

Application

Part *II*

DJR Operating, LLC

Nageezi Unit WDW #1

INJECTION WELL DATA SHEET

Tubing Size:

Surface Casing:

9-5/8 in, 36 lb., J-55 set at 500 ft, ST&C coupling, Cemented with 253 sx (352 cu ft). Circulate cement to surface, Hole size – 12-1/4 in.

Production Casing:

7 in, 26 lb., N-80 (6970 ft) set at 6970 ft., LT&C coupling, Cement in two stages with stage tool (DV) at 3865 ft using 700 cu ft (587 cu ft 1st lead and 113 cu ft in 1st tail) in first stage and 872 (759 2nd lead and 113 in 2nd tail) cubic ft in second stage. Hole size – 8-3/4 in.

Injection Tubing:

3-1/2 in J-55 EUE 9.3 lb./ft Internally Coated Tubing set at 6785 ft.

Type of Packer:

7 in by 3 1/2 in AS1-X packer 10K nickel coated.

Packer Setting Depth:

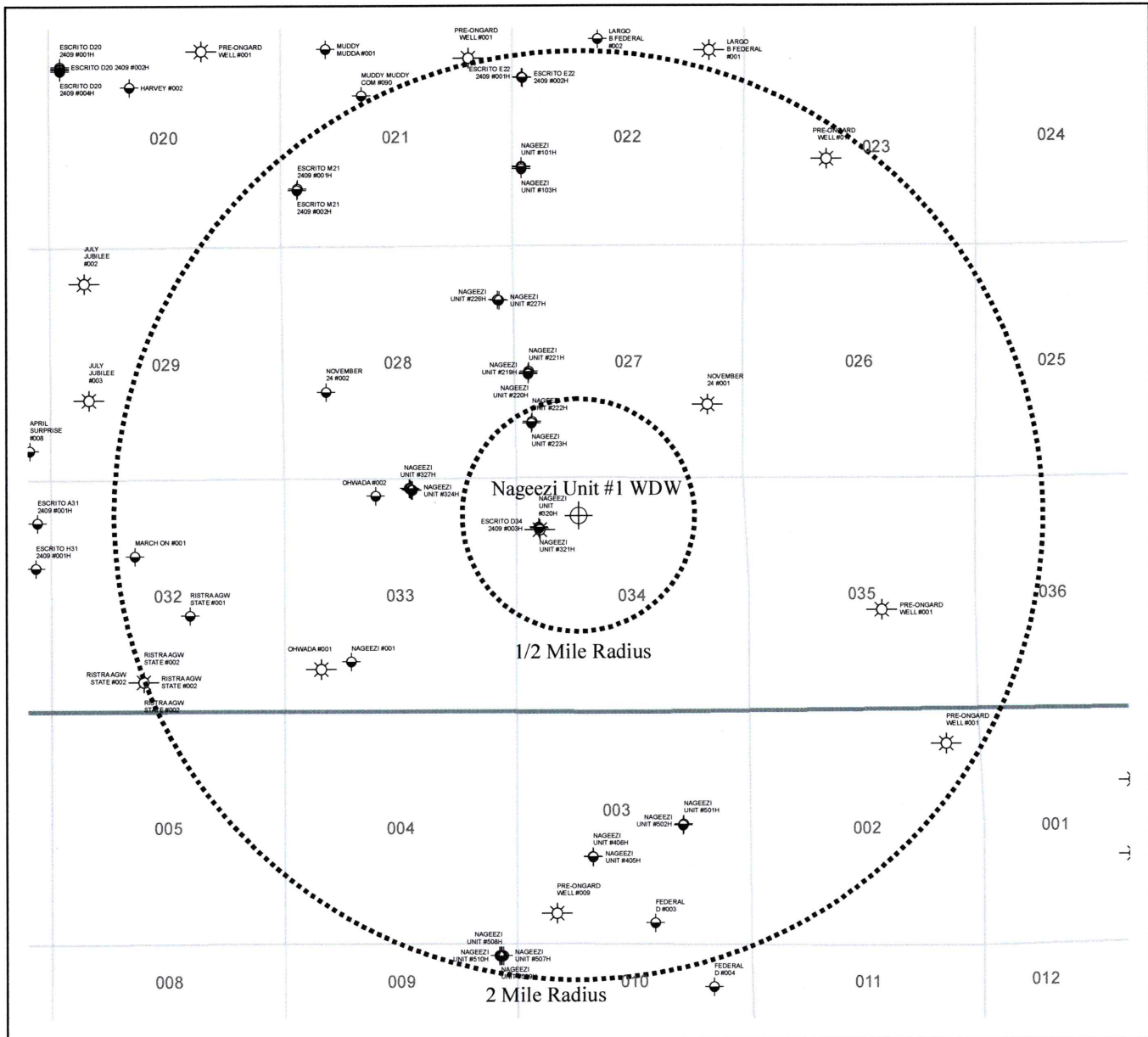
Set in tension at 6725 ft or 50 ft above the upper most perforation.

Other Type of Tubing/Casing Seal (If applicable): -NA-

Additional Data

1. Is this a new well drilled for injection: X Yes No
If no, for what purpose was the well originally drilled?
2. Name of Injection Formation: Entrada Sandstone
3. Name of Field or Pool (If applicable): NA
4. Has the well ever been perforated in other zone(s) No
List all such Perforated intervals and give plugging detail, i.e. Sacks of cement or plug(s) used:
NA
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Fruitland Formation - 965', Picture Cliffs - 1335', Mancos Shale - 3915', Gallup Sandstone - 4655', Dakota Sandstone - 5685'

9W



24N

23N

Legend- 2 Mile Radius Map

-  1/2 Mile Radius
-  2 Mile Radius Nageezi
-  Suspended, Cancelled, Plugged
-  New, Active
-  Nageezi Unit WDW

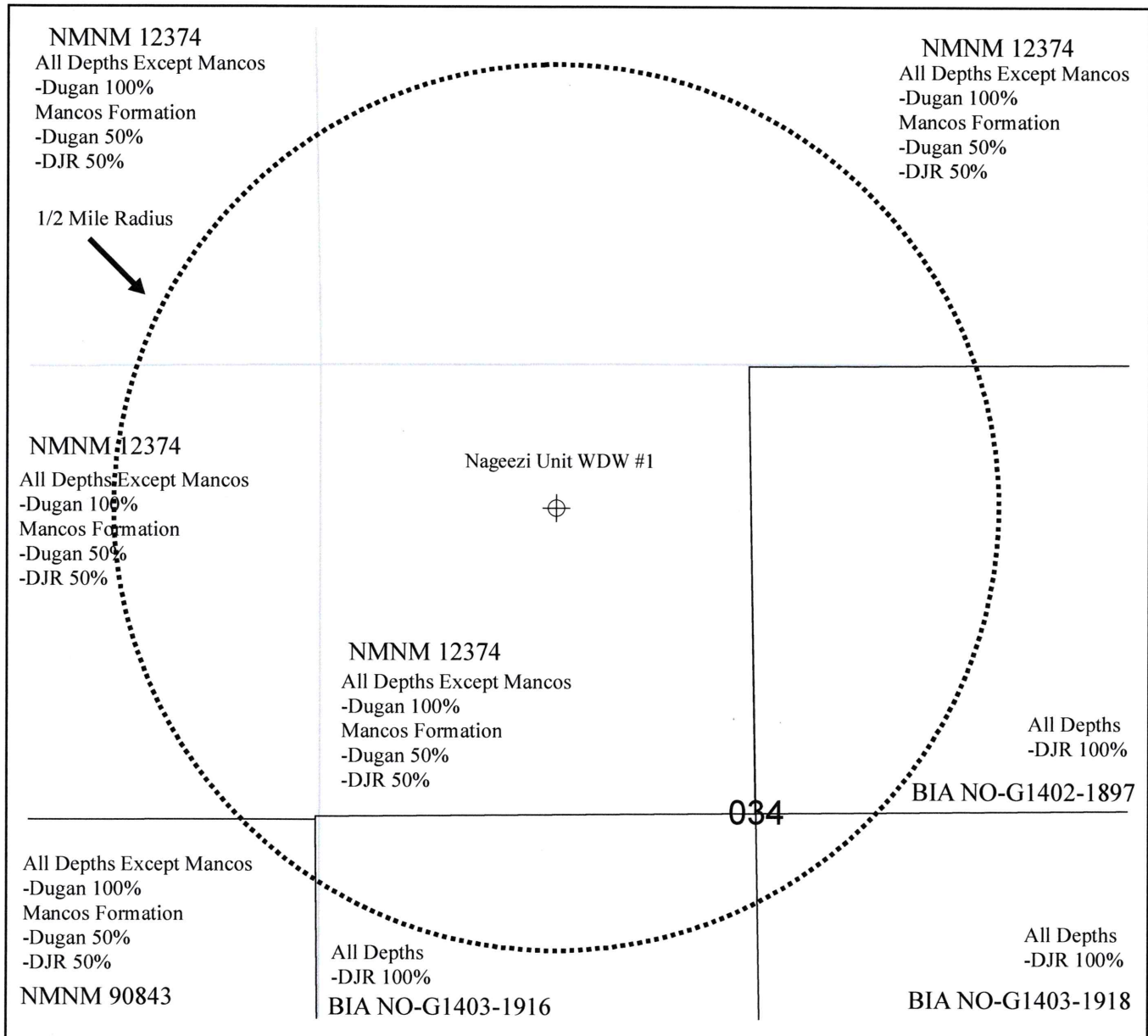
Nageezi Unit WDW #1 - Data Sheet of All Wells Within 2 Miles

API	Well Name	Well Number	Type	Mineral Owner	Surface Owner	Status	Section	Township	Range	OCD Unit Letter	Last Production	Spud Date	Plugged On	Current Operator
30-045-35440	NAGEEZI UNIT	#320H	Oil	Federal	Federal	Active	34 24N	09W	D		Jun-19	8/2/2014		[371838] DJR OPERATING, LLC
30-045-35583	NAGEEZI UNIT	#321H	Oil	Federal	Federal	Active	34 24N	09W	D		Jun-19	8/16/2014		[371838] DJR OPERATING, LLC
30-045-35475	ESCRITO D34 2409	#003H	Oil	Federal	Federal	Plugged, Site Released	34 24N	09W	D			7/26/2014	8/1/2014 INC.	
30-045-35478	NAGEEZI UNIT	#219H	Oil	Federal	Federal	Active	27 24N	09W	L		Jun-19	8/8/2014		[371838] DJR OPERATING, LLC
30-045-35481	NAGEEZI UNIT	#220H	Oil	Federal	Federal	Active	27 24N	09W	L		Jun-19	7/27/2014		[371838] DJR OPERATING, LLC
30-045-35820	NAGEEZI UNIT	#221H	Oil	Federal	Federal	Active	27 24N	09W	L		Jun-19	3/17/2017		[371838] DJR OPERATING, LLC
30-045-35480	NAGEEZI UNIT	#222H	Gas	Federal	Federal	Active	27 24N	09W	M		Jun-19	8/9/2014		[371838] DJR OPERATING, LLC
30-045-35479	NAGEEZI UNIT	#223H	Oil	Federal	Federal	Active	27 24N	09W	M		Jun-19	7/28/2014		[371838] DJR OPERATING, LLC
30-045-25295	24-Nov	#001	Oil	Federal	Federal	Plugged, Site Released	27 24N	09W	I		Sep-02	2/1/1982	1/31/2005	[6515] DUGAN PRODUCTION CORP
30-045-35701	ESCRITO M21 2409	#001H	Oil	Federal	Federal	New	21 24N	09W	M					[371838] DJR OPERATING, LLC
30-045-35703	ESCRITO M21 2409	#002H	Oil	Federal	Federal	New	21 24N	09W	M					[371838] DJR OPERATING, LLC
30-045-25919	MUDDY MUDDA	#001	Oil	Federal	Federal	Active	21 24N	09W	D		19-Feb	4/27/1984		[6515] DUGAN PRODUCTION CORP
30-045-31767	MUDDY MUDDY COM	#090	Gas	Federal	Federal	Active	21 24N	09W	F		19-May	10/24/2003		[6515] DUGAN PRODUCTION CORP
30-045-05105	PRE-ONGARD WELL	#001	Oil	Federal	Federal	Plugged, Site Released	21 24N	09W	A			9/13/1957	8/2/1960	[214263] PRE-ONGARD WELL OPERATC
30-045-35709	ESCRITO E22 2409	#001H	Gas	Federal	Federal	New	22 24N	09W	E					[371838] DJR OPERATING, LLC
30-045-35706	ESCRITO E22 2409	#002H	Gas	Federal	Federal	New	22 24N	09W	E					[371838] DJR OPERATING, LLC
30-045-35702	NAGEEZI UNIT	#101H	Oil	Federal	Federal	New	22 24N	09W	L					[371838] DJR OPERATING, LLC
30-045-35700	NAGEEZI UNIT	#102H	Oil	Federal	Federal	New	22 24N	09W	L					[371838] DJR OPERATING, LLC
30-045-35704	NAGEEZI UNIT	#103H	Oil	Federal	Federal	New	22 24N	09W	L					[371838] DJR OPERATING, LLC
30-045-05103	LARGO B FEDERAL	#001	Oil	Federal	Federal	Plugged, Site Released	22 24N	09W	A		Sep-13	3/10/1958	8/3/2015	[6515] DUGAN PRODUCTION CORP
30-045-33173	LARGO B FEDERAL	#002	Oil	Federal	Federal	Active	22 24N	09W	C		Jun-19	9/27/2005		[6515] DUGAN PRODUCTION CORP
30-045-35558	NAGEEZI UNIT	#226H	Oil	Federal	Federal	New	28 24N	09W	A					[371838] DJR OPERATING, LLC
30-045-35557	NAGEEZI UNIT	#227H	Oil	Federal	Federal	New	28 24N	09W	A					[371838] DJR OPERATING, LLC
30-045-28961	24-Nov	#002	Oil	Federal	Federal	Active	28 24N	09W	L					[6515] DUGAN PRODUCTION CORP
30-045-26997	MARCH ON	#001	Oil	State	State	Active	32 24N	09W	F		Dec-18	11/22/1993		[6515] DUGAN PRODUCTION CORP
30-045-27561	RISTRA AGW STATE	#001	Oil	State	State	Active	32 24N	09W	J		19-Jun	8/30/1988		[6515] DUGAN PRODUCTION CORP
30-045-30659	RISTRA AGW STATE	#002	Oil	State	State	Cancelled Apd	32 24N	09W	N		19-Jun	1/31/1990		[6515] DUGAN PRODUCTION CORP
30-045-31404	RISTRA AGW STATE	#002	Oil	State	State	Cancelled Apd	32 24N	09W	N					[25575] EOG Y RESOURCES, INC.
30-045-32893	RISTRA AGW STATE	#002	Oil	State	State	Cancelled Apd	32 24N	09W	N					[25575] EOG Y RESOURCES, INC.
30-045-34587	RISTRA AGW STATE	#002	Oil	State	State	Cancelled Apd	32 24N	09W	N					[25575] EOG Y RESOURCES, INC.
30-045-35782	NAGEEZI UNIT	#324H	Oil	Federal	Federal	New	33 24N	09W	B					[371838] DJR OPERATING, LLC
30-045-35785	NAGEEZI UNIT	#325H	Oil	Federal	Federal	New	33 24N	09W	B					[371838] DJR OPERATING, LLC
30-045-35786	NAGEEZI UNIT	#326H	Oil	Federal	Federal	New	33 24N	09W	B					[371838] DJR OPERATING, LLC
30-045-35783	NAGEEZI UNIT	#327H	Oil	Federal	Federal	New	33 24N	09W	B					[371838] DJR OPERATING, LLC
30-045-05089	NAGEEZI	#001	Oil	Federal	Federal	Active	33 24N	09W	N		May-19	9/20/1956		[6515] DUGAN PRODUCTION CORP
30-045-28981	OHWADA	#001	Gas	Federal	Federal	Plugged, Site Released	33 24N	09W	M			10/13/1993	7/27/1998	[6515] DUGAN PRODUCTION CORP
30-045-29112	OHWADA	#002	Oil	Federal	Federal	Active	33 24N	09W	C		Mar-19	8/5/1994		[6515] DUGAN PRODUCTION CORP
30-045-35841	NAGEEZI UNIT	#405H	Oil	Navajo	Navajo	Active	3 23N	09W	K		Jun-19	5/26/2017		[371838] DJR OPERATING, LLC
30-045-35842	NAGEEZI UNIT	#406H	Oil	Navajo	Navajo	Active	3 23N	09W	K		Jun-19	5/30/2017		[371838] DJR OPERATING, LLC
30-045-35860	NAGEEZI UNIT	#501H	Oil	Federal	Indian	Active	3 23N	09W	G		Jun-19	6/19/2018		[371838] DJR OPERATING, LLC
30-045-35863	NAGEEZI UNIT	#502H	Oil	Federal	Indian	Active	3 23N	09W	G		Jun-19	6/20/2018		[371838] DJR OPERATING, LLC
30-045-28455	FEDERAL D	#003	Oil	Federal	Indian	Active	3 23N	09W	O		May-19	2/27/1991		[372834] EPIC ENERGY, L.L.C.
30-045-35855	NAGEEZI UNIT	#507H	Oil	Navajo	Navajo	Active	9 23N	09W	A		Jun-19	6/22/2018		[371838] DJR OPERATING, LLC
30-045-35859	NAGEEZI UNIT	#508H	Oil	Navajo	Indian	New	9 23N	09W	A					[371838] DJR OPERATING, LLC
30-045-35858	NAGEEZI UNIT	#509H	Oil	Navajo	Indian	New	9 23N	09W	A					[371838] DJR OPERATING, LLC
30-045-35862	NAGEEZI UNIT	#510H	Oil	Navajo	Navajo	Active	9 23N	09W	A		Jun-19	6/23/2018		[371838] DJR OPERATING, LLC
30-045-35764	NAGEEZI UNIT	#513H	Oil	Federal	Indian	New	9 23N	09W	P					[371838] DJR OPERATING, LLC
30-045-35763	NAGEEZI UNIT	#514H	Oil	Indian	Indian	New	9 23N	09W	P					[371838] DJR OPERATING, LLC

* Wells in bold type are located within the 1/2 Mile Area of Review

Township 24 North, Range 9 West
San Juan County, NM

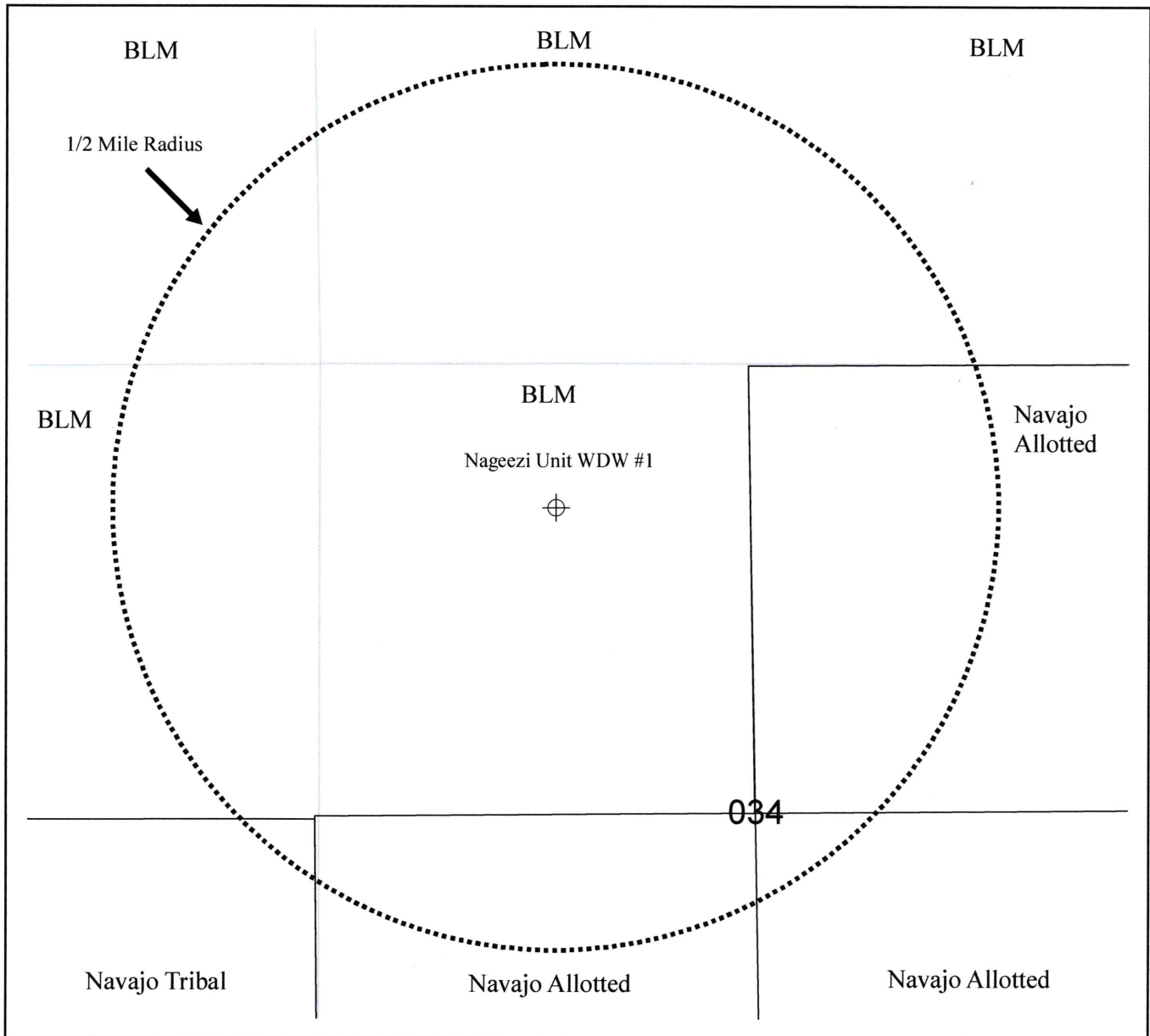
9W



C-108 Application to Inject
Nageezi Unit WDW #1
Part V. b.
Lease Ownership Map

Township 24 North, Range 9 West
San Juan County, NM

9W



C-108 Application to Inject
Nageezi Unit WDW #1
Part V. c.
Surface Ownership Map

Application for Authorization to Inject

DJR Operating, LLC

Nageezi Unit WDW #1

Part VI. Data on Offset Wells

There are no wells within the ½ mile area of review which penetrate the proposed injection zone.
There are also no plugged wells in the ½ mile radius of the proposed injection well.

Application for Authorization to Inject

DJR Operating, LLC

Nageezi Unit WDW #1

Part VII. Operations Plan

1. Average Injection Rate: 3,000-bwpd with a maximum of 6,000-bwpd.
2. The system will be closed.
3. The average injection pressure: 1000 psi and the maximum will be 1300-psi.
4. The source of injected water will be produced water from the Nageezi Unit wells in the area (T23N and 24N, R9W) The water to be injected is compatible with the water in the disposal zone.
5. Injection is for disposal purposes into a zone (Entrada Sandstone) that is not productive of oil or gas within one mile of the proposed injection well.

Entrada Formation Water Samples

1. Entrada SWD

Section 8-25N-3W

2. Santa Fe 20 No. 1 SWD

Section 20-21N-8W

3. Herry Monster #3 SWD

Section 11-24N-11W

Water Analysis of Entrada Formation Water

(from TnT Disposal well located in section 8/T25N/R3W)

Multi-Chem Analytical Laboratory

1122 S. FM1788
Midland, TX 76706

Units of Measurement: Standard

multi-chem

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: TNT Environmental
Well Name: SWD ENTRADA
Sample Point: SWD
Sample Date: 11/20/2014
Sample ID: WA-294316

Sales Rep: Greg Ramalho
Lab Tech: Andrew Callaghan

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

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	11/25/2014	Cations	mg/L	Anions	mg/L
System Temperature 1 (°F):	31	Sodium (Na):	4455.35	Chloride (Cl):	6000.00
System Pressure 1 (psig):	15	Potassium (K):	44.79	Sulfate (SO ₄):	1094.00
System Temperature 2 (°F):	300	Magnesium (Mg):	23.10	Bicarbonate (HCO ₃):	427.00
System Pressure 2 (psig):	300	Calcium (Ca):	115.67	Carbonate (CO ₃):	120.00
Calculated Density (g/ml):	1.0059	Strontium (Sr):	7.60	Acetic Acid (CH ₃ COO):	
pH:	7.60	Barium (Ba):	9.30	Propionic Acid (C ₂ H ₅ COO):	
Calculated TDS (mg/L):	12320.63	Iron (Fe):	1.82	Butanoic Acid (C ₃ H ₇ COO):	
CO ₂ in Gas (%):		Zinc (Zn):	0.10	Isobutyric Acid ((CH ₃) ₂ CHCOO):	
Dissolved CO ₂ (mg/L):	80.00	Lead (Pb):	0.00	Fluoride (F):	
H ₂ S in Gas (%):		Ammonia NH ₃ :		Bromine (Br):	
H ₂ S in Water (mg/L):	2.50	Manganese (Mn):	0.55	Silica (SiO ₂):	21.35

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ 2H ₂ O		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
300.00	300.00	1.90	85.63	1.92	5.47	2.21	0.99	1.95	1.31	0.00	0.00	0.09	1.02	0.00	0.00	6.95	0.05
270.00	268.00	1.68	77.73	1.90	5.47	2.04	0.99	1.80	1.30	0.00	0.00	0.00	0.00	0.00	0.00	7.04	0.05
240.00	236.00	1.47	68.31	1.90	5.47	1.89	0.98	1.63	1.29	0.00	0.00	0.00	0.00	0.00	0.00	7.17	0.05
210.00	205.00	1.26	57.99	1.92	5.47	1.76	0.97	1.45	1.27	0.00	0.00	0.00	0.00	0.00	0.00	7.32	0.05
180.00	173.00	1.06	47.51	1.98	5.48	1.67	0.96	1.25	1.24	0.00	0.00	0.00	0.00	0.00	0.00	7.53	0.05
150.00	141.00	0.88	37.61	2.08	5.49	1.62	0.96	1.03	1.19	0.00	0.00	0.00	0.00	0.00	0.00	7.79	0.05
120.00	110.00	0.71	29.02	2.23	5.51	1.64	0.96	0.81	1.11	0.00	0.00	0.00	0.00	0.00	0.00	8.13	0.05
90.00	78.00	0.57	22.00	2.44	5.52	1.73	0.97	0.59	0.96	0.00	0.00	0.00	0.00	0.00	0.00	8.56	0.05
60.00	46.00	0.46	16.76	2.73	5.53	1.92	0.98	0.36	0.73	0.00	0.00	0.00	0.00	0.00	0.00	9.11	0.05
31.00	15.00	0.39	13.73	3.10	5.53	2.26	0.99	0.16	0.39	0.00	0.00	0.00	0.00	0.00	0.00	9.83	0.05

		Hemihydrate CaSO ₄ 0.5H ₂ O		Anhydrite CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
300.00	300.00	0.00	0.00	0.14	31.79	0.00	0.00	0.91	0.06	0.00	0.00	7.71	25.75	4.14	13.11	9.66	1.42
270.00	268.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.06	0.00	0.00	6.34	25.03	3.32	12.39	8.62	1.41
240.00	236.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.05	0.00	0.00	4.87	22.02	2.45	10.55	7.49	1.41
210.00	205.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.03	0.00	0.00	3.30	15.59	1.51	7.07	6.31	1.40
180.00	173.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	7.51	0.54	2.57	5.08	1.38
150.00	141.00	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	3.84	1.32
120.00	110.00	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	2.66	1.18
90.00	78.00	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	1.55	0.90
60.00	46.00	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	0.45
31.00	15.00	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	0.01	0.01



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS
WATER ANALYSIS

RECEIVED

MAR 25 1977

Minerals Management Inc.

30-045-22291
G-20-21n-8w

File WA - 5

Company Dome Petroleum Corp. Well Name Sante Fe 20 No. 1 Sample No. SS-2
Formation _____ Depth _____ Sampled From _____
Location Sec 20 T 21N R 8W Field _____ County San Juan State N.M.
Date Sampled 3-9-77 Date Analyzed 3-13-77 Engineer RGC

Total Dissolved Solids 11,114.5 mg/L

Sp. Gr. 1.009 @ 70 °F.

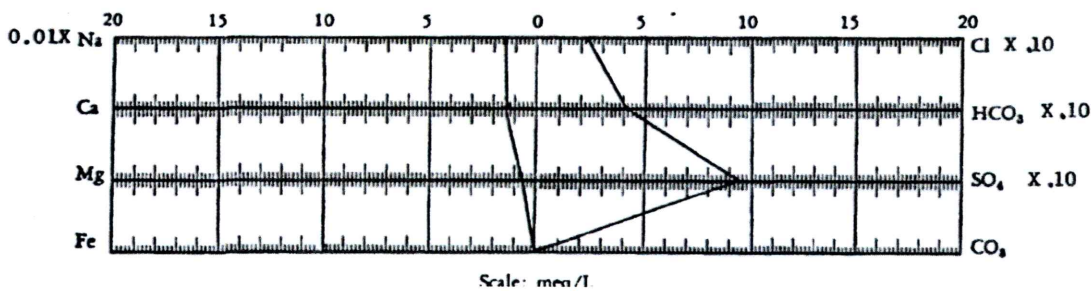
Resistivity 1.0 ohm-meters @ 70 °F.

Hydrogen Sulfide Present

pH 7.73

Constituents	meq/L	mg/L	Constituents	meq/L	mg/L
Sodium	<u>140.44</u>	<u>3228.7</u>	Chloride	<u>25.47</u>	<u>903.0</u>
Calcium	<u>1.35</u>	<u>27.0</u>	Bicarbonate	<u>41.73</u>	<u>2546.0</u>
Magnesium	<u>0.73</u>	<u>8.9</u>	Sulfate	<u>91.61</u>	<u>4400.0</u>
Iron	<u>0.03</u>	<u>0.9</u>	Carbonate	<u>ND</u>	<u>ND*</u>
Barium	<u>ND</u>	<u>ND</u>	Hydroxide	<u>ND</u>	<u>ND</u>

*ND = Less than 0.1 mg/L



HALLIBURTON

Water Analysis Report

30-045-33217

F-11-24n-11w

To:	<u>Dugan Production</u>	Date:	<u>11/10/2005</u>
Submitted by:	<u>Halliburton Energy Services</u>	Date Rec:	<u>11/10/2005</u>
Attention:	<u>Darrin Steed</u>	Report #:	<u>FLMM5A44</u>
Well Name:	<u>Herry Monster #3 SWD</u>	Formation:	<u>Entrada/SWD</u>

Specific Gravity	1.005	
pH	8.4	
Resistivity	0.89	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	200	Mg / L
Sodium (Na)	4165	Mg / L
Calcium (Ca)	176	Mg / L
Magnesium (Mg)	15	Mg / L
Chlorides (Cl)	2200	Mg / L
Sulfates (SO ₄)	2000	Mg / L
Carbonates (CO ₃)	40	Mg / L
Bicarbonates (HCO ₃)	5612	Mg / L
Total Dissolved Solids	14408	Mg / L

Respectfully: Bill Loughridge
Title: Senior Scientist
Location: Farmington, NM