MOBIL EXPLORATION & PRODUCING U.S. INC.

P. D. Box 5444 Denver, Colorado 80217-5444

State of New Mexico Energy and Minerals Department Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87504-2088

OCT1 9 1968
OIL CON. DIV.
DIST. 3

WATER DISPOSAL WELL LINDRITH B UNIT WELL No. 25 APPLICATION FOR PERMIT WATER ANALYSES

Gentlemen:

We enclose representative water sample analysis from representative wells on Mobil operated leases from which water will be moved to location by truck for disposal into the Dakota "E" sand of subject well through perforations from 7570 ' to 7594'.

These analyses had not been received from the laboratory when the application was mailed on October 14, 1988. Copy of the first page of the Form 108 is enclosed for convenient reference.

Thank you,

S. R. Maynard

B. R. Maynard

Regulatory Compliance Manager

WEL

CC: Oil Conservation Division - Aztec BLM - Farmington (Information) TENNECO OIL E & P CONDCO, INC.

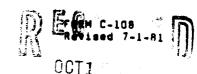
	- -

STATE OF NEW MEXICO

of the earlier submittal.

district office

OIL CONSERVATION DIVISION



NEN	GYAND HINERACS DEPARTMEN	T PORT OFFICE SOLD STATE LAND CHICK SAMPA PL NEW METAL SAMPA PL NEW METAL	BALONE CO 67801	OCT1	od 7-1-81
APPLIC	ATION FOR AUTHORIZATION	TO INJECT			
I.	Purpose: Secondary	Recovery Pressures for administrative ap	Maintenance		Storage
II.	Operator: Mobil Pro	oducing Texas & New Me	exico Inc.		
	Address: P. O. Box	5444, Denver, CO 802	217-5444		
	Contact party: C. N.	Eggerman	Phone	(303) 298-23	346
III.	Well data: Complete th		reverse side of	f this form for	each well
IV.	Is this an expansion of If yes, give the Divisi			no et	
٧.	Attach a map that ident injection well with a converse identical well. This circle identical identical examples are also as a second converse and a second converse are a second converse as a second	ne-half mile radius ci:	cle drawn arous	miles of any produced	toposed 1 injection
۷I.	Attach a tabulation of penetrate the proposed well's type, constructs a schematic of any plug	injection zone. Such d ion, date drilled, local	mata shail inclu ion, depth, rec	ude a description of completi	on of each
VII.	Attach data on the prop	posed operation, includi	ing:		
	2. Whether the system 3. Proposed average 4. Sources and an the receiving 5. If injection is at or within the disposal	pe and maximum daily rails tem is open or closed; pe and maximum injection appropriate analysis of formation if other the for disposal purposes one mile of the propose zone formation water (studies, nearby weils, other temps).	n oressure; f injection flu: in reinjected p: into a zone no ed well, attach may be measured	id and compatib: roduced water; t productive of a chemical ana	ility with and cil or que
VIII.	Attach appropriate geol detail, geological name bottom of all undergroutotal dissolved solids injection zone as well injection interval.	, thickness, and depth and sources of drinking concentrations of 10,00	. Give the geo water (aquifer: 10 mg/l or less	logic name, and s containing was) overlying the	depth to ters with proposed
IX.	Describe the proposed a	stimulation program, if	any.		
х.	Attach appropriate logowith the Division they			ell logs have b	een filed
XI.	Attach a chemical analy available and producing location of wells and o) within one mile of a	ny injection or	resh water well disposal well	s (if showing
XII.	Applicants for disposal examined available geol or any other hydrologic source of drinking water	logic and engineering d connection between the	eta and find no	evidence of op-	en faults
XIII.	Applicants must complete	te the "Proof of Notice	" section on th	e reverse side	of this form.
XIV.	Certification				
	I hereby certify that to the best of my knowledge	ledge and belief.	•	•	
	Name: D D M	avnard	Title Re	<u>qulatory Compl</u>	iance Manager

If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance

	-	:

WELCHEM, INC. 6310 Rothway, Suite 130 Houston, Texas 77040 713-460-0650 910-881-1772 TWX P.O. Box 920941 Houston, Texas 77292-0941

LAB NO. 17905

CC: M.L.BRIGGS H.S.CARSON

M.B.FORD



ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received	d: 10/04/88	By:			: 10/11/88
Tracking#:T-185 Company:MOBIL Of County: State: Lease:	7-0	Date : Sales	Sampled: 10/03 nan: B.D. Source: WELL JICAR	/88 HENSLEY D-16	up-Dakota
DISSOLVED SOLID			OTHER PROPERTI		
Sodium, Na(calc Calcium, Ca Magnesium, Mg Potassium, K Iron, Fe	760 103 0.00	me/1 459 38 8.44 0.00	Specific Gravi Temperature (F	ty, Uncorr	73.4
Manganese, Mn Barium, Ba Strontium, Sr ANIONS	0.00 46 164	0.00 0.67 3.74	Resistivity, C	ems-cm EGEIVI	22 @ 73.4
Chloride, Cl Sulfate, SO4 Carbonate, CO3 Bicarbonate, HO	mg/l 17,756 0.00 0.00 567	me/l 500 0.00 0.00 9.30	C	0071 91988 OL CON. DI DIST. 3	\
Total Dissolved) 29,	945 ppm		
scaling Tendenc	•			CALE INDEX(N	
TEMP(F) P(PE 80 14. 110 .14. 140 14. 170 14. 200 14.	1.250 1.250 1.250 1.250 1.250	PH 6.7 6.7 6.7 6.7	CASO4 B: -130 -103 -83 -67 -55	-2 - -4 - -7 - -9 -	SO4 CACO3 402 -97 426 31 374 144 223 222 164 286

Remarks & Recommendations:

A BLANK DATA FIELD INDICATES ANALYSIS NOT PERFORMED WELCHEM Representative

LAB NO. 17906



ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Out: 10/11/88 By: Date Received: 10/04/88 Tracking#:T-1857-0 10/03/88 Company: MOBIL OIL CO. Date Sampled: B.D. HENSLEY Salesman: county: Sample Source: WELL State: JICAR H-6 Well: Lease: ameo Mesaverde OTHER PROPERTIES DISSOLVED SOLIDS CATIONS me/1mg/16.70 1,286 56 Sodium, Na(calc.) 1.004 Specific Gravity, 60/60 F 0.50 10 Calcium, Ca 1.000- 1.006 Nomograph Sp. Gr. 0.16 2.00 Magnesium, Mg 1.001 specific Gravity, Uncorr Potassium, K 73.4 Temperature (F) 0.00 0.00 Iron, Fe Resistivity, OHMS-CM 160 @ 73.4 0.00 0.00 Manganese, Mn 0.00 0.00 Barium, Ba 1.00 0.02 Strontium, Sr ANIONS mg/lme/11,814 Chloride, Cl Sulfate, SO4 0.00 0.00 0.00 Carbonate, CO3 0.00 5.52 Bicarbonate, HCO3 337 Total Dissolved Solids (calc.) 3,450 ppm SCALING TENDENCIES (MG/L): SCALE INDEX (MG/L) CACO3 BASO4 BRBO4 PH CASO4 CO2 (PSI) P(PSI) TEMP(F) -399 -234 -6 -592 6.7 1.250 14.7 80 -251 -299 -8 -457 1.250 6.7 14.7 110 -218 -213 -10 -3571.250 6.7 14.7 140 -158-94 -11 -280 1.250 6.7 170 14.7 -110 -59 -12 -220 1.250 6.7 200 14.7

Remarks & Recommendations:

PH WAS CALCULATED A BLANK DATA FIELD INDICATES ANALYSIS NOT PERFORMED

WELCHEM Representative

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WELCHEM, INC. 6310 Rothway, Suite 130 Houston, Texas 77040 713-450-0650 910-881-1772 TVX P.O. Box 920941 Houston, Texas 77292-0941

LAB NO. 17907



ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received: 10	/04/88	Bv:			Date Out:	10/11/88
======================================	********					
Company: MOBIL OIL CO	•	Date 8	Sampled:	10/03/88		
County:		Salesi	nan:	B.D. HENS	LEY	
State:			Bource:	WELL	_	
Lease:		Well:		JICAR H-6	A	
				Blanco	11	. 1.
				DIANCO	MESAVE	roe
DISSOLVED SOLIDS			OTHER PR	OPERTIES		
CATIONS						
	mg/1	me/1				6.70
Sodium, Na(calc.)	1,391	61	рН	G	60/60 F	
Calcium, Ca	4.00	0.20		Gravity,		1 000- 1 006
Magnesium, Mg	2.00	0.16	Nomograp	h Sp. Gr. Gravity,	77 a a	1.000- 1.000
Potassium, K			Specific	Gravity,	Uncorr	73.4
Iron, Fe	1.00	0.04	Temperat	ure (r)		73.4 150 @ 73.4
Manganese, Mn	0.00	0.00	Resistiv	ity, ohms-	·CM	120 6 12.4
Barium, Ba	0.00	0.00				
Strontium, Sr	1.00	0.02				•
ANIONS						
	mg/1	me/l				
Chloride, Cl	1,905	54				
Sulfate, SO4	0.00	0.00				
Carbonate, CO3	0.00	0.00	•	•		
Bicarbonate, HCO3	443	7.26				
Total Dissolved Sol	ids (calc.	.) 3,	747 ppm			
SCALING TENDENCIES						
PORTING IPUNEDCIED (ady at t			SCALE	INDEX (MG/	
TEMP(F) P(PSI)	CO2 (PSI)	PH	CASO4	BAS04		CACO3
TEMP(F) P(PSI) 80 ,14.7	1.250	6.7	-991	-7		
110 14.7	1.250	6.7	-759	-9		
140 14.7	1.250	6.7	-590	-10		
170 14.7	1.250	6.7	-462	-11		
200 14.7	1.250	6.7	-361	-12	-6	55 -126

Remarks & Recommendations:

A BLANK DATA FIELD INDICATES ANALYSIS NOT PERFORMED WELCHEM Representative

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Parameter than the second terms of the second		

LAB NO. 17908



ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received: 10/04/88 Date Out: 10/11/88 Tracking#:T-1857-0 10/03/88 Company: MOBIL OIL CO. Date Sampled: B.D. HENSLEY Salesman: County: Sample Source: WELL state: CULLIN #3 Well: Lease: W Lindrith Gallup-Takota OTHER PROPERTIES DISSOLVED SOLIDS CATIONS me/l mg/l4,849 211 7.70 рĦ Sodium, Na(calc.) Specific Gravity, 60/60 F 1.012 123 6.14 Calcium, Ca 1.007- 1.016 19 1.56 Nomograph Sp. Gr. Magnesium, Mg Specific Gravity, Uncorr 1.009 Potassium, K 73.4 0.07 Temperature (F) 2.00 Iron, Fe 0.00 Resistivity, OHMS-CM 48 @ 73.4 0.00 Manganese, Mn 0.00 Barium, Ba 0.00 8.00 0.18 Strontium, Sr ANIONS mg/1me/1Chloride, Cl Sulfate, SO4 6,416 181 17 815 0.00 0.00 Carbonate, CO3 21 1,285 Bicarbonate, HCO3 Total Dissolved Solids (calc.) 13,517 ppm scaling Tendencies (MG/L): SCALE INDEX (MG/L) SRSO4 CACO3 CO2 (PSI) PH CASO4 BASO4 TEMP(F) P(PSI) 7.7 -90 147 80 14.7 0.039 -2402 -0 -96 186 -1758 -0 110 14.7 0.039 7.7 -71 215 7.7 -0 140 14.7 0.039 -1297 239 -16 7.7 -947 -0 170 0.039 14.7 -0 257 -0 0.039 -672 200 14.7

Remarks & Recommendations:

PH WAS CALCULATED A BLANK DATA FIELD INDICATES ANALYSIS NOT PERFORMED

WELCHEM Representative

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ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received: Tracking#:T-1857-0	/ U4/68 EEEE=======	B; :====================================	y: ====		Date Out: 1	 0/11/88
Tracking#:T-1857-0 Company:MOBIL OIL County: State: Lease:	co.	Date Sale	s sampled: sman: ple source:	10/03/88 B.D. HEN WELL CHENEY #	SLEY	
DISSOLVED SOLIDS			OTHER PR	Blanco	Mesave	rde
Sodium, Na(calc.) Calcium, Ca Kagnesium, Mg Potassium, K	mg/l 1,627 6.00 2.00	me/l 71 0.30 0.16	** OWOOT GD:	Gravity,	60/60 F 1	.70 .005 .000- 1.0
Tron, Fe Kanganese, Mn Sarium, Ba	0.00	0.00	Specific	Gravity, ire (F)	uncorr 1	.002 .4
strontium, sr	0.00	0.00			100	- 6 /3.4
NIONS						
hloride, C1 ulfate, SO4 arbonate, CO3 icarbonate, HCO3	mg/l 1,438 50 0.00 1,810	me/l 41 1.04 0.00 30				
otal Dissolved Sol	ids (calc	_ -	,933 ppm			
CALING TENDENCIES (MG/L):	·	P.P.L			
EMP(F) P(PSI) 80 14.7 110 14.7 140 14.7 170 14.7 200 14.7	CO2(PSI) 0.039 0.039 0.039 0.039 0.039	PH 7.7 7.7 7.7 7.7	CASC4 -1842 -1393 -1072 -829	-0 -1 -1 -1	INDEX (MG/L) SRB04 -261 -263 -228 -93	CACO3 -121 -90 -64 -45
marks & Recommenda		· • /	-642	-1	-50	-45 -29

WELCHEM Representative

PH WAS CALCULATED A BLANK DATA FIELD INDICATES ANALYSIS NOT PERFORMED

WELCHEM, INC. 6310 Rothway, Suite 130 Houston, Texas 77040 713-469-0650 910-881-1772 TWX P.O. Box 920941 Houston, Texas 77292-0941

LAB NO. 17910



ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received:	10/04/88	By:		r	Date Out:	10/11/88
************						######################################
Tracking#:T-1857-0 Company:MOBIL OIL (County: State: Lease:	eo.	Sales	e Source:	B.D. HENSI WELL	4	Dakota-
DISSOLVED SOLIDS			OTHER PR			
ALIONS	mg/l	me/l				
Sodium, Na(calc.)	6,006	261	pН			7.70
Calcium, Ca	87	4.34	Specific	Gravity,	60/60 F	1.014
Magnesium, Mg	18	1.48	Nomograp.	h sp. Gr.		1.008- 1.01
Potassium, K			Specific	Gravity, V	Jncorr	1.011
ron, Fe	29	1.04	Temperat	ure (F)	•	73.4
Kanganese, Mn	0.00	0.00	Resistiv	ity, `ohms-c	CM :	39 @ 73.4
Barium, Ba	0.00	0.00		•		
Strontium, Sr	7.00	0.16				
ANIONS						
-1. 5	mg/l	me/l				
Chloride, Cl	9,057 204	255 4.25				
Sulfate, SO4	0.00	0.00				
Carbonate, CO3 Bicarbonate, HCO3	535	8.77				
rotal Dissolved So	lids (calc.	.) 15,	943 ppm			
SCALING TENDENCIES	(MG/L):			221.5	**************************************	- 1
7777 P/PAT1	000/0011	nu	03.604	BCALE BASO 4	Index (MG/ 8RSO	. ·
Temp(y) P(psi)	CO2 (PSI)	PH 7.7	CASO4 -4848	BABU4 -0	-31	
80 14.7 110 -14.7	0.039 0.039	7.7 7.7	-3649	-0 -1	-31 -32	
140 14.7	ለ ለገባ	7.7	-2802	-1 -1	-26	
170 14.7	0.039	7.7	-2166	-1		
	~ ~ ~ ~ ~	7 6 7	4444	*	~~	

Remarks & Recommendations:

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WELCHEM Representative

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ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received: Tracking#:T-1857-(Company:MOBIL OIL County: State: Lease:		Date Sale Samp	Sampled: sman: le Source:	10/03/88 B.D. HENG	Date Out: 1()/11/88
DISSOLVED SOLIDS		Well	:		Weia Verk	UCI.HA
Sodium, Na(calc.) Calcium, Ca Cagnesium, Mg Cotassium, K Cron, Fe Canganese, Mn Barium, Ba Strontium, Sr	mg/l 91 11 1.00 0.00 0.00 0.00	me/1 3.97 0.55 0.08 0.00 0.00 0.00	Specific	Gravity, 6 h Sp. Gr. Gravity, U ure (F) ity, OHMS-C	0/60 F 1. Incorr 0. 73.	000- 1.00 999
NIONS chloride, Cl ulfate, SO4 arbonate, CO3 icarbonate, HCO3	mg/1 43 0.00 0.00 207	me/l 1.21 0.00 0.00 3.39				
otal Dissolved Sol CALING TENDENCIES (.)	353 ppm			
EMP(F) P(PSI) 80 14.7	CO2 (PSI) 0.625 0.625 0.625 0.625 0.625	PH 6.8 6.8 6.8 6.8	CASO4 -375 -281 -213 -162 -123	SCALE II BAS04 -4 -5 -6 -6	NDEX(MG/L) SRSO4 -143 -157 -140 -96	CACO3 -247 -179 -125 -85
emarks & Recommend	ations:		~ 4 d	-6	-77	- 56
PH WAS CALCULA						

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WELCHEM, INC. 6310 Rothway, Suite 130 Houston, Texas 77040 713-460-0650 910-881-1772 TWX P.O. Box 920941 Houston, Texas 77292-0941

LAB NO. 17912



ANALYTICAL SERVICES REPORT WATER ANALYSIS

Date Received: 1	0/04/88	By:		Date (out: 10/11	/88
		********	医过去记忆 医超过 显然是	=======================================		
racking#:T-1857-0 ompany:MOBIL OIL C	٥.	Date	Sampled: 1	0/03/88		
ounty:		Sales	man: B	.D. HENSLEY		
tate:			e Source: K	ELL		
		Well:		UGHES #7		, ,
		6	W. Lindr	the Gally	p - Dal	eota
ISSOLVED SOLIDS			OTHER PROP	•	•	
ATIONS			48,020 , 23,00			
	mg/l	me/1				
Sodium, Na(calc.)	4,798	209	рН		6.80	
Calcium, Ca	130	6.49	Specific G	ravity, 60/60 Sp. Gr.	F 1.01.	5 7_ 1
Magnesium, Mg	23	1.89		sp. Gr. Fravity, Uncor		
Potassium, K	31	1.11	Temperatur	ravity, uncut	73.4	•
iron, Fe Manganese, Mn	0.00		Resistivit	e (F) Y, OHMS-CM	46	3 73.4
Barium, Ba	0.00	0.00		• '		
strontium, Sr	7.00	0.16				
ANIONS						
	mg/1	me/1				
Chloride, Cl	6,421	181				
Sulfate, SO4	1,376	29				
Carbonate, CO3	0.00	0.00 8.74				
Bicarbonate, HC03	533	0.74				
Total Dissolved Sol	ids (calc.	.) 13,	319 ppm			
SCALING TENDENCIES	(MG/L):			colim type:	/ /Ma /T.\	
	000 (D6T)	707	CASO4	SCALE INDEX BASO4	SRSO4	CACO3
remp(F) P(PSI) 80 14.7	CO2 (PSI) 0.625	PR 6.9	-1757	-0	-49	-77
	0.625	6.9	-1263	-0	-53	20
140 14.7	0.625	6.9	-906	-0	- 38	94
170 14.7	0.625	6.9	-633	- 0	-5	154
200 14.7	0.625	6.9	-418	-0	5	199

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STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

ENGI MIG WINTENACO D	
DISTRIBUTION	
SANTA PE	
FILE	
U.S.G.S.	
LAND OFFICE	
	 T -

OIL CONSERVATION DIVISION

	P. O. BOX 2088	Form C-103
DISTRIBUTION SANTA FE	SANTA FE, NEW MEXICO 87501	Revised 10-1-78
\ 	SANTA FE, NEW MEXICO 8/301	5a. Indicate Type of Lease
FILE		
LAND OFFICE		State Fee X
		5. State Oti 6 Gas Lease No.
OPERATOR		07891
		mmmmm m
SUNDRY	NOTICES AND REPORTS ON WELLS	VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
(DG MOT USE THIS FORM FOR PROP USE "APPLICATIO	ON FOR PERMIT -" IFORM C-1011 FOR SUCH PROPOSALS.)	
1.		7, Unit Agreement Name
	OTHER.	Lindrith B Unit
	DYNEW.	8. Form or Lease Name
2. Name of Operator	•	
Mobil Producing TX & N	NM Inc.	
3. Address of Operator		9. Well No.
O Greenway Plaza Sui	te 2700, Houston, TX 77046	25
	de 2, 66, 11645 con, 11.	10. Field and Pool, or Wildcat
4. Location of Well	•	West lingrith
	250 PEET PROM THE South LINE AND 1840 PE	Gallup/Dakota
MAIL FELLEH	-50 reer race the 300 cm	
THE East LINE, SECTION	N 9 TOWNSHIP 24N RANGE 3W	- uman: {{ }}}}}
		- munithtitit
	15. Elevation (Show whether DF, RT, GR, etc.)	12. County
		Rio Arriba
		or Orber Dese
Check A	Appropriate Box To Indicate Nature of Notice, Report	or Other Data
NOTICE OF IN	TENTION TO: SUBSE	QUENT REPORT OF:
	PLUE AND ABANDON REMEDIAL WORK	ALTERING CASING
PERFORM REMEDIAL WORK	 ;	PLUS AND ABANDONMENT
TEMPORARILY ASAMDON	COMMENCE DRILLING OPHS.	PLUE AND ABANDONMENT
PULL OR ALTER CASING	CHANGE PLANS CASING TEST AND CEMENT JOS	IJ
PBC: 04 Ac. (44 C	OTHER Temporary Al	bandonment X
	<u> </u>	
- R3HT9	U	
	perations (Clearly state all pertinent details, and give pertinent dates, i	including estimated date of starting any proposed
17. Describe Proposed or Completed Op- work; SEE RULE 1903.	erations (Clearly state att pertinent setans, and give pertinent	
Bigar, SEE HOLL		•
Wall was Shut-in 1-28.	-86; uneconomical to produce.	•
Well was shut III 1-20	oo, uncontour or product	,
	time to metain this wall as tomporarily	abandoned
Request authority to	continue to retain this well as temporarily	apandonea.
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	description the heat of my beautiful and heliaf	
18. I hereby certify that the information	above is true and complete to the best of my knowledge and belief.	
1.	\mathscr{L}_{\cdot} ,	0101
Manus 1	authorized Agent	
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AUG 04 1986 ONS OF APPROVAL. IF ANY:

expure 8-4-87

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