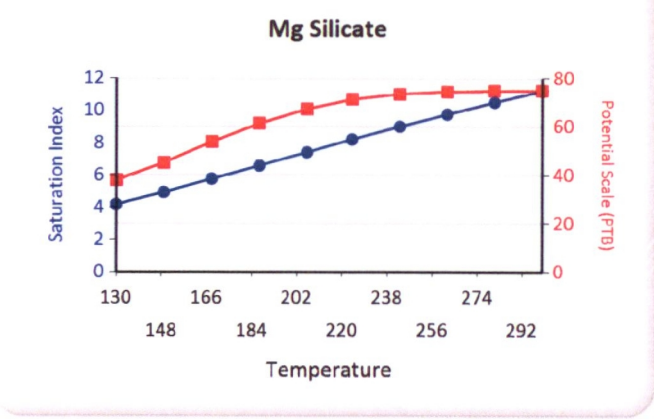


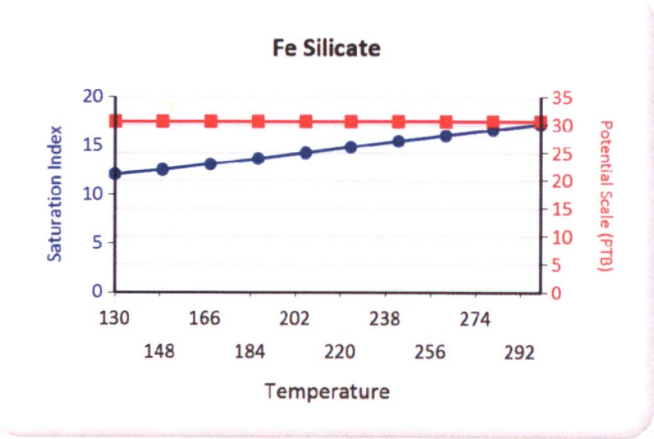



Lead Sulfide
Saturation Index
Potential Scale (PTB)
Temperature
130 166 202 238 274
148 184 220 256 292


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


Ca Mg Silicate
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

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

EPA

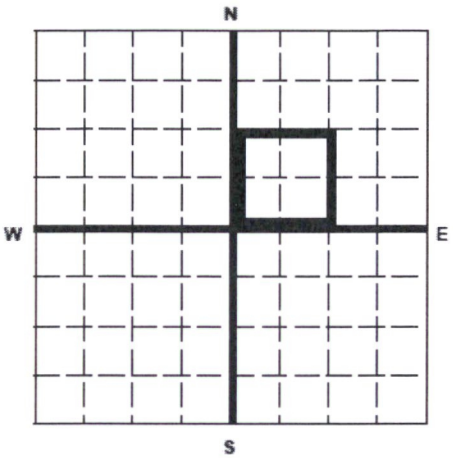
United States Environmental Protection Agency
Washington, DC 20460

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~~ 07122

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

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

Surface Location 1969 ft. frm (N/S) N Line of quarter section U2 Entered
and 2093 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

Date 3/3/16
Initial DJ

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 29-07

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	15	383	387	0		0	0
February	15	378	389	0		0	0
March	15	380	419	0		0	0
April	15	362	391	0		0	0
May	15	386	415	0		0	0
June	15	411	411	0		0	0
July	15	401	412	0		0	0
August	15	408	412	0		0	0
September	15	355	404	0		0	0
October	15	345	375	0		0	0
November	15	351	353	0		0	0
December	15	317	340	0		0	0

Certification

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

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

TAB | GREEN | BLUE | CBI

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

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

multi-chem®
A HALLIBURTON SERVICE

Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 29-07 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327712**		

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):	1.0058
pH:	9.50
Calculated TDS (mg/L):	12515.84
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H2S 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):	4490.93	Chloride (Cl):	6000.00
Potassium (K):	21.43	Sulfate (SO_4):	70.00
Magnesium (Mg):	18.29	Bicarbonate (HCO_3):	1830.00
Calcium (Ca):	57.23	Carbonate (CO_3):	
Strontium (Sr):	3.70	Acetic Acid (CH_3COO)	
Barium (Ba):	5.91	Propionic Acid (C_2H_5COO)	
Iron (Fe):	6.24	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.01	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.54	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.10	Silica (SiO_2):	10.46
Aluminum (Al):	0.04	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	0.77	Phosphates (PO_4):	14.37
Boron (B):	2.56	Oxygen (O_2):	
Silicon (Si):	4.89		

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	2.59	49.94	0.62	2.64	0.00	0.00	3.59	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	2.53	49.91	0.65	2.69	0.00	0.00	3.51	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	2.46	49.88	0.68	2.75	0.00	0.00	3.42	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	2.41	49.85	0.73	2.83	0.00	0.00	3.34	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	2.35	49.82	0.78	2.91	0.00	0.00	3.25	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	2.30	49.78	0.85	3.00	0.00	0.00	3.17	4.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	2.25	49.75	0.93	3.08	0.00	0.00	3.08	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	2.21	49.71	1.03	3.17	0.00	0.00	3.00	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	2.17	49.67	1.14	3.25	0.00	0.00	2.91	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	2.13	49.64	1.27	3.32	0.00	0.00	2.82	4.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

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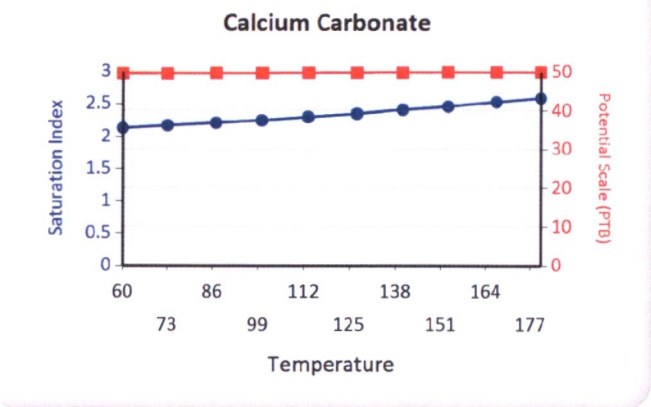
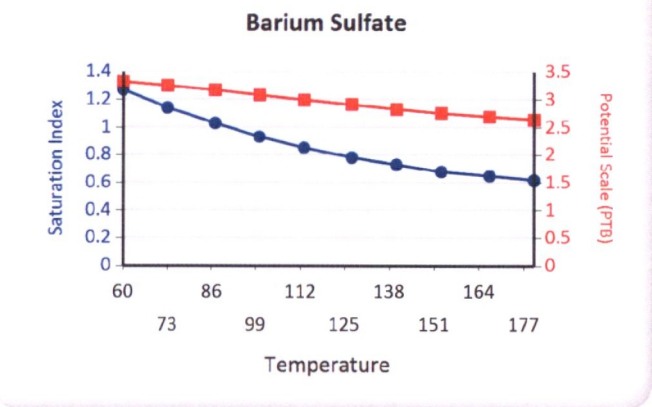
Water Analysis Report

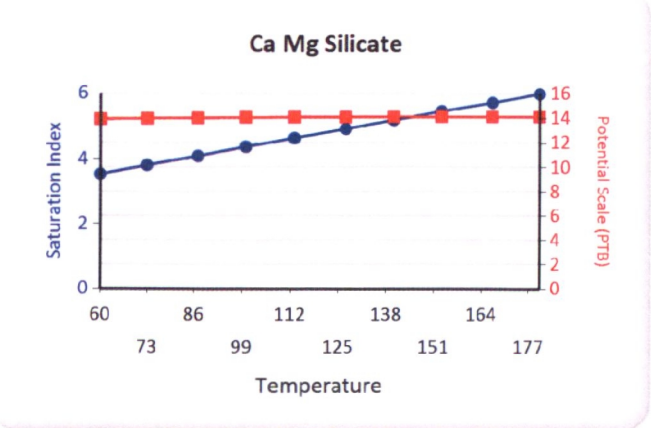
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.68	0.00	0.00	10.54	27.13	5.99	14.13	15.76	4.85
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.74	0.68	0.00	0.00	10.06	27.13	5.72	14.13	15.45	4.85
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.60	0.68	0.00	0.00	9.57	27.13	5.46	14.12	15.13	4.85
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	0.68	0.00	0.00	9.07	27.13	5.19	14.11	14.82	4.85
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.29	0.68	0.00	0.00	8.56	27.13	4.92	14.10	14.50	4.85
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11	0.67	0.00	0.00	8.03	27.12	4.64	14.09	14.19	4.85
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93	0.67	0.00	0.00	7.50	27.10	4.37	14.07	13.87	4.85
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.67	0.00	0.00	6.96	27.08	4.09	14.04	13.56	4.85
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52	0.66	0.00	0.00	6.41	27.03	3.81	14.00	13.25	4.85
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.64	0.00	0.00	5.85	26.93	3.53	13.93	12.94	4.85

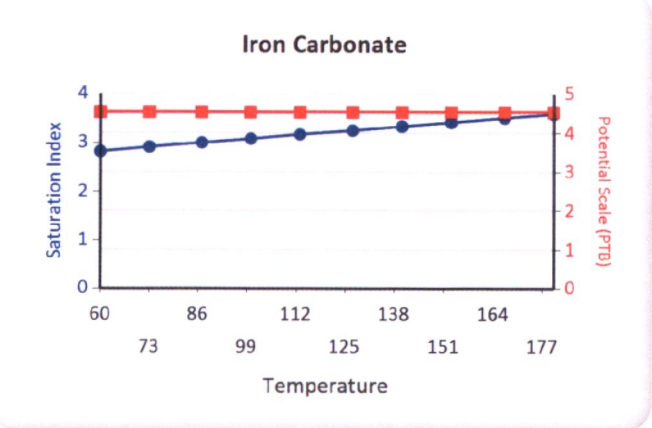
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

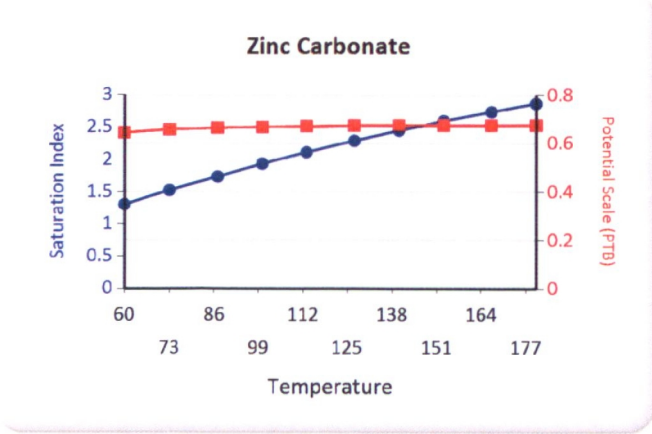
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

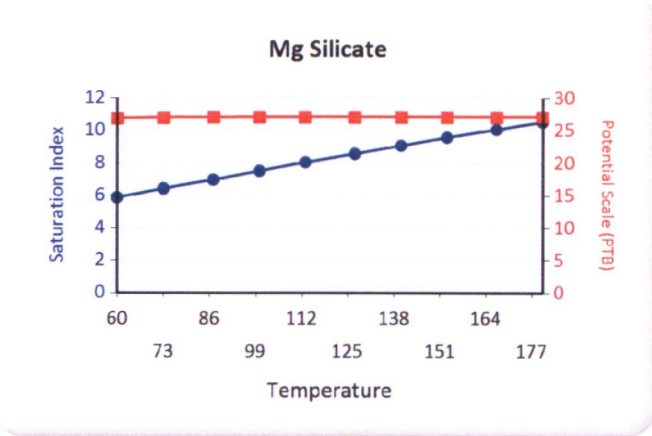


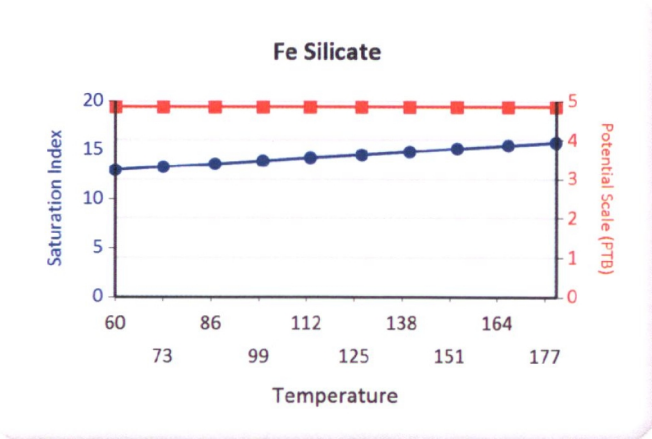







Zinc Carbonate
Saturation Index
Potential Scale (PTB)
Temperature
3
2.5
2
1.5
1
0.5
0
0.8
0.6
0.4
0.2
0
60
86
112
138
164
73
99
125
151
177


Mg Silicate
Saturation Index
Potential Scale (PTB)
Temperature
12
10
8
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
20
15
10
5
0
5
4
3
2
1
0
60
86
112
138
164
73
99
125
151
177

June 11, 2014

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

RE: EPA AREA PERMIT NO. UT2736-07122
Mechanical Integrity Test
Two year retesting for Ute Tribal 29-07

Mr. Breffle:
The enclose Mechanical Integrity Test was performed on the above referenced well on May 27, 2014. This MIT was performed because the well was due for a 2 year Mechanical Integrity Test due to inactivity.

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 29-07

U2 Entered
Date 6/25/14
Initial DB

GREEN	BLUE	CBI
	2	

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

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

EPA Witness: _____ Date: 5/27/14
Test conducted by: CHAD STEVENSON
Others present: _____

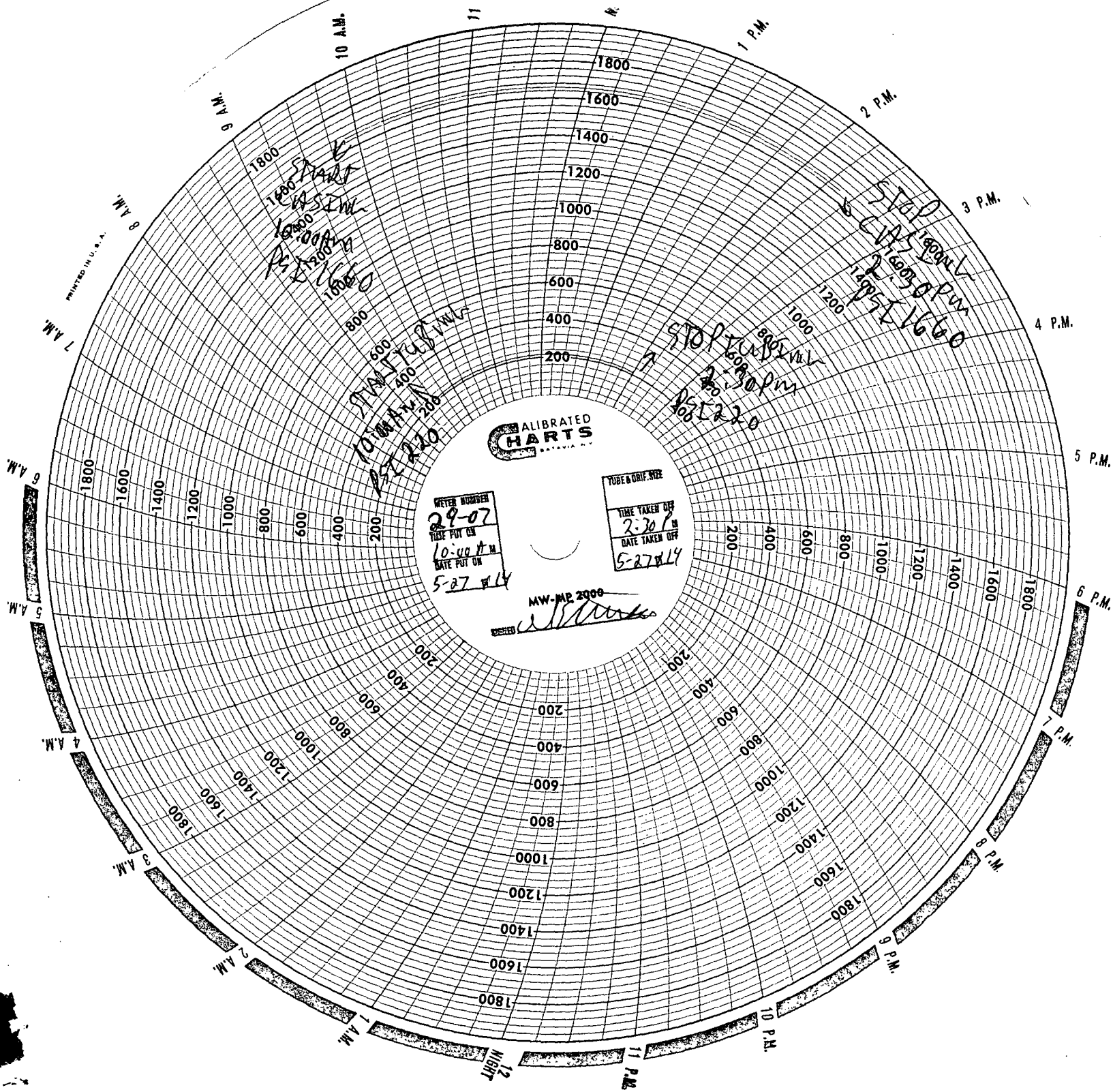
Well Name: 29-07 Type: ER SWD **Status: AC TA UC**
Field: ANTELOPE CREEK
Location: 29-07 Sec: ____ T ____ N / S R ____ E / W County: DUCHESNE State: UT
Operator: PETROGLYPH ENERGY
Last MIT: ___/___/___ **Maximum Allowable Pressure:** _____ **PSIG**

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: _____ bpd
Pre-test annulus pressure: _____ psig

MIT DATA TABLE	*Test #1*	*Test #2*	*Test #3*
TUBING		***PRESSURE RECORD***	
Initial Pressure	220 psig	psig	psig
End of test pressure	220 psig	psig	psig
CASING / TUBING ANNULUS		***PRESSURE RECORD***	
0 minutes	1660 psig	psig	psig
5 minutes	1660 psig	psig	psig
10 minutes	1660 psig	psig	psig
15 minutes	1660 psig	psig	psig
20 minutes	1660 psig	psig	psig
25 minutes	1660 psig	psig	psig
30 minutes	1660 psig	psig	psig
4 1/2 Hours *minutes*	1660 psig	psig	psig
_____ *minutes*	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

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


CALIBRATED CHARTS
BATAVIA, N.Y.
METER NUMBER
29-07
TUBE PUT ON
10:00 A.M.
DATE PUT ON
5-27-14
TUBE & ORIF. SIZE
TIME TAKEN OFF
2:30 P.M.
DATE TAKEN OFF
5-27-14
MW-MP 2000
PRINTED IN U.S.A.
START
CVS 1800
10:00 AM
PSI 1660
STOP
CVS 1800
2:30 PM
PSI 1660
START
CVS 1800
10:00 AM
PSI 220
STOP
CVS 1800
2:30 PM
PSI 220

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

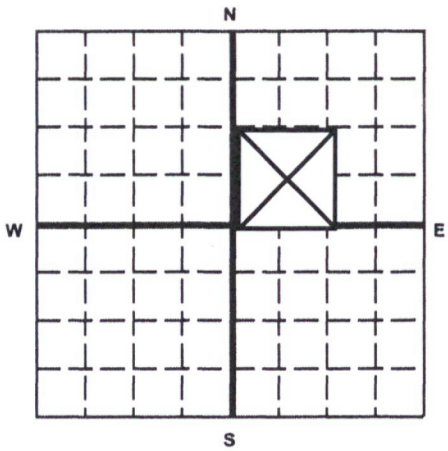
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-07122

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

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

Surface Location 1969 ft. frm (N/S) N Line of quarter section
and 2093 ft. from (E/W) E Line of quarter section.

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

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

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 29-07

MONTH	YEAR	INJECTION PRESSURE AVERAGE PSIG	INJECTION PRESSURE MAXIMUM PSIG	TOTAL VOLUME INJECTED BBL	TOTAL VOLUME INJECTED MCF	TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MINIMUM PSIG	TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING) MAXIMUM PSIG
January	13	765	776	0		0	0
February	13	752	759	0		0	0
March	13	742	746	0		0	0
April	13	733	737	0		0	0
May	13	741	747	0		0	0
June	13	745	748	0		0	0
July	13	739	741	0		0	0
August	13	734	739	0		0	0
September	13	725	730	0		0	0
October	13	722	729	0		0	0
November	13	702	730	0		0	0
December	13	719	724	0		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the 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	CBI
		2	

U2 Entered
Date 3/21/14
Initial

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

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 29-07 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-263027**

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):	1.003
pH:	8.00
Calculated TDS (mg/L):	8119.39
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):	2985.32	Chloride (Cl):	4000.00
Potassium (K):	14.00	Sulfate (SO_4):	571.00
Magnesium (Mg):	6.80	Bicarbonate (HCO_3):	488.00
Calcium (Ca):	15.00	Carbonate (CO_3):	
Strontium (Sr):	0.87	Acetic Acid (CH_3COO)	
Barium (Ba):	0.19	Propionic Acid (C_2H_5COO)	
Iron (Fe):	30.00	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.10	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.20	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.77	Silica (SiO_2):	5.14

Notes:
B=.6 Al=.01 Li=.27

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.95	0.10	0.00	0.00	1.97	20.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	0.00	0.00	0.80	0.09	0.00	0.00	2.02	20.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	0.00	0.01	0.67	0.09	0.00	0.00	2.10	20.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	0.04	0.47	0.56	0.08	0.00	0.00	2.19	21.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	0.08	0.98	0.46	0.07	0.00	0.00	2.27	21.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	0.13	1.57	0.38	0.07	0.00	0.00	2.35	21.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	0.18	2.22	0.30	0.06	0.00	0.00	2.43	21.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	0.24	2.92	0.24	0.05	0.00	0.00	2.51	21.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	0.30	3.67	0.19	0.04	0.00	0.00	2.58	21.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	0.36	4.45	0.15	0.03	0.00	0.00	2.65	21.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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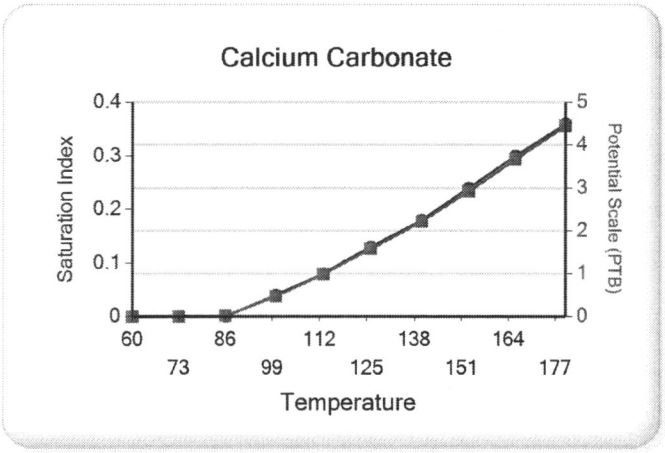
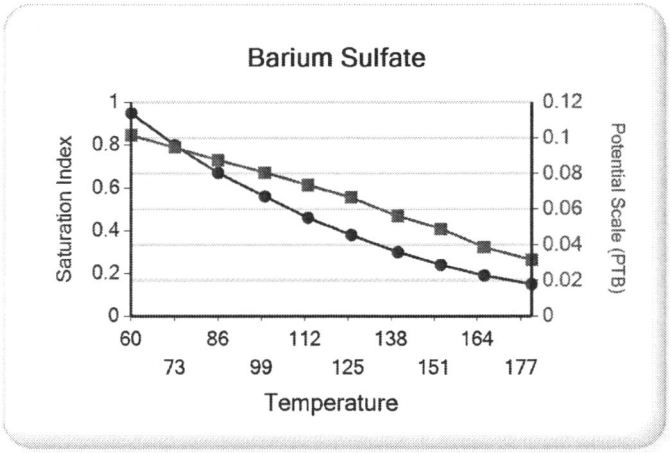
Water Analysis Report

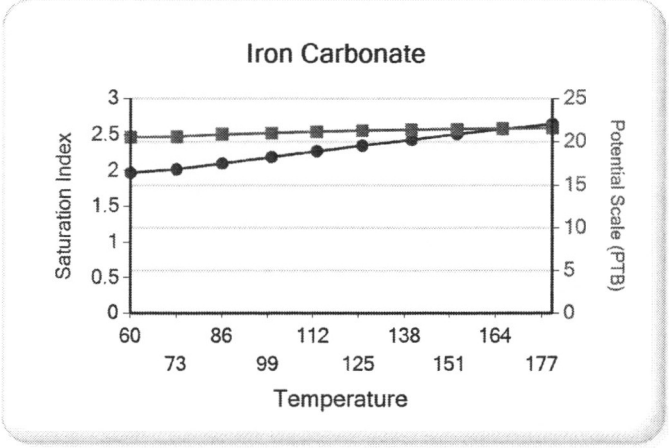
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	5.86	5.42
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.49	0.00	0.00	0.00	0.00	0.00	0.00	5.97	5.43
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.82	0.00	0.00	0.00	0.00	0.00	0.00	6.34	5.49
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	1.03	0.00	0.00	0.00	0.00	0.00	0.00	6.74	5.52
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.16	0.00	0.00	0.00	0.00	0.00	0.00	7.17	5.54
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.24	0.00	0.00	0.00	0.00	0.00	0.00	7.61	5.56
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	1.30	0.00	0.00	0.00	0.00	0.00	0.00	8.06	5.57
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	1.33	0.00	0.00	0.00	0.00	0.00	0.00	8.52	5.57
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.35	0.00	0.00	0.14	0.32	0.00	0.00	8.98	5.57
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.37	0.00	0.00	0.78	1.47	0.00	0.00	9.44	5.57

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

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







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1553 East Highway 40
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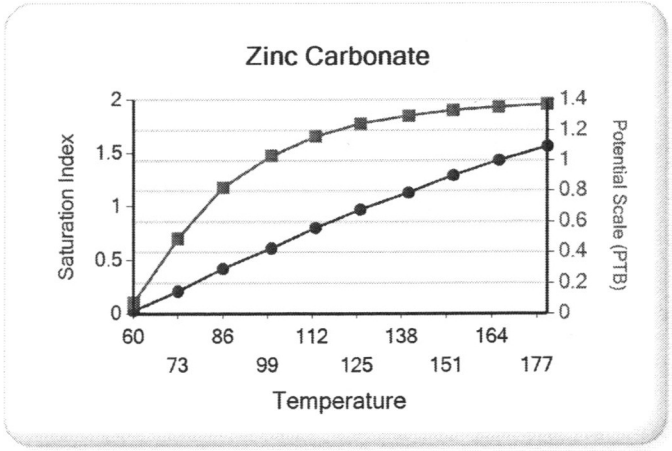
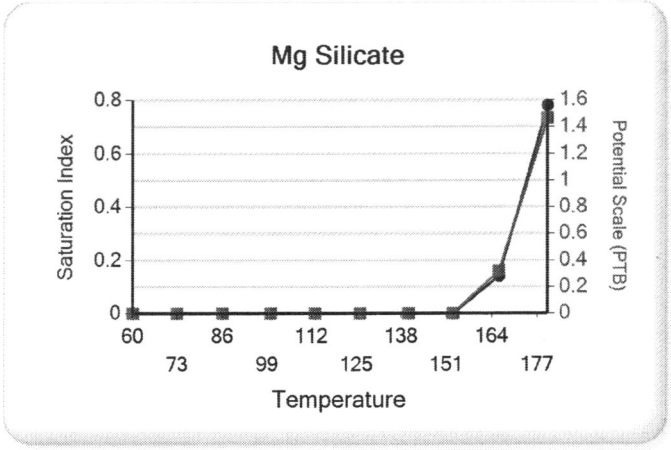
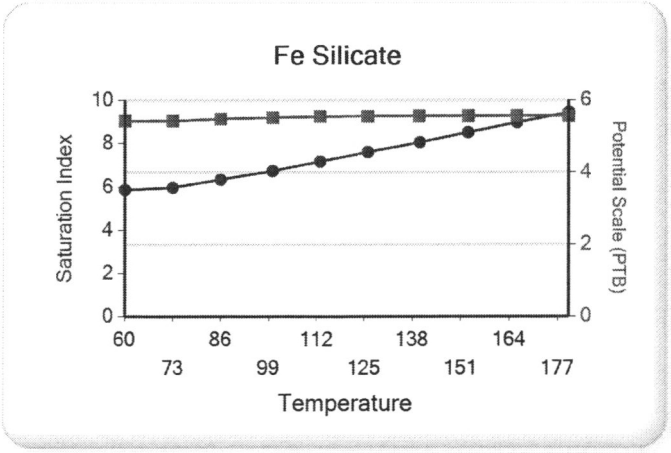
Water Analysis Report







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

JUL 23 2007

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

RE: Authorization to Inject
UIC Permit No. UT20736-00000
Well ID: UT20736-07122
Ute Tribal No. 29-07
Duchesne County, Utah

Dear Mr. Wall:

Thank you for submitting information pertaining to the newly constructed or converted Ute Tribal No. 29-07 enhanced recovery injection well to the Region 8 Ground Water Program office of the Environmental Protection Agency (EPA). The "Prior To Commencing Injection" requirements for the Ute Tribal No. 29-07 injection well required well owner and operator Petroglyph Operating Company, Inc. to submit the following information to the Director:

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

All required information has been submitted, and has been reviewed and approved by the EPA. Therefore, effective upon your receipt of this letter, Administrative approval hereby is granted for injection into the Ute Tribal No. 29-07 enhanced recovery injection well under the conditions of the Authorization for Additional Well and UIC Area Permit UT20736-00000 as modified.

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

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

The Director has determined that the maximum allowable surface injection pressure (MAIP) for the Ute Tribal No. 29-07 shall not exceed **1480** psig. Please be reminded that it is the responsibility of the owner/operator to be aware of, and to comply with, all conditions of Authorization for Additional Well UT20736-07122 and EPA UIC Area Permit UT20736-00000 and relevant modifications as issued.

If you have any questions regarding this Authorization, please call Linda Bowling of my staff at (303) 312-6254. For questions regarding notification, testing, monitoring, reporting or other Permit requirements, please contact Nathan Wiser of the UIC Technical Enforcement Program by calling (303) 312-6211.

Sincerely,

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

cc:

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

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

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

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

Shawn Chapoose, Director
Land Use Department
Ute Indian Tribe

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

Fluid Minerals Engineering Office
BLM - Vernal Office

Lynn Becker, Director
Energy and Minerals Department
Ute Indian Tribe

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

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

Chester Mills, Superintendent
BIA - Uintah & Ouray Indian Agency

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

bcc w/o enclosures:

Judy Hervig, 8TAP
Nathan Wiser, ENF-UFO

CONCURRENCE COPY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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LMB 7/18/07

8P-W-GW 7/19/07

8P-W-GW 7/23/07

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

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