216452033 SWD 6/28/02

dugan production corp.

June 10, 2002

JUN 13 2002

New Mexico Oil Conservation Division
Engineering Bureau
1220 S. Saint Francis Street
Santa Fe, NM 87505

Attention: Mr. David Catanach, Petroleum Engineer

Re: Application to Class 2, water disposal well, Molly Pitcher SWD #4
San Juan County, NM.

Dear Mr. Catanach:

Attached is Dugan Production Corp.'s application for the Molly Pitcher SWD #4 for water disposal well. The application and all attachments follow the enumeration scheme set out in NMOCD's Permit Application for Underground Injection Control. The Bureau of Land Management, as surface owners & offsetting operators, has been notified of this application by certified mail. A notice has been published in the Farmington Daily Times advising the public of our application.

The undersigned employee is the contact person for this application.

Sincerely yours,

Terry Kochis
Petroleum Engineer

Attachments

cc: Frank Chaves
New Mexico Oil Conservation Division
1000 Rio Bravo Road
Aztec, NM 87410

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised 4-1-98

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____No

II. OPERATOR: Dugan Production Corp.

ADDRESS: P.O. Box 420 Farmington, NM 87499

CONTACT PARTY: Terry Kochis PHONE: (505) 325-1821

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes _____X_____No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Terry Kochis TITLE: Petroleum Engineer

SIGNATURE: Terry Kochis DATE: June 10, 2002

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Nos. III, VII, VIII, IX, XI, XIV, on Form C – 108

Dugan Production Corp.
P.O. Box 420
Farmington, New Mexico 87499 – 0420

III **A. Injection Well Information**

1. Molly Pitcher SWD #4
   Sec 14, T30N, R14W
   2,610' FNL & 425' FEL

2. 8-5/8" 24 lb/ft set @ 228' in 12-1/4" hole. Cemented with 180 sx Class "B" w/ 2% Calcium Chloride & 1/4#/sx celloflake. Circulated cemented to surface.

   5-1/2" 15.5 lb/ft set @ 4,600'. 1st stage cemented with 179 sx Premium Lite FM w/ 8% gel, 5#/sx LCM-1, 1/4#/sx celloflake & 0.4% Sodium Metasillicate. Tailed by 245 sx Type III w/ 1% Calcium Chloride & 1/4#/sx celloflake. 2nd stage cemented with 200 sx Premium Lite FM w/ 8% gel, 5#/sx LCM-1, 1/4#/sx celloflake, 0.4% Sodium Metasillicate & 3% Calcium Chloride. Tailed by 75 sx Type III w/ 1% Calcium Chloride & 1/4#/sx celloflake. Circulated cemented to surface. Stage tool set @ 1,806'.

3. Tubing will be 2-7/8" 6.4 lb/ft EUE 8rd reg, internally plastic coated. Setting depth will +/- 4,100'.

4. Packer will be Baker Model AD-1, plastic coated internally & externally. Setting depth will be +/- 4,100'.

III **B. Formation Information:**

1. Blanco Mesaverde. Point Lookout Sandstone.

2. Approximate injection interval to be perforated 4,160 – 4,480' based on correlative log from the Molly Pitcher #1E. It will be cased hole logged and perforated upon the approval of SWD application.

3. Drilled as a SWD well.

4. There are no perforations in this well.

5. Next highest production zone: Picture Cliffs bottom @ 1,800'.

VII Data on Proposed Operation:

1. Average daily injection rate is expected to be 400 bwpd with a maximum rate expected to be 1,000 bwpd.

2. The system is closed.

3. The average injection pressure will be 650 psi, with a maximum of 832 psi.

4. Injected water will be produced from the Fruitland Coal, Picture Cliff & Dakota formations and re-injected into the Mesaverde Point Lookout formation. An analysis of the water to be injected is included as Attachment VII – 4a, 4b, 4c & 4d. This water is compatible with the Mesaverde formation.

5. Injected water is for disposal purposes. An analysis of Mesaverde water is included as Attachment VII – 5. The Mesaverde formation water is compatible with the water to be injected.

VIII Geological Information:

Injection will be into the Mesaverde Point Lookout. Top of the Mesaverde is @ 3,400' with a total thickness of 1,000'. The Point Lookout is @ 4,160' – 4,480'. The Ojo Alamo is a possible source of drinking water. It is at the surface and is located behind the surface casing which has been cemented to surface.

IX Stimulation:

Acidize with 1,500 gallons after perforating.

X Logs:

This well has not been logged yet. The log attached is from the Molly Pitcher #1E Basin Dakota well. The geological information has been correlatively derived and stated in this application. The correlation log from the Molly Pitcher #1E is attached.

XI Fresh Water Analysis:

There are no active water wells in the area.

XIV Proof in Notice:

Attached are copies of the certified mail receipts notifying the offset lease owners. A copy of the letter provided is attached.

A certified copy of the legal notice published in the Farmington Daily Times is also attached.

Dugan Production Corporation - Molly Pitcher SWD No. 4

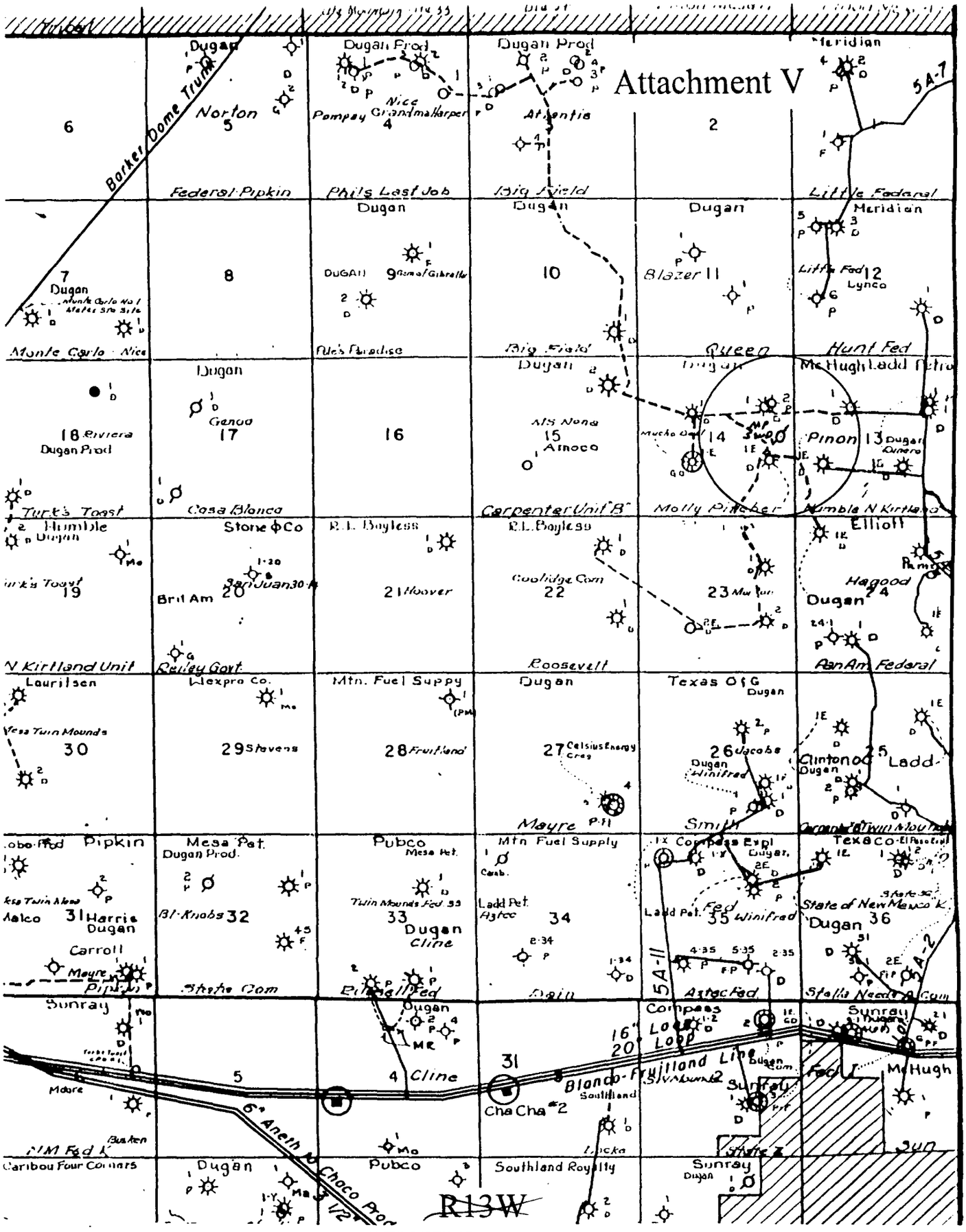
API	WELL NAME	Short Operator	NS	EW	UL	Sec	Tsp	Rge	Land Type	Well Type	Orig FORM (or NOTES)	P&A Date	STATUS	Latest Pool	GAS200 2	OIL200 2	WAT200 2	PROP	TVD	Current Perfs	Perf Date	Hole Size	Casing Size	Csg Top	Csg Bottom	Sacks Cmt	Ft3 Cmt	Reported Cmt Top	Stage Tool	Calculated Cmt Top
30-045-20956	PINON #001	DUGAN	1630N	1820W	F	13	30N	14W	F	G			ACTIVE	BASIN Dkta (Pro GAS)	2198	0	90	15165	6508	6270-6382	Nov-71	5 5/8	4.5	0	6503	600			4444	Circ
30-045-30920	PINON #002	DUGAN	1940N	1435W	F	13	30N	14W	F	G	HARPER HILL FR SND PC		NO COMPL		0	0	0	15165												
30-045-24186	PINON #001E	DUGAN	1790S	890W	L	13	30N	14W	F	G			ACTIVE	BASIN Dkta (Pro GAS)	2493	27	9	15165	6570	6488-6299	May-80	7 7/8	4.5	0	6587	875		Est at 350'		1700
30-045-30919	PINON COM #090	DUGAN	1465S	715W	L	13	30N	14W	F	G	BASIN FRUITLAND COAL		NO COMPL		0	0	0	29711												
30-045-22570	MUCHO DEAL #001	DUGAN	1850N	1800W	F	14	30N	14W	F	G			ACTIVE	BASIN Dkta (Pro GAS)	3112	0	125	3776	6575	6350-6490		7 7/8	4.5	0	6572		650+1430		4528	1700
30-045-30179	MUCHO DEAL #014	DUGAN	1450N	1550W	F	14	30N	14W	F	G	HARPER HILL FT SD PC		ACTIVE	HARPER HILL Fr Sd PC (GAS)	12314	0	9000	3776	1880	1644-1761		6 1/4	4.5	0	1877		371	Circ		
30-045-30930	MOLLY PITCHER #090	DUGAN	1725N	1640E	G	14	30N	14W	F	G	BASIN FRUITLAND COAL		NO COMPL		0	0	0	3771												
30-045-22084	MOLLY PITCHER #001	DUGAN	1650N	990E	H	14	30N	14W	F	G			ACTIVE	BASIN Dkta (Pro GAS)	1768	32	125	3771	6652	6275-6490	Nov-76	7 7/8	4.5	0	6630	350+600	650+1500			1700
30-045-30954	MOLLY PITCHER SWD #004	DUGAN	2610N	425E	H	14	30N	14W	F	G	SWD MESAVERDE		NO COMPL		0	0	0	29715	4600Planned								circ (Planned)			(16
30-045-23612	MOLLY PITCHER #001E	DUGAN	1850S	790E	I	14	30N	14W	F	G			ACTIVE	BASIN Dkta (Pro GAS)	2202	34	8	3771	6595	6311-6466	Nov-79	7 3/4	4.5	0	6600	325+500			4537	2100
30-045-30915	MOLLY PITCHER #003	DUGAN	1620S	1895E	J	14	30N	14W	F	G	HARPER HILL FR SND PC		NO COMPL		0	0	0	3771	1765Planned								circ (Planned)			
30-045-22571	MUCHO DEAL #001E	DUGAN	1850S	1800W	K	14	30N	14W	F	G			ACTIVE		0	0	0	3776	6570	6311-6466		7 3/4	4.5	0	6571	825				1700
30-045-30916	MUCHO DEAL #090	DUGAN	2255S	1650W	K	14	30N	14W	F	G	BASIN FRUITLAND COAL		NO COMPL		0	0	0	3776												

Tops:

FRC	1333
PC	1692
Lewis	1785
Cliff House	3249
Menefee	3378
PointLookOut	4087
Mancos	4450
Gallup	5410
Greenhorn	6150
Graneros	6222
Kd	6272

4160 — 4480

Attachment V



LENGEND

- PRODUCING GAS WELL
- PRODUCING OIL WELL
- SHUT IN GAS WELL
- SHUT IN OIL WELL
- INJECTION WELL
- DISPOSAL WELL
- PLUGGED & ABANDONED GAS WELL
- PLUGGED & ABANDONED OIL WELL
- TEMPORARILY ABANDONED GAS WELL
- TEMPORARILY ABANDONED OIL WELL
- WATER WELL

Scale: 1" - 4000'

Dugan Production Corp - Molly Pitcher SWD #4 salt water disposal well proposal

Those wells within the 1/2 mile area of review are shaded

Attachment VI

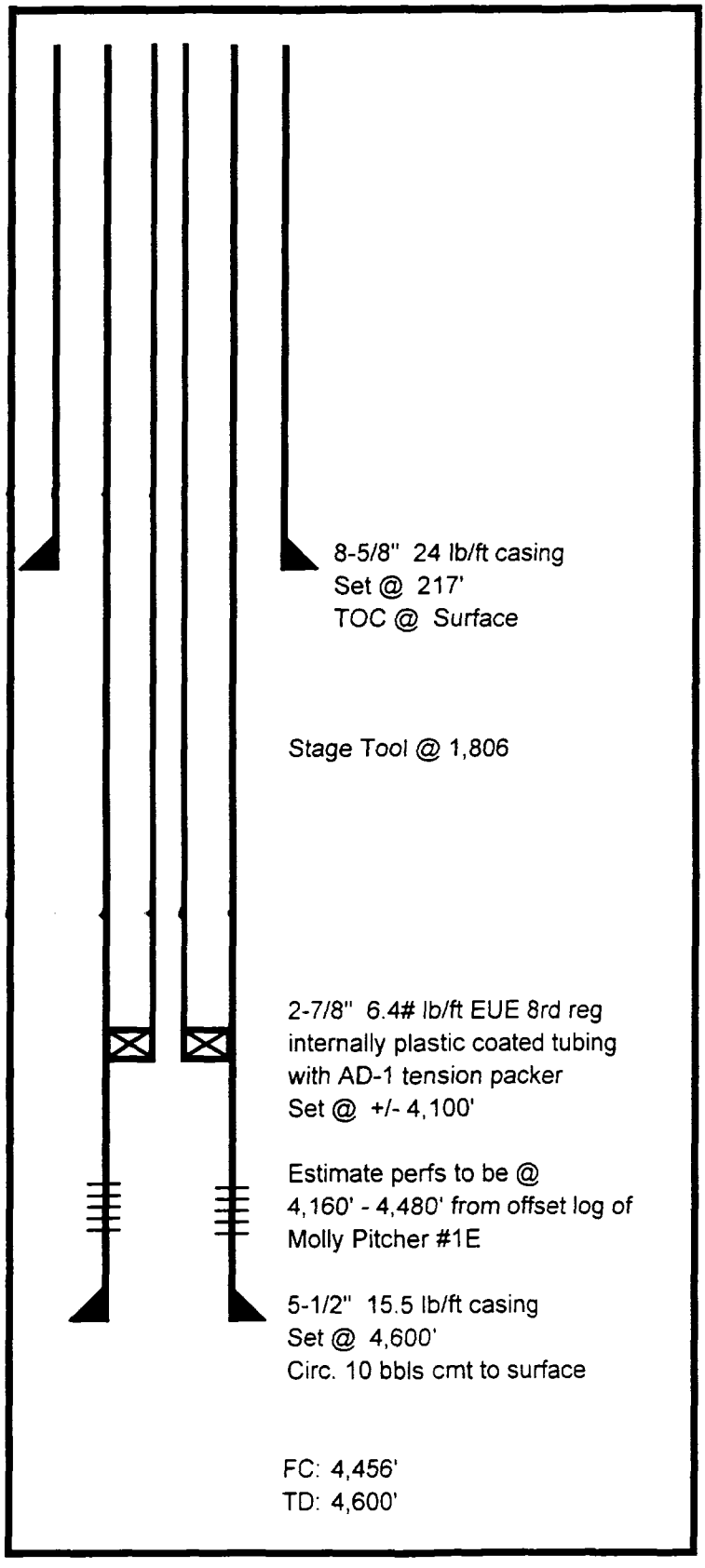
OPERATOR	WELL NAME	WELL NO	POOL	SEC	TWN	RGE	UL	FTAGE NS	FTAGE EW	TD	STATUS
FOUR STAR O&G CO	DICK HUNT FEDERAL	1	BASIN DAKOTA	12	30N	14W	I	1595/S	1045/E	6420	PA
MERIDIAN OIL INC	LITTLE FEDERAL	3	BASIN DAKOTA	12	30N	14W	C	990/N	1455/W	6579	PA
ODESSA NATURAL CORP	LITTLE FEDERAL	5	WC D3;PICTURED CLIFFS	12	30N	14W	D	940/N	790/W	1850	PA
ODESSA NATURAL CORP	LITTLE FEDERAL	6	CONNOR FRUITLAND	12	30N	14W	L	1850/S	790/W	1900	PA
RICHARDSON OPER CO	WF FEDERAL 12	2	BASIN FRUITLAND COAL	12	30N	14W	L	1815/S	828/W		SP
RICHARDSON OPER CO	WF FEDERAL 12	2	HARPER HIL PC	12	30N	14W	L	1815/S	828/W		SP
DUGAN PRODUCTION CORP	**PINON**	**1**	**BASIN DAKOTA**	**13**	**30N**	**14W**	**F**	**1630/N**	**1820/W**	**6508**	**CO**
QUESTAR EXPLOR & PROD CO	HUMBLE N KIRTLAND	1E	BASIN DAKOTA	13	30N	14W	J	1695/S	1760/E	6448	CO
DUGAN PRODUCTION CORP	**PINON**	**1E**	**BASIN DAKOTA**	**13**	**30N**	**14W**	**L**	**1790/S**	**890/W**	**6570**	**CO**
AMAX O&G INC	HUMBLE N KIRTLAND	1	BASIN DAKOTA	13	30N	14W	H	1725/N	800/E	6481	PA
DUGAN PRODUCTION CORP	DINERO	1	WC D3;PICTURED CLIFFS	13	30N	14W	H	1460/N	810/E	1770	PA
DUGAN PRODUCTION CORP	PINON COM	90	BASIN FRUITLAND COAL	13	30N	14W	L	1465/S	715/W		
DUGAN PRODUCTION CORP	PINON	2	HARPER HILL FR SND PC	13	30N	14W	F	1940/N	1435/W		
DUGAN PRODUCTION CORP	HUMBLE KIRTLAND COM	90	BASIN FRUITLAND COAL	13	30N	14W		1095/N	2490/E		
DUGAN PRODUCTION CORP	HUMBLE KIRTLAND	2	HARPER HILL FR SND PC	13	30N	14W		1130/S	1170/E		
DUGAN PRODUCTION CORP	MUCHO DEAL	1	BASIN DAKOTA	14	30N	14W	F	1850/N	1800/W	6575	CO
DUGAN PRODUCTION CORP	**MOLLY PITCHER**	**1**	**BASIN DAKOTA**	**14**	**30N**	**14W**	**H**	**1650/N**	**990/E**	**6652**	**CO**
DUGAN PRODUCTION CORP	**MOLLY PITCHER**	**1E**	**BASIN DAKOTA**	**14**	**30N**	**14W**	**I**	**1850/S**	**790/E**	**6595**	**CO**
DUGAN PRODUCTION CORP	MUCHO DEAL	1E	BASIN DAKOTA	14	30N	14W	K	1850/S	1800/W	6570	CO
DUGAN PRODUCTION CORP	MOLLY PITCHER	2	WC D3;FRUITLAND	14	30N	14W	H	1590/N	790/E	1800	PA
DUGAN PRODUCTION CORP	MUCHO DEAL	14	HARPER HILL FR SD PC	14	30N	14W	F	1450/N	1550/W	1880	CO
DUGAN PRODUCTION CORP	MOLLY PITCHER	3	HARPER HILL FR SND PC	14	30N	14W		1620/S	1895/E		
DUGAN PRODUCTION CORP	MUCHO DEAL	90	BASIN FRUITLAND COAL	14	30N	14W	K	2255/S	1650/W		
DUGAN PRODUCTION CORP	MOLLY PITCHER	90	BASIN FRUITLAND COAL	14	30N	14W		1725/N	1640/E		
DUGAN PRODUCTION CORP	**MOLLY PITCHER SWD**	**4**	**SWD MESAVERDE**	**14**	**30N**	**14W**		**2610/N**	**425/E**		
CALPINE NATURAL GAS CO	MORTON	1	BASIN DAKOTA	23	30N	14W	H	1750/N	1030/E	6385	ZA
CALPINE NATURAL GAS CO	MORTON	2	BASIN DAKOTA	23	30N	14W	I	1810/S	1100/E	6250	CO
CALPINE NATURAL GAS CO	MORTON	1	TWIN MOUNDS FRT SAND PC	23	30N	14W	H	1750/N	1030/E	6385	CO
MCELVAIN O&G PROP INC	HAGOOD	1	BASIN DAKOTA	24	30N	14W	A	1050/N	1040/E	6389	CO
DUGAN PRODUCTION CORP	PAN AMERICAN FED	1E	BASIN DAKOTA	24	30N	14W	D	500/N	800/W	6510	CO
MCELVAIN O&G PROP INC	HAGOOD	1E	BASIN DAKOTA	24	30N	14W	I	1430/S	840/E	6129	CO
DUGAN PRODUCTION CORP	PAN AMERICAN FED	1	BASIN DAKOTA	24	30N	14W	N	1080/S	1835/W	6260	CO
HENRY S BIRDSEYE	USA CARPENTER 24	1	WC D3;PICTURED CLIFFS	24	30N	14W	M	1160/S	1180/W	1422	PA
DUGAN PRODUCTION CORP	PAN AMERICAN FEDERAL	2	HARPER HILL FR SND PC	24	30N	14W	D	460/N	1020/W		

Dugan Production Corp.
Application to Dispose of Water in the Mesaverde Point Lookout Formation Attachment VI
Molly Pitcher SWD #4

WELL	FTGES	SEC	TN	RG	STATUS	DATE DRILLED	DEPTH	SURFACE CASING	PRODUCTION CASING	PLUGGING INFORMATION
Pinon #1	1630' FNL 1820' FWL	13	30N	14W	(CO) Completed & producing Basin Dakota	8 Nov 1971	6474	8 5/8" @ 215' Cemented to surface.	4 1/2" @ 6503' Stage Tool @ 4444' 1st stage cmt w/ 100 sx (256 cu.ft.) 65/35/10 tailed by 150 sx (204 cu.ft.) Class "C" w/ 7.5% salt. TOTAL 1st stage 460 cu.ft. 2nd stage cmt w/ 350 sx (896 cu.ft.) 65/35/10 tailed by 150 sx (204 cu.ft.) Class "C" w/ 7.5% salt. TOTAL 2nd stage 1100 cu.ft. TOTAL cmt pumped 1560 cu.ft. Lost circ. last 13 bbls, no cmt reported to surface.	
Pinon #1E	1790' FSL 890' FWL	13	30N	14W	(CO) Completed & producing Basin Dakota	16 Apr 1990	6556	8 5/8" @ 217' Cemented to surface.	4 1/2" @ 6587' Stage Tool @ 4499' 1st stage cmt w/ 175 sx (336 cu.ft.) Class 'B" w/ 8% gel tailed by 200 sx (236 cu.ft.) Class "B". TOTAL 1st stage 572 cu.ft. 2nd stage cmt w/ 400 sx (1048 cu.ft.) 65/35/12 tailed by 100 sx (155 cu.ft.) Class "B" w/ 4% gel. TOTAL 2nd stage 1203 cu.ft. TOTAL cmt pumped 1775 cu.ft. Good circ. throughout, no cmt reported to surface.	
Molly Pitcher #1	1650' FNL 990' FEL	14	30N	14W	(CO) Completed & producing Basin Dakota	14 Oct 1976	6570	8 5/8" @ 233' Cemented to surface.	4 1/2" @ 6630' Stage Tool @ 4537' 1st stage cmt w/ 200 sx (506 cu.ft.) 65/35/12 tailed by 150 sx (177 cu.ft.) Class "B". TOTAL 1st stage 683 cu.ft. 2nd stage cmt w/ 600 sx (1518 cu.ft.) 65/35/12 TOTAL cmt pumped 2201 cu.ft. Good circ. throughout, no cmt reported to surface.	
Molly Pitcher #1E	1850' FSL 790' FEL	14	30N	14W	(CO) Completed & producing Basin Dakota	29 Sept 1979	6502	8 5/8" @ 211' Cemented to surface.	4 1/2" @ 6599' Stage Tool @ 4531' 1st stage cmt w/ 200 sx (304 cu.ft.) Class 'B" w/ 8% gel tailed by 125 sx (147.5 cu.ft.) Class "B". TOTAL 1st stage 451.5 cu.ft. 2nd stage cmt w/ 400 sx (1048 cu.ft.) 65/35/12 tailed by 100 sx (155 cu.ft.) Class "B" w/ 4% gel. TOTAL 2nd stage 1203 cu.ft. TOTAL cmt pumped 1654.5 cu.ft. Lost circ. last 14 bbls, no cmt reported to surface.	
Molly Pitcher SWD #4 (Proposed well for salt water disposal into the Mesaverde Point Lookout Formation)	2610' FNL 425' FEL	14	30N	14W	(SP) Spudded applying for (SWD) salt water disposal well	6 May 2002	4600	8 5/8" @ 228' Cemented to surface.	5 1/2" @ 4600' Stage Tool @ 1806' 1st stage cmt w/ 179 sx (392 cu.ft.) Prem. Lite FM w/ 8% gel tailed by 245 sx (343 cu.ft.) Type III. TOTAL 1st stage 735 cu.ft. 2nd stage cmt w/ 200 sx (438 cu.ft.) Prem. Lite FM w/ 8% gel tailed by 75 sx (105 cu.ft.) Type III. TOTAL 2nd stage 543 cu.ft. TOTAL cmt pumped 1278 cu.ft. Good circ. throughout, 10 bbls cmt circ. to surface.	

INJECTION WELL SCHEMATIC

Attachment VI



OPERATOR: Dugan Production Corp.
LEASENAME: Molly Pitcher SWD
LEASE #: NM 628
API #: 30 - 045 - 30954
WELL #: 4
SECTION: 14
TOWNSHIP: 30 N
RANGE: 14 W
UNIT: H San Juan County, New Mexico
2,610' from North Line, 425' from East Line

All depths Relative to Kelly Bushing 12.0'
GLE: 5,967'
KBE: 5,979'
DF: 5,978'

Tubular Data

Surface Casing 8-5/8" 12-1/4" Hole
landed @ 228'
Cemented with 180 sx (212.4 cu.ft.)
TOC @ surface determined by circulation.

Production Casing 5-1/2" 7-7/8" Hole
landed @ 4,600'
Cemented with 699 sx (1278 cu.ft.)
TOC @ surface determined by circulation

Injection Interval: 4,160' - 4,480' Approx. Perfs
Mesaverde Point Lookout Formation

Tubing Size 2-7/8" Internally Plastic Coated
with Baker Model AD-1 tension
packer Set @ +/- 4,100'

Well was drilled for a SWD well
Overlying gas formation is the Picture Cliffs Sandstone
formation bottom @ 1,800'

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Attachment VII – 4a

Operator:	Dugan Production	Date:	May 5, 2002
Well :	Federal I4 Injection	District:	Farmington
Formation:	Fruitland Coal & Pictured Cliff	Requested by:	John Alexander
County:	San Juan	Technician:	Mike Brown
Depth:	n/a	Source:	Well

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

SPECIFIC GRAVITY:	1.002	AT 68 Degrees F.			
pH:	7.67		SULFATES:	0	ppm
			CALCIUM:	319.4	ppm
IRON:	0	ppm	BICARBONATES:	2191.6	ppm
			RESISTIVITY:	0.5	ohm/meter
H2S:	0	ppm	CHLORIDES:	6786.4	ppm
			SODIUM :	3255.7	ppm
			POTASSIUM:	67.0	ppm
MAGNESIUM:	848.8	ppm	TDS:	13469.43	ppm

CaCO3 Scale Tendency = Possible
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Attachment VII – 4b

Operator:	Dugan Production	Date:	May 5, 2002
Well :	Mucho Deal #14	District:	Farmington
Formation:	Pictured Cliff	Requested by:	John Alexander
County:	San Juan	Technician:	Mike Brown
Depth:	n/a	Source:	Well

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

SPECIFIC GRAVITY:	1	AT 68 Degrees F.			
pH:	8.7		SULFATES:	0	ppm
			CALCIUM:	360.0	ppm
IRON:	0	ppm	BICARBONATES:	1988.6	ppm
			RESISTIVITY:	11	ohm/meter
H2S:	0	ppm	CHLORIDES:	2800.0	ppm
			SODIUM :	134.2	ppm
			POTASSIUM:	3.0	ppm
MAGNESIUM:	1069.2	ppm	TDS:	6365.98	ppm

CaCO3 Scale Tendency = Possible
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Attachment VII – 4c

Operator:	Dugan Production	Date:	May 5, 2002
Well :	Pan Am Federal IE	District:	Farmington
Formation:	Dakota	Requested by:	John Alexander
County:	San Juan	Technician:	Mike Brown
Depth:	n/a	Source:	Well

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

SPECIFIC GRAVITY:	1.001	AT 68 Degrees F.			
pH:	7.67		SULFATES:	0	ppm
			CALCIUM:	479.5	ppm
IRON:	0	ppm	BICARBONATES:	243.8	ppm
			RESISTIVITY:	0.6	ohm/meter
H2S:	0	ppm	CHLORIDES:	4795.2	ppm
			SODIUM :	633.5	ppm
			POTASSIUM:	8.0	ppm
MAGNESIUM:	1068.1	ppm	TDS:	7228.734	ppm

CaCO3 Scale Tendency = Remote
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Attachment VII – 4d

Operator:	Dugan Production	Date:	May 5, 2002
Well :	Tabor Injection Plant	District:	Farmington
Formation:	Fruitland Coal & Pictured Cliff	Requested by:	John Alexander
County:	San Juan	Technician:	Mike Brown
Depth:	n/a	Source:	Well

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

SPECIFIC GRAVITY: 1.002 AT 68 Degrees F.

pH:	7.8		SULFATES:	0	ppm
			CALCIUM:	239.5	ppm
IRON:	0	ppm	BICARBONATES:	1034.9	ppm
			RESISTIVITY:	0.38	ohm/meter
H2S:	0	ppm	CHLORIDES:	8383.2	ppm
			SODIUM :	3305.9	ppm
			POTASSIUM:	17.0	ppm
MAGNESIUM:	1188.3	ppm	TDS:	14169.27	ppm

CaCO3 Scale Tendency = Remote
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

American Energy Services
Water Analysis Results Sheet
Farmington NM
708 S. Tucker
Phone:(505)325-4192
Fax:(505)564-3524
Zip:87401

Attachment VII – 5

Operator:	Dugan Production	Date:	May 24, 2002
Well :	Locke #1	District:	Farmington
Formation:	Mesa Verde	Requested by:	John Alexander
County:	San Juan	Technician:	Mike Brown
Depth:	n/a	Source:	Well

P H Y S I C A L A N D C H E M I C A L D E T E R M I N A T I O N

SPECIFIC GRAVITY: 1.05 AT 67 Degrees F.

pH:	6.89		SULFATES:	0 ppm
			CALCIUM:	647.6 ppm
IRON:	10	ppm	BICARBONATES:	348.6 ppm
			RESISTIVITY:	0.12 ohm/meter
H2S:	0	ppm	CHLORIDES:	24000.0 ppm
			SODIUM :	12274.5 ppm
			POTASSIUM:	300.0 ppm
MAGNESIUM:	1411.7	ppm	TDS:	38992.56 ppm

CaCO3 Scale Tendency = Remote
CaSO4 Scale Tendency = Remote

REMARKS:

Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. David Richardson
Richardson Operating Company
3100 La Plata Highway
Farmington, NM 87401

Re: Notice of Application for Approval
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. Richardson,

This is your notification, as an offset lease owner, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis

Terry Kochis
Petroleum Engineer

TK:sh

709 E MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. Ray Sanchez
Bureau of Land Management
1235 La Plata Highway
Farmington, NM 87401

Re: Notice of Application for Approval
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. Sanchez,

This is your notification, as surface owner, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis

Terry Kochis
Petroleum Engineer

TK:sh

709 E. MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. Larry Van Ryan
McElvain Oil & Gas
1050 17th Street, Suite 1800
Denver, CO 80265

Re: Notice of Application for Approval
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. Van Ryan,

This is your notification, as an offset lease owner, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis

Terry Kochis (sh)
Petroleum Engineer

TK:sh

709 E. MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. Steve Dunn
Merrion Oil & Gas
610 Reilly Avenue
Farmington, NM 87401

Re: Notice of Application for Approval
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. Dunn,

This is your notification, as an offset lease owner, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis
Petroleum Engineer

TK:sh

709 E. MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. Paul Thompson
Walsh Engineering
7415 East Main
Farmington, NM 87402

Re: Notice of Application for Approval
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. Thompson,

This is your notification, as the operator of an offset lease owner, Calpine Natural Gas, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis
Petroleum Engineer

TK:sh

709 E. MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. Kevin McCord
Bayless Oil & Gas
P.O. Box 168
Farmington, NM 87499

Re: *Notice of Application for Approval*
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. McCord,

This is your notification, as an offset lease owner, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis (sh)

Terry Kochis
Petroleum Engineer

TK:sh

709 E. MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

dugan production corp.

May 23, 2002

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Mr. Jim Yates
Four Star Oil & Gas
P.O. Box 1289
Farmington, NM 87499

Re: Notice of Application for Approval
Molly Pitcher #4
Unit H, Section 14, T30N, R14W
San Juan County, New Mexico

Dear Mr. Yates,

This is your notification, as an offset lease owner, that Dugan Production Corp. has applied to the New Mexico Oil Conservation Division for administrative approval for a salt water disposal well, the Molly Pitcher #4. The well is located at 2,610' FNL and 425' FEL, Sec. 14, T30N, R14W, San Juan County, New Mexico. It was drilled with the intention of a salt water disposal well into the Mesaverde Point Lookout Formation.

You must notify the New Mexico Oil Conservation Division (NMOCD) at 1220 S. Saint Francis Street, Santa Fe, NM 87505 within 15 days if you object to this application.

Sincerely,

Terry Kochis

Terry Kochis
Petroleum Engineer

TK:sh

709 E. MURRAY DR • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX # (505) 327-4613

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. Steve Dunn
Merrion Oil & Gas
610 Reilly Avenue
Farmington, NM
87401

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): P. Garcia — B. Date of Delivery: 5-28-02

C. Signature: X P. Garcia — ☐ Agent ☐ Addressee

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

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label): 7000 1670 0010 0492 5053

PS Form 3811, July 1999 — Domestic Return Receipt — 102595-00-M-0952

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. Paul Thompson
Walsh Engineering
7415 E. Main
Farmington, NM
87402

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): Melissa Oakes — B. Date of De: 5/24/0

C. Signature: X Melissa Oakes — ☐ Agen ☐ Addr

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

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label): 7000 1670 0010 0492 5091

PS Form 3811, July 1999 — Domestic Return Receipt — 102595-00-M

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. David Richardson
Richardson Operating Co.
3100 La Plata Highway
Farmington, NM
87401

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): Carol Sanchez — B. Date of Delivery: 5/24/02

C. Signature: X Carol Sanchez — ☐ Agent ☐ Addressee

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

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label): 7000 1670 0010 0492 5077

PS Form 3811, July 1999 — Domestic Return Receipt — 102595-00-M-0952

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. Ray Sanchez
BLM
1235 La Plata Hwy.
Farmington, NM
87401

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly): VERA BEE — B. Date of De: 5-24-

C. Signature: X [signature] — ☐ Ager ☐ Addr

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

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label): 7000 1670 0010 0492 5084

PS Form 3811, July 1999 — Domestic Return Receipt — 102595-00-M

Attachment XIV – 2

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. Larry Van Ryan
McElvain Oil & Gas
1050 17th St., Suite 1800
Denver, Co 80265

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) 28 | B. Date of Delivery MAY 2002

C. Signature
X Theresa M Hall ☐ Agent ☐ Addressee

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

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label) 7000 1670 0010 0492 5060

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. Jim Yates
Four Star Oil & Gas
P.O. Box 1289
Farmington, NM 87499

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) | B. Date of Delivery

C. Signature
X ☐ Agent ☐ Addressee

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

FARMINGTON NM 87401 JUN 6 2002 USPS

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label) 7000 1670 0010 0492 5039

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

SENDER: COMPLETE THIS SECTION

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

1. Article Addressed to:

Mr. Kevin McCord
Bayless Oil & Gas
P.O. Box 168
Farmington, NM 87499

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) | B. Date of Deli

C. Signature
X Lyndale Hust ☐ Agent ☐ Addre

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

FARMINGTON NM 87401 MAY 29 2002 USPS

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

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label) 7000 1670 0010 0492 50

PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-

AFFIDAVIT OF PUBLICATION

Ad No. 46214

Attachment XIV - 3

STATE OF NEW MEXICO
County of San Juan:

CONNIE PRUITT, being duly sworn says: That she is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meeting of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s): Tuesday, May 28, 2002.

And the cost of the publication is $25.46

Connie Pruitt

ON 5-31-02 CONNIE PRUITT appeared before me, whom I know personally to be the person who signed the above document.

Jenny Beck

My Commission Expires April 2, 2004.

COPY OF PUBLICATION

918 Legals

Dugan Production Corp., P.O. Box 420, Farmington, NM 87499 (505-325-1821), has made application to the New Mexico Oil Conservation Division for the Molly Pitcher SWD #4 for salt water disposal service. Contact for this application is Terry Kochis. This well is located 2610' FNL & 425' FEL of Section 14, T-30N, R-14W, San Juan County, New Mexico. Disposal will be into the Mesaverde Point Lookout formation at 4160'. Maximum injection pressure will be 832 psi. Maximum injection rate will be 1000 barrels of water daily. Interested parties must file objections or request for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505, within 15 days.

Legal No. 46214, published in The Daily Times, Farmington, New Mexico, Tuesday, May 28, 2002.

Lease Owners Map

Attachment V

T30N R14W

Dugan Prod. 10	11 Richardson Operating Co. Dugan Prod.	12 Merion O & G Richardson Operating Co. Bayless O & G FourStar O&G
Richardson Operating Co. 15 Dugan Prod.	Dugan Prod. 14 Molly Pitcher SWD #4	Dugan Prod. 13
Calpine Natural Gas 22	Calpine Natural Gas 23	Dugan Prod. 24 McElvain Oil & Gas

T30N R14W

Dugan Production Corp

Well Log Molly Pitcher NO. 1E

too large to copy