-			erig saar ban de k
Form 3160-5	UNITED STATES	SUBMIT IN TRIPLICATE	
November 1983) Tormerly 9-331)	DEPARTMENT OF THE INT	ERIOR (Other instructions on r	5. LEASE DESIGNATION AND SERIAL NO.
1 Officially 29—331)	BUREAU OF LAND MANAGE!		/ NM 058122
	IDRY NOTICES AND REPOR		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
SUC	defil on to deepen or	ning hack to a different reservoir/	
	Use "APPLICATION FOR PERMIT—" for	such proposals.)	7. UNIT AGREEMENT NAME
OIL TO GAS			
WELL X WELL 2. NAME OF OPERATOR	OTES		8. FARM OR LEASE NAME
	rion Oil & Gås Corporation	/	Federal Medio
3. ADDRESS OF OPERATO	B	07.100	9. WELL NO.
P.	O. Box 840, Farmington, NM Report location clearly and in accordance wit	87499	10. FIELD AND POOL, OR WILDCAT
See also space 17 be	Report location clearly and in accordance with low.)	n any beate requirements.	Undesignated Mesavero
At surface			11. SBC., T., R., M., OR BLK. AND SURVEY OR ARRA
990	'FSL & 660' FWL		
			Sec 14, T19N, R3W
14. PERMIT NO.	15. ELEVATIONS (Show when	ther DF, RT, GR, etc.)	Sandoval NM
	6,837' GL		Daniel
16.	Check Appropriate Box To Indica	ate Nature of Notice, Report, or	Other Data
	NOTICE OF INTENTION TO:	EUBSI	QUENT REPORT OF:
TEST WATER SHUT-	OFF PULL OR ALTER CASING	WATER SHUT-OFF	REPAIRING WELL
PRACTURE TREAT	MULTIPLE COMPLETE	FRACTURE TREATMENT	ALTERING CASING
SHOOT OR ACIDIES	ABANDON*	SHOOTING OR ACIDIZING	ABANDOHMENT*
REPAIR WELL	CHANGE PLANS	(Other)	its of multiple completion on Well
	for Inj of Produced Wtr X OR COMPLETED OPERATIONS (Clearly state all pour well in directionally drilled, give subsurface		apletion Report and Log form.)
point the s of the addit for y Media	ant to your letter day NTL-2B information for ubject well. We receive NMOCD on 11/1/90 for ional paperwork was no your information is the Entrada Unit #3, the	r injection of the ved verbal approval said injection. Mrecessary for the NMC approtarget injection we	produced water from from Mr. Ernie Bush Bush said that no DCD. Also attached wed NTL-2B for the ll.
9801.	u have any questions,	prease contact Get	orge sharpe at 327-
		La Caracteria de la Car	CE
			CON. DIV.
18. I hereby certify the	at the foregoing is true and correct		
SIGNED	It Shance TITLE	Engineer	DATE 4/17/91
Ge	orge F. Sharpe derai/or State office use)	AREA MANAGER	
APPROVED BY	Merley Mondy TITLE	RIO PUERCO RESOURCE AREA	
CONDITIONS OF	APPROVAL, IS AND . ,		cc: 5 BLM 2 Well Files

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any faise, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

MERRION OIL & GAS CORPORATION

FEDERAL MEDIO # 1

NTL-2B APPLICATION FOR APPROVAL TO INJECT PRODUCED WATER

PREPARED BY: George F. Sharpe DATE: 4/16/91

1) Injection Well
Media Entrada Unit #3
1980' FSL & 330' FWL
Sec 14, T19N, R3W
Lease: NM12012
NMOCD Permit PMX-158, Order R-5017

Proposed Injection Rate: ± 2500 BPD Source: Entrada Produced Water and Menefee Produced Water (Analyses attached)

Production Wells	Location	Lease	<u>Formation</u>
Media Entrada Unit #6	SESE Sec 15 19N3W	NMO-58122	Entrada
Federal Medio #1	SWSW Sec 14 19N3W	NMO-58122	Menefee

- 3) Injection Formation = Entrada 5220'-30'
- 4) Entrada water analysis attached (TDS = 15132)
- 5) The Morrison Formation at a depth of \pm 4450' and the Mesaverde Formation at a depth of \pm 390' both contain water with a TDS of less than 10,000 ppm. Mesaverde water is produced from one well and is used for ranching in the area. However, neither formation is used as a drinking water source.
- 6) Attached is a wellbore schematic showing the casing and cementing detail for the MEU #3.
- 7) TD = 5351' Current PBTD = 5300'
- 8) The well is completed with 2-3/8" plastic lined tubing and a Baker Lok-set Retrievable packer set 0 ± 5160 . The annulus is protected with inhibited fluid. The anticipated operating conditions are:

Conditions are.	<u>Average</u>	<u>Maximum</u>
Injection Rate (BPD)	2000	3000

9) Rates and pressures will be monitored daily. The tubing casing annulus and packer were pressure tested prior to commencing injection and will be tested again at least once every 5 years thereafter.

I hereby certify that the above information is true and complete to the best of my knowledge.

George F. Sharpe Petroleum Engineer

Date

WELL: MEDIA ENTRADA UNIT #3

WELLBORE SCHEMATIC

MERRION OIL AND GAS CORP.

ENG:GFS DRFT:MEG DATE:4-15-91

LOCATION:

1980' FSL & 330' FWL SEC 14, T19N, R3W SANDOVAL COUNTY, N.M.

ELEVATION

GL: 6825' KB: 6842'

FORMATION TOPS:

MESAVERDE 380'
GALLUP 2790'
DAKOTA 4202'
MORRISON 4456'
ENTRADA 5218'

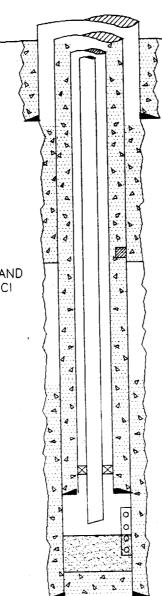
SQUEEZED PERFORATIONS:

2240' - 2 HOLES SQZ. W/150 SX G W/6% GEL AND 150 SX G W/1% D65 & 1% CaCl

OPEN PERFORATIONS:

ENTRADA: 5206 - 54' @ 25PF

SAND FROM PBTD TO 5230'



INJECTION STRING:

TBG: 2 3/8", 4.6 #/FT, P.L. DEPTH: 5225' 4 1/2" BAKER LOCKSET PKR @ 5160'

SURFACE CASING:

HOLE SIZE: 15 " CSG SIZE: 10 3/4", 40 #/FT DEPTH: 217' CMT DETAILS: 140 SX TOC: SURFACE

TOC: SURFACE BY: CIRCULATE

PRODUCTION CASING:

HOLE SIZE: 8 3/4" CSG SIZE: 7", 20#/FT DEPTH: 5340' CMT DETAILS: 300 SX

TOC: 3340' BY: CALCULATED

LINER

LNR SIZE: 4 1/2" 9.5 #/FT
DEPTH: 5200'
CMT DETAILS: 462 SX G
W/50/50 Poz, 2% GEL,
5#/SK GILS.; 0.2% D-65 AND
100 SX G W/5#SK GILS., 0.75%
D-65, SQZ 100 SX G W/3% CaCl
DOWN CASING ANNULUS.

TOC: SURFACE BY: ANNULUS SQUEEZE

DEPTHS

PBTD: 5300' TD: 5351'





WATER ANALYSIS for Merrion Oil

A Baker Hughes company

Date of Analysis: NOVEMBER 13, 1990

Company:

Merrion Oil New Mexico

state:

Lease:

0

Media Entrada

oil (bbl/day): Type of Water: N/D

Sample Source:

produced wellhead

Representative:

Mike Jones

Analysis #:

Company Address:

Field:

Well #:

Water (bbl/day):

Temp.,C:

Date of Sampling: Analysis By:

21

6

13, 1990 NOVEMBER

Ken Hake

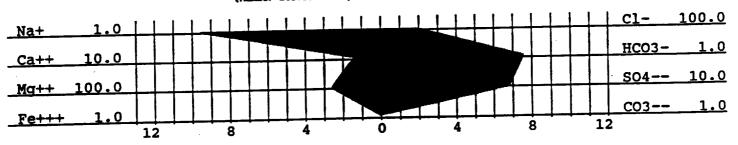
N/D

N/D

Farmington

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/L scale unit)



DISSOLVED SOLIDS

DISSOLVED GASES

CATIONS	me/l	mg/T
Total Hardness :	280.00	
Calcium, (Ca++) :	15.00	300.72
Magnesium, (Mg++):	265.00	3220.12
Iron, (Fe+++):	0.06	1.10
Barium, (Ba++) :	0.00	0.00
Sodium, Na+(calc):	9.79	225.28
Vancanese. (Mn++):	0.00	0.00

45.20 mg/1Hydrogen sulfide: 3.28 mg/1Carbon dioxide mg/1N/D Oxygen

PHYSICAL PROPERTIES

Manganese, (MI++): ANIONS 7500.89 211.30 Chloride, Cl-3400.00 70.75 Sulfate, SO4--0.00 0.00 Carbonate, CO3--: 475.90 7.80 Bicarbonate, HCO3-: 0.00 0.00 Hydroxyl,OH-0.00 0.00 sulfide, S--0.00 TOTAL SOLIDS (quant.):

7.30 pН 1.015 Spec Grav. : 15131.81 TDS (calc.)

SCALE STABILITIES

Temp.,C	CaCO3	CaSO4	Ba	<u> 1804</u>
18.0	-0.25	2986		0
21.0	-0.20	3033		0
24.0	-0.14	3072		0
	y, (calc.)	1025		. 0
RESIDUAL	HYDROCARBO	ons:	N/D	

N/D = not determined





WATER ANALYSIS for Merrion Oil

A Baker Hughes company

Date of Analysis: NOVEMBER 13, 1990 Analysis #:

Company:

Merrion Oil New Mexico

State: Lease:

0

Media Mesa Verde

oil (bbl/day):

N/D

Type of Water: Sample Source: produced wellhead

Representative:

Mike Jones

Company Address:

Farmington N/D

Field:

Well #:

N/D

Water (bbl/day):

21

Temp.,C:

Date of Sampling:

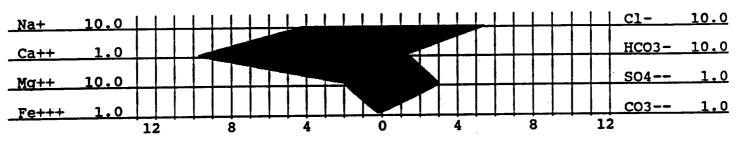
NOVEMBER 13, 1990

Ken Hake

Analysis By:

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/L scale unit)



DISSOLVED SOLIDS

TOTAL SOLIDS (quant.):

DISSOLVED GASES

RESIDUAL HYDROCARBONS:

N/D

CATIONS	me/l	mg/l	Hydrogen sulfide		
Total Hardness :	30.00		Carbon dioxide	: 3.	
Calcium, (Ca++):	10.00	200.48	Oxygen	: N/D	mg/1
Magnesium, (Mg++):	20.00	243.03			
Iron, (Fe+++) :	0.27	5.00	PHYSICAL PROPERT	<u>ries</u>	
Barium, (Ba++) :	0.00	0.00	·		
Sodium, Na+(calc):	43.95	1010.91	рH	: 7.	70
Manganese, (Mn++):	0.00	0.00	Spec Grav.	: 1.	010
nunguitae, (ima),			TDS (calc.)	: 4525.	79
ANIONS					
Chloride, Cl- :	56.30	1998.58	SCALE STABILITI		
Sulfate, SO4 :	3.12	150.00	Temp., C CaCO	3 CaSO4	Bas04
Carbonate, CO3:	0.00	0.00	18.0 1.00	2098	0
Bicarbonate, HCO3-:	14.80	902.99	21.0 1.0	5 2122	0
Hydroxyl,OH- :	0.00	0.00	24.0 1.1	1 2141	0
sulfide, S	0.00	0.00	Max entity, (ca.	lc.) 213	. 0
PRILITGE, D					M/D

4510.48

N/D = not determined

Fr.m. 3160-5 November 1983) ormerly 9-331)

At surface

14. PERMIT NO.

16.

1980' FSL and 330' FWL

UNITED STATES SUBMIT IN PRIPLICATES OF THE INTERIOR STATES OF THE INTERIOR STATES

Expires August 11, 1985 5. LEASE DESIGNATION AND SERIAL

NM 12012

BUREAU OF LAND MANAGEMENT	ß	īr	INDIAN.	ALLOTTER	OR TRIE	i e 5.
AND PEPORTS ON WELLS						

SUNDRY N	IOTICES AND	REPORTS C	IN METT2
SUNDRY N	proposais to drill or t	n deepen or plug ba RMIT—" for such pro	ck to a different reservoir

				NAME.	
	Med	الم	کسا	hada	Unit
8.	PARM	OB	LEASE	MAME	

Um "APPLICATION I GIVE	
OIL X WELL OTHER	
Merrion Oil & Gas Corporation	
P. O. Box 840, Farmington, NM 87499 LOCATION OF WELL (Report location clearly and in accordance See also space 17 below.)	

Media Entrada Unit

9. WHILL MO.

3 10. FIELD AND POOL OR WILDCAT

11. SEC., T., B., M., OR BLE, AND SURVEY OR AREA

Sec 14, T19N, R3W

15. SLEVATIONS (Show whether DF, RT, GR, etc.) 6,825' GR

12. COUPTY OR PARISH: 13. STATE

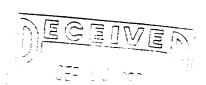
Sandoval

Check Appropriate Box To Indicase Nature of Notice, Report, or Other Data

CHECK Appropriate con		AUBREQUENT REPORT OF:				
707	ICE OF INTE	: OT KOITE			•	_
		PULL OR ALTER CASE	76	WATER SHUT-OFF	REPAIRING WELL	 :
EST WATER SECT-OFF	,;			PRACTURE TREATMENT	ALTERING CARING	
RACTURE TREAT	-	MULTIPLE COMPLETE		SHOOTING OR ACIDIZING	**************************************	_
HINT OR ACIDISE		ABANDON*	i — -:	1		i
EPAIR WELL	<u></u> i	CHANGE PLANS	X .1.	(Other)	of multiple completion on Well etion Report and Log form.)	
()(ber)	Con	vert to Injec	ction	details, and give pertinent dates.	including estimated date of star	ting

17. DESCRIBE PROPRIED OF COMPLETED OPERATIONS (Clearly State all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give substricts locations and measured and true vertical depths for all markers and somes pertinent dates. proposed work. If nent to this work.)

> We plan to convert the subject well to injection to expand the existing secondary recovery project in the Media Entrada Unit. This proposal is in accordance with the field-wide plan approved by your office on 4-20-90. Attached for your approval is the 9 point NTL-2B application. Also enclosed for your information is the State C-108 permit application. If additional information is required, please contact George Sharpe at 327-9801.



8. I hereby certify that the toregoing is true and correct	TITLE Reservoir Engineer	DATE -	May 29,1990
This space for Federal or State office use)	AREA MANAGER	DATE	JUNF 5 1990
CONDITIONS OF APPROVAL IF ANT	TITLERIO PUERCO RESOURCE AREA	DATE	
CONDITIONS OF ATTROVAL =	ARER LEAD		

OPERATOR

*See instructions on Reverse Side

MERRION OIL & GAS CORPORATION

MEDIA ENTRADA UNIT NO. 3

NTL-2B APPLICATION FOR APPROVAL TO INJECT PRODUCED WATER

LOCATION: 1980' FSL & 330' FWL

ELEVATION: 684

6842' KB

Section 14, T19N, R3W

6825' GL

Sandoval County, New Mexico

PREPARED BY: George F. Sharpe

DATE: 5/25/90

1) Injection Well
Media Entrada Unit #3
1980' FSL 330' FWL
Sec. 14, Tf19N, R3W
Lease: NM 12012

2) Proposed Injection Rate: ± 2500 BPD

Source: Entrada Produced Water (Analysis Attached)

Production Well	<u>Location</u>	<u>Lease</u>	<u>Formation</u>
Media Entrada Unit #6	SESE Sec 15 19N3W	NM0-58122	Entrada

- 3) Injection Formation = Entrada 5220'-30'
- 4) Entrada water analysis attached
- 5) The Morrison Formation at a depth of \pm 4450' and the Mesaverde Formation at a depth of \pm 390' both contain water with a TDS of less than 10000 ppm. Mesaverde water is produced from one well and is used for ranching in the area. However, neither formation is used as a drinking water source.
- 6) Attached are wellbore schematics showing the current and proposed hole, casing and cementing detail for the subject well.
- 7) TD = 5351'
 Current PBTD = 5300'
 Proposed PBTD = 5260'
- 8) The well is to be completed with 2 3/8" plastic—lined tubing and a Baker Lok-set Retrievable packer set @ \pm 5150'. The annulus will be protected with inhibited fluid. The anticipated operating conditions are:

	Average	<u>Maximum</u>
Injection Rate (BPD)	1500	3000
Tubing Pressure (psi)	500	1000

9) Rates and pressures will be monitored daily. The tubing casing annulus and packer will be pressure tested prior to commencing injection and at least once every 5 years thereafter.

I hereby certify that the above information is true and complete to the best of my knowledge.

George F. Sharpe Petroleum Engineer

0-10

Date