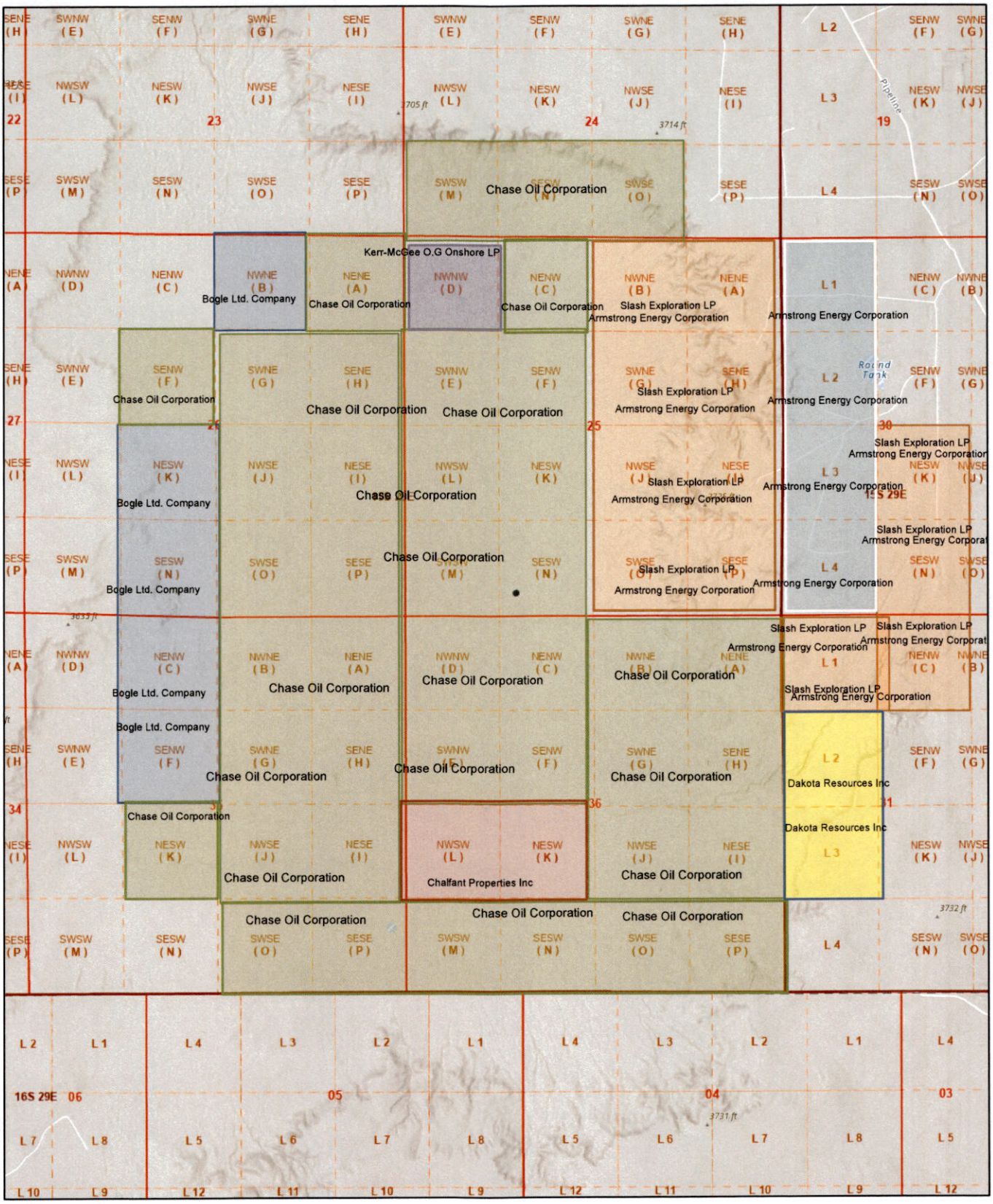
OCD Well Locations



10/12/2023, 10:29:44 AM

Areas

- Override 1
- Override 2
- Override 3
- Override 4
- Override 5
- Override 6
- Override 7
- Override 8
- PLSS Second Division
- PLSS First Division
- PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Esri Community Maps Contributors, New Mexico State University, Texas Parks & Wildlife, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri, NASA, NGA,

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

MACK Energy Corporation

P.O. Box 960
Artesia, NM 88211-0960
Office (575) 748-1288
Fax (575) 746-9539

October 13, 2023

Via Certified Mail 7022 3330 0001 8949 9008
Return Receipt Requested

Bogle Ltd. Company
P.O. Box 460
Dexter, NM 88230

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to drill this well as a water disposal. If you have any objections, you must notify the Oil Conservation Division in Santa Fe in writing at 1220 South St. Francis Drive, Santa Fe, NM 87505 within fifteen (15) days of receiving this letter.

Sincerely,

Mack Energy Corporation

Deana Weaver

Deana Weaver
Regulatory Technician II

DW/

Attachments

From: Livestock Watering
RA:08333

Catalyst Oilfield Services
11999 E Hwy 158
Gardendale, TX 79758
(432) 563-0727
Fax: (432) 224-1038

Water Analysis Report

Customer:	Mack Energy Corporation	Sample #:	252946
Area:	Artesia	Analysis ID #:	193290
Lease:	Fraser		
Location:	SWD #1 0		
Sample Point:	Wellhead		

Sampling Date:	7/13/2023
Analysis Date:	7/19/2023
Analyst:	Catalyst
TDS (mg/l or g/m3):	8579.8
Density (g/cm3):	1.008
Hydrogen Sulfide:	0
Carbon Dioxide:	0
Comments:	

Anions	mg/l	meq/l
Chloride:	**4196.7**	**118.37**
Bicarbonate:	**157.9**	**2.59**
Carbonate:		
Sulfate:	**1200.0**	**24.98**
Borate*:	**5.4**	**0.03**
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	7
pH at time of analysis:	
pH used in Calculation:	**7**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**1777.0**	**77.3**
Magnesium:	**266.8**	**21.95**
Calcium:	**898.8**	**44.85**
Potassium:	**58.9**	**1.51**
Strontium:	**17.6**	**0.4**
Barium:	**0.1**	**0.**
Iron:	**0.1**	**0.**
Manganese:	**0.479**	**0.02**

Conductivity (micro-mhos/cm):	**12896**
Resistivity (ohm meter):	**.7754**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.15	3.13	-0.23	0.00	-0.30	0.00	-0.22	0.00	0.66	0.00
100	0.27	5.91	-0.24	0.00	-0.25	0.00	-0.21	0.00	0.51	0.00
120	0.39	9.04	-0.24	0.00	-0.16	0.00	-0.19	0.00	0.38	0.00
140	0.52	12.16	-0.23	0.00	-0.06	0.00	-0.16	0.00	0.28	0.00
160	0.66	15.29	-0.21	0.00	0.07	67.42	-0.12	0.00	0.21	0.00
180	0.80	18.77	-0.18	0.00	0.20	186.62	-0.07	0.00	0.15	0.00
200	0.94	22.24	-0.15	0.00	0.36	287.40	-0.03	0.00	0.11	0.00
220	1.08	25.37	-0.12	0.00	0.52	369.07	0.02	0.70	0.08	0.00

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: RA 08333 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: DCL DECLARATION

Total Acres: 0 **Subfile:** - **Header:** -

Total Diversion: 1.47 **Cause/Case:** -

Owner: BOGLE FARMS

Contact: STUART BOGLE

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
245912	DCL	1991-07-10	DCL	PRC	RA 08333	T	0	1.47	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
RA 08333				1	2	26	15S	28E	584050	3650815*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1914	DCL	0	1.47	RA 08333

Place of Use

Q 256	Q 64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
		1	2	26	15S	28E	0	1.47		STK	12/31/1914	DCL	

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0	1.47		STK	12/31/1914	GW	SHALLOW

New Mexico Office of the State Engineer
Transaction Summary

DCL Declaration of a Water Right

Transaction Number: 245912 **Transaction Desc:** RA 08333 **File Date:** 07/10/1991

Primary Status: DCL Declared
Secondary Status: PRC Processed
Person Assigned: *******
Applicant: BOGLE FARMS
Contact: STUART BOGLE

Events

Date	Type	Description	Comment	Processed By
07/10/1991	APP	Application Received		*******
07/10/1991	FTN	Finalize non-published Trans.		*******
10/30/2002	RUB	Re-Update the WR Database		*******
09/05/2003	RUB	Re-Update the WR Database		*******
09/05/2003	QAT	Quality Assurance Completed		*******

Water Right Information

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RA 08333	0	1.47		STK 72-12-1 LIVESTOCK WATERING

****Point of Diversion**

RA 08333		584050	3650815*

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

****Place of Use**

Q 256	Q 64	Q 16	Q 4	Sec	Tws	Rng	Acres	Diversion	Consumptive	Use	Priority	Status	Other Loc Desc
		NW	NE	26	15S	28E	0	1.47		STK	12/31/1914	DCL	

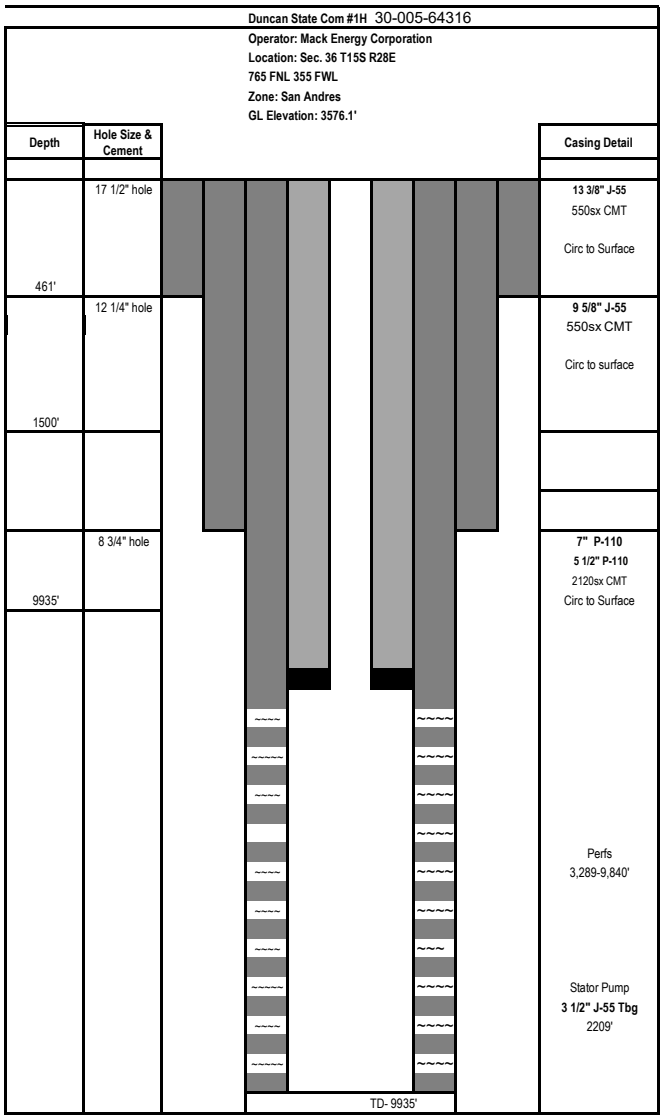
Remarks

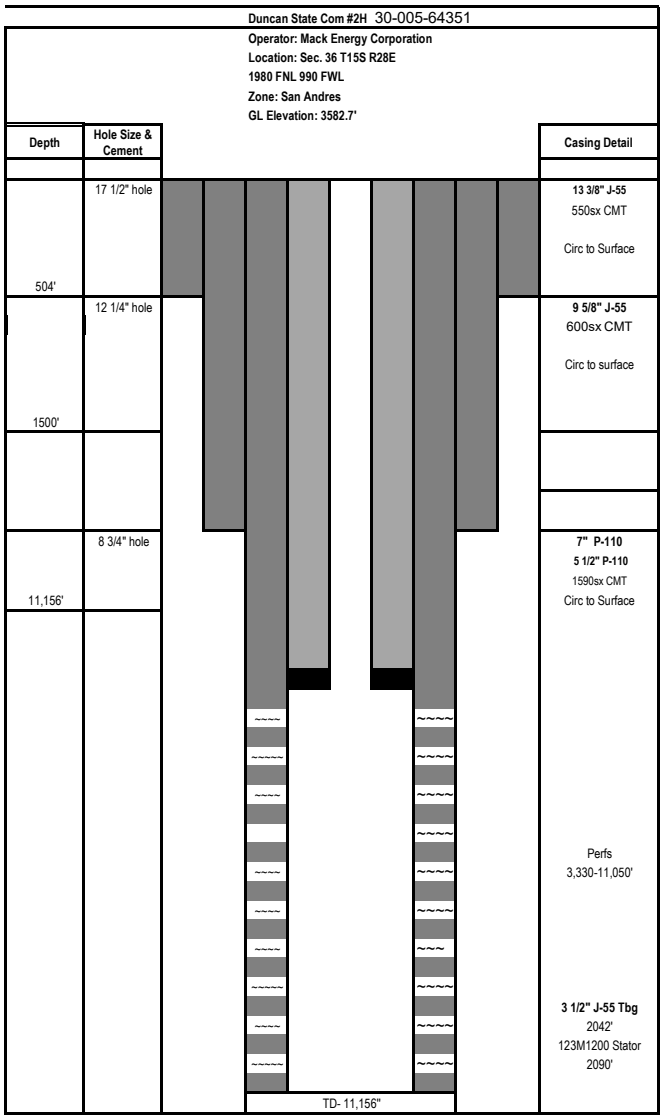
Used for livestock and wildlife.

Fraser SWD #1
C-108
Well Tabulation Penetrating Injection Zone in Review Area
Mack Energy Corporation
Proposed Disposal Well

Operator	Well Name	API #	County	Footage	Sec	TWN	RNG	Type	Status	Spud Date	Comp Date	TD	TVD	PBTD	Comp Zone	Comp Interval	Casing Prog	Cement
Mack Energy Corporation	Fraser SWD #1		Chaves	330 FSL 1550 FWL	25	15S	28E	SWD	Not Drilled			10960			Devonian	10,415-10,960'	13 3/8"	175sx
																	9 5/8"	700sx
																	5 1/2"	1625sx
Mack Energy Corporation	Duncan State Com #1H	30-005-64316	Chaves	765 FNL 355 FWL	36	15S	28E	Oil	Producing	4/4/2019	6/19/2029	9,935'		9,908'	San Andres	3,289-9,840'	13 3/8"	550sx
																	9 5/8"	550sx
																	7 & 5 1/2"	2120sx
Mack Energy Corporation	Duncan State Com #2H	30-005-64351	Chaves	1980 FNL 990 FWL	36	15S	28E	Oil	Producing	5/6/2021	10/1/2021	11,156'		11,106'	San Andres	3,330-11,050'	13 3/8"	550sx
																	9 5/8"	600sx
																	7 & 5 1/2"	1590sx
Amoco Production Company	State EV Com #1	30-005-60459	Chaves	1980 FSL 810 FEL	26	15S	28E	Oil	P&A 2/23/1978	11/16/1977	11/21/1977	1,504'		1,480'	Round Tank Queen	1,250-1,469'	8 5/8"	200sx
Pre-Ongard Well Operator	Pre-Ongard Well #1								10sx Cmt Plug to Surface								5 1/2"	550sx
									100sx sqz perfs @ 1250-1270'									
Armstrong Energy Corp	Amoco State Com #1	30-005-60232	Chaves	330 FNL 350 FEL	36	15S	28E	Gas	P&A 2/18/2014	9/27/1972	11/17/1972	1475'		1468'	Round Tank Queen	1416-1426'	8 5/8"	100sx
									20sx Cmt Plug to Surface								4 1/2"	250sx
									CIBP @ 1375' w/ 25sx CMT									
Mack Energy Corporation	Cranbrook State Com #1H	30-005-64360	Chaves	1637 FSL & 2310 FEL	36	15S	28E	Oil	Producing	4/27/2021	8/28/2021	10,036'		9987'	Round Tank; San Andres	3286-9930'	13 3/8"	210sx
																	9 5/8"	665sx
																	7" & 5 1/2"	2031sx
Elk Oil Company	Christine Federal #1	30-005-60255	Chaves	990 FNL 990 FWL	31	15S	29E	Oil	P&A 8/5/1992	8/17/1974	2/7/1975	3105'		3105'	Round Tank; San Andres	2777-2957'	8 5/8"	100sx
Pre-Ongard Well Operator	Pre-Ongard Well #1								35sx CMT @ 121-238'								4 1/2"	250sx
									30sx CMT @ 500-600'									
									20sx CMT @ 1451-1562'									
									CIBP @ 2700' w/ 50sx CMT									
Max Pray	State A #2	30-005-00468	Chaves	660 FSL 1980 FWL	30	15S	29E	Oil	P&A 1/19/1967	11/21/1962	12/5/1962	3072'		3072'	San Andres	3014-3072' Open Hole	8 5/8"	150sx
Pre-Ongard Well Operator	Pre-Ongard Well #2								20sx CMT @ 3072'								4 1/2"	400sx
									20sx CMT @ Stub of 4 1/2									
									20sx CMT @ 1500'									
									20sx CMT @ Base of Surface									
M.C. Gandy	State A #1	30-005-00467	Chaves	1980 FSL 1980 FWL	30	15S	29E	Oil	P&A 4/19/1967	11/4/1962	11/26/1962	3090'		3090'	Round Tank; San Andres	3001-3018'	8 5/8"	150sx
Pre-Ongard Well Operator	Pre-Ongard Well #1								30sx CMT @ 3090'							3029-3044'	4 1/2"	125sx
									20sx CMT @ Stub 4 1/2"							3064-3090' Open Hole		
									20sx CMT @ 1500'									
									20sx CMT @ Base of Surface									
Armstrong Energy Corp	Round Tank Queen Unit #4	30-005-00396	Chaves	1980 FSL & 660 FEL	25	15S	28E	Gas	P&A 2/20/2014	9/30/1962	10/5/1962	3075'		1492'	Round Tank; Queen	1454-1464'	8 5/8"	150sx
									15sx CMT Plug @ 2900-3050' 3/18/64								4 1/2"	300sx
									40sx CMT Plug @ 1650-1800' 3/18/64									
									CIBP @ 1400' w/25sx CMT 2/20/14									
									Perf @ 363' 2/20/14									
									80sx CMT Tag @ 143' 2/20/14									
									10sx CMT Fill 4 1/2" 2/20/14									
									50sx CMT into 8 5/8" annulus 2/20/14									
									20sx CMT to Surface 2/2014									
Armstrong Energy Corp	Round Tank Queen Unit #3	30-015-60105	Chaves	2300 FSL & 628 FWL	30	15S	29E	Oil	P&A 2/27/2014	1/5/1970	2/101970	1659'		1659'	Round Tank; Queen	1472-1488'	8 5/8"	150sx
									CIBP @ 1440 w/ 25sx Cmt								4 1/2"	150sx
									Perf @301' 50sx CMT									
									12sx CMT Circ to Surface inside 4 1/2" csg									
									30sx CMT into 8 5/8 annulus									
									15sx CMT fill 8 5/8: annulus to Surface									
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-005-00397	Chaves	1980 FNL & 1980 FEL	25	15S	28E	Oil	P&A 8/25/1958	5/3/1957	5/27/1957	1389'		1354'	Wildcat	1312-1328'	8 5/8"	
Intex Oil Company	Featherstone Federal #1-25								16sx CMT plug 1210-1354'								5 1/2"	
									20sx CMT plug 750-820'									
									30sx CMT plug 121-221'									
									5sx Cmt to surface									
Mack Energy Corporation	Quebec State #4	30-005-64276	Chaves	1650 FSL 2310 FEL	26	15S	28E	Dry Hole	P&A 10/8/2016	9/25/2016	10/8/2016	1264'		1264'	Round Tank; San Andres		8 5/8"	550sx

									TAMPlug packer @ 820'									
									656sx CMT to Surface									


Duncan State Com #1H 30-005-64316
Operator: Mack Energy Corporation
Location: Sec. 36 T15S R28E
765 FNL 355 FWL
Zone: San Andres
GL Elevation: 3576.1'
Depth
Hole Size & Cement
Casing Detail
17 1/2" hole
461'
13 3/8" J-55
550sx CMT
Circ to Surface
12 1/4" hole
1500'
9 5/8" J-55
550sx CMT
Circ to surface
8 3/4" hole
9935'
7" P-110
5 1/2" P-110
2120sx CMT
Circ to Surface
Perfs
3,289-9,840'
Stator Pump
3 1/2" J-55 Tbg
2209'
TD- 9935'


Duncan State Com #2H 30-005-64351
Operator: Mack Energy Corporation
Location: Sec. 36 T15S R28E
1980 FNL 990 FWL
Zone: San Andres
GL Elevation: 3582.7'
Depth
Hole Size & Cement
Casing Detail
17 1/2" hole
13 3/8" J-55
550sx CMT
Circ to Surface
504'
12 1/4" hole
9 5/8" J-55
600sx CMT
Circ to surface
1500'
8 3/4" hole
7" P-110
5 1/2" P-110
1590sx CMT
Circ to Surface
11,156'
Perfs
3,330-11,050'
3 1/2" J-55 Tbg
2042'
123M1200 Stator
2090'
TD- 11,156"

State EV Com #1

Amoco Production Company

P&A 2/23/1978

Pre-Ongard Well #1

Operator: Pre-Ongard Well Operator

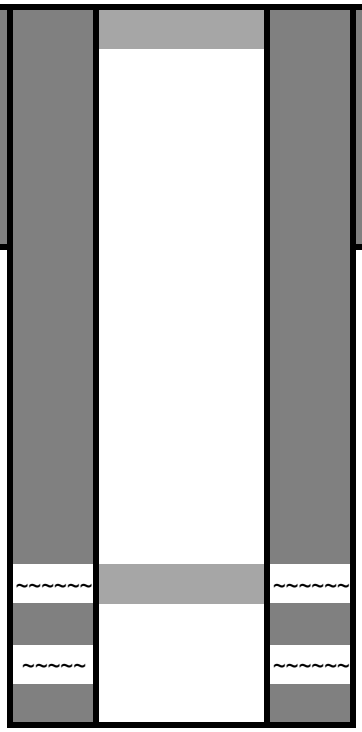
Location: Sec. 26 T15S R28E

1980 FSL 810 FEL

Zone: Und. Round Tank Queen

GL Elevation: 3561.2'

Depth	Hole Size & Cement	Casing Detail
	12 1/4" hole	**8 5/8"** 220sx Circ to Surface
229'		
	7 7/8" hole	**5 1/2"** 550sx Circ to surface
1504'		
		Perfs 1250-1270" 1451-1469'
		Sqz Perfs 1250-1270' w/ 100sx Class C
		10sx Cmt Plug to Surface



AMOCO STATE COM #1

30-005-60232

P&A 2/18/2014

Operator: Armstong Energy Corporation

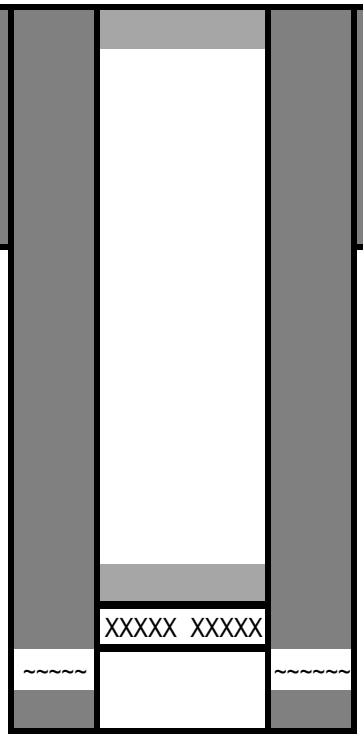
Location: Sec. 36 T15S R28E

330 FNL 350 FEL

Zone: Round Tank Queen

GL Elevation: 3660'

Depth	Hole Size & Cement	Casing Detail
201'	10" hole	**8 5/8"** 100sx Circ to Surface
1468'	8" hole	**4 1/2"** 250sx Circ to surface
		Perfs 1416-1426'
		CIBP @ 1375' **w/ 25sx CMT**
		20sx Cmt Plug to Surface

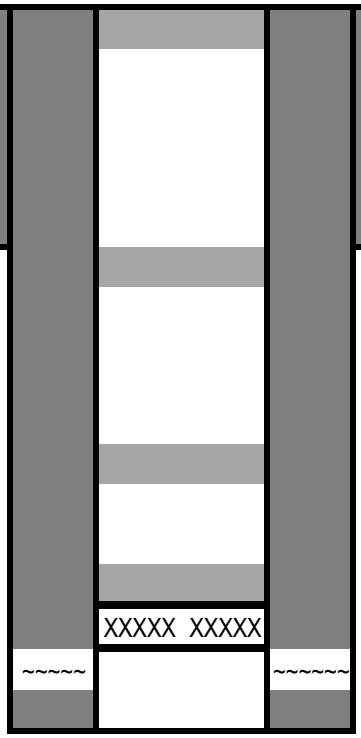


Pre-Ongard Well #1

Christine Federal #1
API# 30-005-60255
P&A 8/5/1992

Operator: Elk Oil Company/ Pre-Ongard Well Operator
Location: Sec. 31 T15S R29E
990 FNL 990 FWL
Zone: Round Tank; San Andres
GL Elevation: 3674'

Depth	Hole Size & Cement	Casing Detail
223"	10" hole	**8 5/8"** 100sx Circ to Surface
3105"	8" hole	**4 1/2"** 250sx Circ to surface
		Perfs 2777-2957'
		35sx CMT @ 121-238'
		30sx CMT @ 500-600'
		20sx CMT @ 1451-1562'
		CIBP @ 2700' w/ 50sx CMT

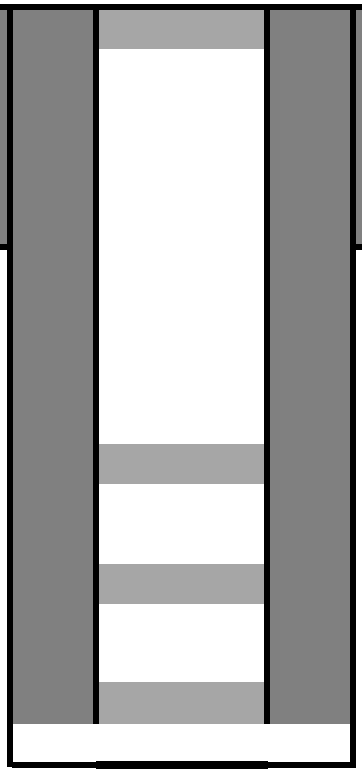


Pre-Ongard Well #2

State A #2
API# 30-005-00468
P&A 1/19/1967

Operator: Max Pray/ Pre-Ongard Well Operator
Location: Sec. 30 T15S R29E
660 FSL 1980 FWL
Zone: San Andres
GL Elevation: 3730'

Depth	Hole Size & Cement	Casing Detail
325'	11" hole	**8 5/8"** 150sx Circ to Surface
3014'	7 7/8" hole	**4 1/2"** 400sx Circ to surface
		Open Hole 3014-3072'
		20sx CMT @ 3072'
		20sx CMT @ Stub of 4 1/2
		20sx CMT @ 1500'
		20sx CMT @ Base of Surface



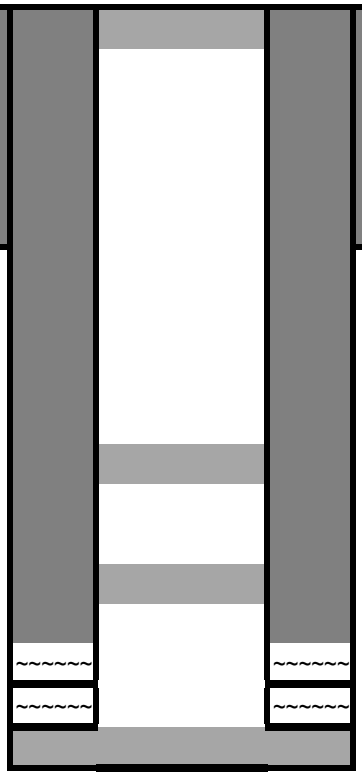
TD- 3072'

Pre-Ongard Well #1

State A #1
API# 30-005-00467
P&A 4/19/1967

Operator: M.C. Gandy/ Pre-Ongard Well Operator
Location: Sec. 30 T15S R29E
1980 FSL 1980 FWL
Zone: San Andres
GL Elevation: 3090'

Depth	Hole Size & Cement	Casing Detail
318'	12 1/4" hole	**8 5/8"** 150sx Circ to Surface
3064'	7 7/8" hole	**4 1/2"** 125sx Circ to surface
		3001-3018' perf
		3029-3044' perf
		3064-3090' Open Hole
		30sx CMT @ 3090'
		20sx CMT @ Stub 4 1/2"
		20sx CMT @ 1500'
		20sx CMT @ Base of Surface

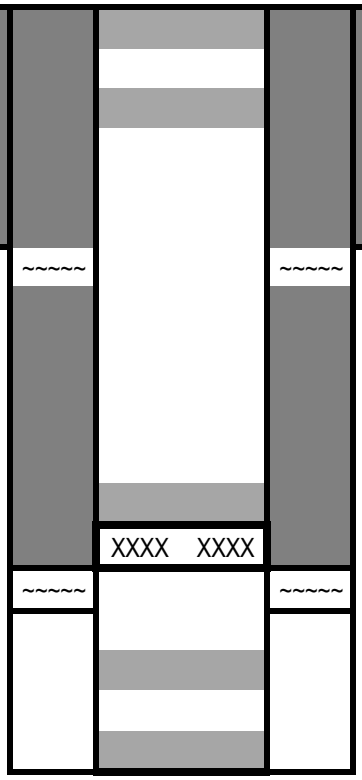


Round Tank Queen Unit #4

API# 30-005-00396
P&A 2/20/2014

Operator: Armstrong Energy Corporation
Location: Sec. 25 T15S R28E
1980 FSL 660 FEL
Zone: Round Tank; Queen
GL Elevation: 3701'

Depth	Hole Size & Cement	Casing Detail
318'	10" hole	**8 5/8"** 200sx Circ to Surface
1492'	8" hole	**4 1/2"** 110sx Circ to surface
		1454-1464' perf
		15sx CMT Plug @ 2900-3050' 3/18/64
		40sx CMT Plug @ 1650-1800' 3/18/64
		CIBP @ 1400' w/25sx CMT 2/20/14
		Perf @ 363' 2/20/14
		80sx CMT Tag @ 143' 2/20/14
		10sx CMT Fill 4 1/2" 2/20/14
		50sx CMT into 8 5/8" annulus 2/20/14
		20sx CMT to Surface 2/2014



Pre-Ongard Well #1

Featherstone Federal #1-25

API# 30-005-00397

P&A 8/25/1958

Operator: Pre-Ongard Well Operator (Intex Oil Company)

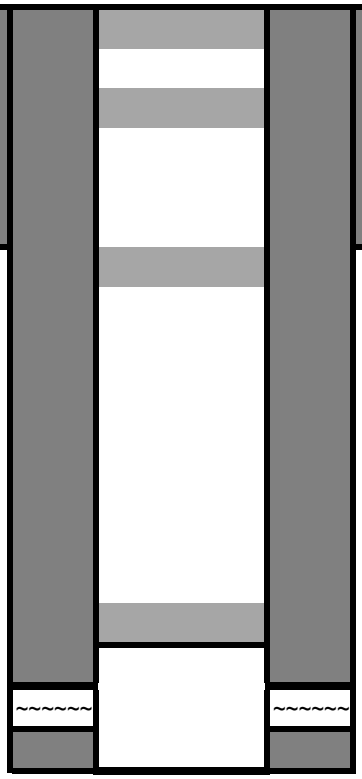
Location: Sec. 25 T15S R28E

1980 FNL 1980 FEL

Zone: Wildcat

GL Elevation: 3598'

Depth	Hole Size & Cement	Casing Detail
	10" hole	**8 5/8"** Circ to Surface
1389'	8" hole	**5 1/2"** 200sx Circ to surface
		1312-1328' perfs
		16sx CMT plug 1210-1354'
		20sx CMT plug 750-820'
		30sx CMT plug 121-221'
		5sx Cmt to surface



Quebec State #4

API# 30-005-64276
P&A 10/8/2016

Operator: Mack Energy Corporation
Location: Sec. 26 T15S R28E
1650 FSL 2310 FEL
Zone: Round Tank; San Andres
GL Elevation: 3575'

Depth	Hole Size & Cement	Casing Detail
	12 1/4" hole	**8 5/8"** 550sx Circ to Surface
428'		
	7 7/8" hole	
1264'		
		XXXXX XXXXX
		P&A 10/8/2016
		TAMPlug packer @ 820'
		656sx CMT to Surface
		TD- 1264"

Round Tank Quen Unit #3

API# 30-005-60105
P&A 2/27/2014

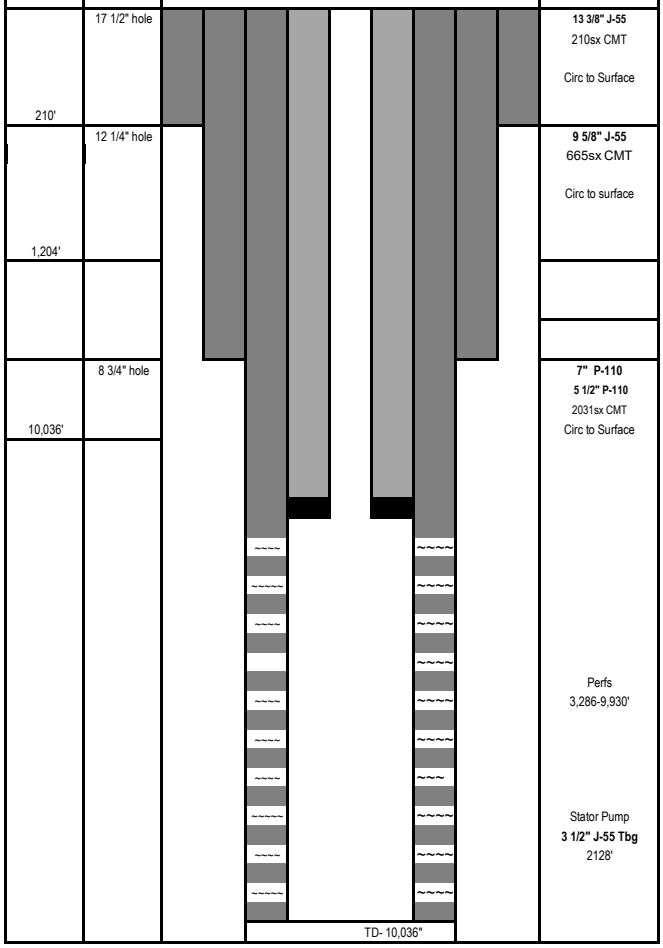
Operator: Armstrong Energy Corporation
Location: Sec. 30 T15S R29E
2300 FSL 628 FWL
Zone: Queen
GL Elevation: 3712'

Depth	Hole Size & Cement	Casing Detail
	10" hole	**8 5/8"** 150sx Circ to Surface
251		
	8" hole	**4 1/2"** 150sx Circ to surface
1656'		
		1472-1488' perf
		XXXXX XXXXX
		CIBP @ 1440 w/ 25sx Cmt
		Perf @301' 50sx CMT
		12sx CMT Circ to Surface inside 4 1/2" csg
TD- 1659'		30sx CMT into 8 5/8 annulus
		15sx CMT fill 8 5/8: annulus to Surface

30-005-64360

Cranbrook State Com #1

Operator: Mack Energy Corporation
Location: Sec. 36 T15S R28E
1637 FSL 2310 FEL
Zone: Round Tank; San Andres
GL Elevation: 3602.4'



Underground Sources of Drinking Water- There is no USDW present.

Seismicity Risk Assessment- There is no risk of induced Seismicity.

C-108 APPLICATION FOR AUTHORIZATION TO INJECT
ADMINISTRATIVE COMPLETENESS FORM

Well Name: _____

Applicant: _____

Action ID: _____

Admin. App. No: _____

C-108 Item	Description of Required Content	Yes	No	N/A
I. PURPOSE	Selection of proper application type.			
II. OPERATOR	Name; address; contact information.			
III. WELL DATA	Well name and number; STR location; footage location within section.			
	Each casing string to be used, including size, setting depth, sacks of cement, hole size, top of cement, and basis for determining top of cement.			
	Description of tubing to be used including size, lining material, and setting depth.			
	Name, model, and setting depth of packer to be used, or description of other seal system or assembly to be used.			
	Well diagram: Existing (if applicable).			
	Well diagram: Proposed (either Applicant's template or Division's Injection Well Data Sheet).			
IV. EXISTING PROJECT	For an expansion of existing well, Division order number authorizing existing well (if applicable).			
V. LEASE AND WELL MAP	AOR map identifying all wells and leases within 2 mile radius of proposed well, and depicting a 1/2 mile radius circle around any another projected injection well and a 1 mile radius circle around any other projected injection well in the Devonian formation.			
VI. AOR WELLS	Tabulation of data for all wells of public record within AOR which penetrate the proposed injection zone, including well type, construction, date drilled, location, depth, and record of completion.			
	Schematic of each plugged well within AOR showing all plugging detail.			
VII. PROPOSED OPERATION	Proposed average and maximum daily rate and volume of fluids to be injected.			
	Statement that the system is open or closed.			
	Proposed average and maximum injection pressure.			
	Sources and analysis of injection fluid, and compatibility with receiving formation if injection fluid is not produced water.			
	A chemical analysis of the disposal zone formation water if the injection is for disposal and oil or gas is not produced or cannot be produced from the formation within 1 mile of proposed well. Chemical analysis may be based on sample, existing literature, studies, or nearby well.			
VIII. GEOLOGIC DATA	Proposed injection interval, including appropriate lithologic detail, geologic name, thickness, and depth.			
	USDW of all aquifers overlying the proposed injection interval, including the geologic name and depth to bottom.			
	USDW of all aquifers underlying the proposed injection interval, including the geologic name and depth to bottom.			

C-108 (SWD) APPLICATION FOR AUTHORIZATION TO INJECT ADMINISTRATIVE COMPLETENESS FORM

Well Name: _____

Applicant: _____

Action ID: _____

Admin. App. No: _____

C-108 Item	Description of Required Content	Yes	No	N/A
IX. PROPOSED STIMULATION	Description of stimulation process or statement that none will be conducted.			
X. LOGS/WELL TESTS	Appropriate logging and test data on the proposed well or identification of well logs already filed with OCD.			
XI. FRESH WATER	Chemical analysis of fresh water from two or more fresh water wells (if available and producing) within 1 mile of the proposed well, including location and sampling date(s).			
XII. AFFIRMATION STATEMENT	Statement of qualified person endorsing the application, including name, title, and qualifications.			
XIII. PROOF OF NOTICE	Identify of all "a*ffected persons*" identified on AOR map in Section V, including all affected persons within 1/2 mile radius circle around any another projected injection well and a 1 mile radius circle around any other projected injection well in the Devonian formation.			
	Identification and notification of all surface owners.			
	BLM and/or NMSLO notified per 19.15.2.7(A)(8)(d) NMAC.			
	Notice of publication in local newspaper in county where proposed well is located with the following specific content:			
	● Name, address, phone number, and contact party for Applicant;			
	● Intended purpose of proposed injection well, including exact location of single well, or the section, township, and range location of multiple wells;			
	● Formation name and depth, and expected maximum injection rates and pressures; and			
	● Notation that interested parties shall file objections or requests for hearing with OCD no later than 15 days after the admin completeness determination.			
XIV. CERTIFICATION	Signature by operator or designated agent, including date and contact information.			

Review Date*: **Reviewer:**

◯ **Administratively COMPLETE**

◯ **Administratively INCOMPLETE**

NOTES:

* The Review Date is the date of administrative completeness determination that commences the 15 day protest period in 19.15.26.8 (C)(2) NMAC.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

ORDER

GRANTING UIC PERMIT SWD-2550

Mack Energy Corporation ("Applicant") filed an Application for Authorization to Inject (Form C-108) ("Application") with the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division ("OCD") to inject produced water at the Applicant's Fraser SWD#1 ("Well"), as more fully described in Appendix A.

THE OCD FINDS THAT:

1. Applicant provided the information required by 19.15.26 NMAC and the Form C-108 for an application to inject produced water into a Class II Underground Injection Control ("UIC") well.

2. Applicant complied with the notice requirements of 19.15.26.8 NMAC.

3. No person filed a protest on the Application.

4. The Well will inject produced water into the Devonian formation.

5. The produced water injected into the Well will be confined by layers above and below the approved injection interval.

6. No other UIC wells which inject or that are authorized to inject produced water into the same approved injection interval are permitted within one mile of the Well.

7. Applicant affirmed in a sworn statement by a qualified person that it examined the available geologic and engineering data and found no evidence of open faults or other hydrologic connections between the approved injection interval and any underground sources of drinking water.

8. Applicant is in compliance with 19.15.5.9 NMAC.

9. Applicant agrees to the Terms and Conditions in the attached Permit.

THE DIVISION CONCLUDES THAT:

1. OCD has authority under the Oil and Gas Act, NMSA 1978, §§70-2-1 *et seq.*, and its implementing regulations, 19.15.1 *et seq.* NMAC, and under the federal Safe

Drinking Water Act, 42 U.S.C. 300f *et seq.*, and its implementing regulations, 40 CFR 144 *et seq.*, to issue this permit for an UIC Class II injection well. *See* 40 CFR 147.1600.

2. Based on the information and representations provided in the Application, the proposed injection, if conducted in accordance with the Application and the terms and conditions of the attached Permit, (a) will not result in waste of oil and gas; (b) will not adversely affect correlative rights; (c) will protect underground sources of drinking water; and (d) will protect the public health and environment.

3. Applicant is authorized to inject subject to the terms and conditions of the Permit.

IT IS THEREFORE ORDERED THAT:

The Applicant be granted UIC Permit SWD-2550 for Well Fraser SWD#1.

Date: 11/15/23

DYLAN FUGE
OCD DIRECTOR
DMF / th

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

UIC CLASS II PERMIT SWD- 2550

APPENDIX A – AUTHORIZED INJECTION

Permittee: Mack Energy Corporation

OGRID No.:013837

Well name: Fraser SWD#1

Surface location: 330 feet from the South line and 1550 feet from West line (Unit Letter N), Section 25, Township 15 South, Range 28 East, NMPM, Chaves County
Latitude: 32.9806306°N; Longitude: 104.0887885°W, NAD1983

Bottom hole location (if different):

Type of completion: Openhole

Type of injection: Non-Commercial

Injection fluid: Class II UIC (Produced Water)

Injection interval: Devonian Formation 10,415 feet – 10,960 feet.

Injection interval thickness (feet): 545 feet

Confining layer(s): Woodford shale (upper) & Montoya formation (lower)

Prohibited injection interval(s): Any formation above or below the permitted injection interval. including lost circulation intervals.

Liner, tubing, and packer set: 10,415 feet.

Maximum daily injection rate: 15,000 barrels of water per day.

Maximum surface injection pressure: 2083 pounds per square inch.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

UIC CLASS II PERMIT SWD- 2550_

Pursuant to the Oil and Gas Act, NMSA 1978, §§70-2-1 *et seq.*, ("Act") and its implementing regulations, 19.15.1 *et seq.* NMAC, ("Rules") and the federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, and its implementing regulations, 40 CFR 144 *et seq.*, the Oil Conservation Division ("OCD") issues this Permit to Mack Energy Corporation ("Permittee") to authorize the construction and operation of a well to inject produced water at the location and under the terms and conditions specified in this Permit and Appendix A.

I. GENERAL CONDITIONS

A. AUTHORIZATION

1. Scope of Permit. This Permit authorizes the injection of produced water into the well described on Appendix A ("Well"). Any injection not specifically authorized by this Permit is prohibited. Permittee shall be the "operator" of the Well as defined in 19.15.2.7(O)(5) NMAC.

a. Injection is limited to the approved injection interval described in Appendix A. Permittee shall not allow the movement of fluid containing any contaminant into an underground source of drinking water ("USDW") if the presence of that contaminant may cause a violation of a Primary Drinking Water Regulation adopted pursuant to 40 CFR Part 142 or that may adversely affect the health of any person. [40 CFR 144.12(a)]

b. The wellhead injection pressure for the Well shall not exceed the value identified in Appendix A.

c. Permittee shall not commence to drill, convert, or recomplete the Well until receiving this approval and until OCD approves a Form C-101 Application for Permit to Drill ("APD") pursuant to 19.15.14 NMAC or receives an approved federal Form 3160-3 APD for the Well. [40 CFR 144.11; 19.15.14.8 and 19.15.26.8 NMAC]

d. Permittee shall not commence injection into the Well until the Permittee complies with the conditions in Section I. C. of this Permit.

e. This Permit authorizes injection of any UIC Class II fluid or oil field waste defined in 19.15.2.7(E)(6) NMAC.

f. This Permit does not authorize injection for an enhanced oil recovery project as defined in 19.15.2.7(E)(2) NMAC.

2. Notice of Commencement. Permittee shall provide written notice on Form C-103 to OCD E-Permitting and notify OCD Engineering Bureau by email of the submittal no later than two (2) business days following the date on which injection commenced into the Well. [19.15.26.12(B) NMAC]

3. Termination. Unless terminated sooner, this Permit shall remain in effect for a term of twenty (20) years beginning on the date of issuance. Permittee may submit an application for a new permit prior to the expiration of this Permit. If Permittee submits an application for a new permit, then the terms and conditions of this Permit shall remain in effect until OCD denies the application or grants a new permit.

a. This Permit shall terminate one (1) year after the date of issuance if Permittee has not commenced injection into the Well, provided, however, that OCD may grant a single extension of no longer than one (1) year for good cause shown. Permittee shall submit a written request for an extension to OCD Engineering Bureau no later than thirty (30) days prior to the deadline for commencing injection.

b. One (1) year after the last date of reported injection into the Well, OCD shall consider the Well abandoned, the authority to inject pursuant to this Permit shall terminate automatically, and Permittee shall plug and abandon the Well as provided in Section I. E. of this Permit. Upon receipt of a written request by the Permittee no later than one year after the last date of reported injection into the Well, OCD may grant an extension for good cause. [19.15.26.12(C) NMAC]

B. DUTIES AND REQUIREMENTS

1. Duty to Comply with Permit. Permittee shall comply with the terms and conditions of this Permit. Any noncompliance with the terms and conditions of this Permit, or of any provision of the Act, Rules or an Order issued by OCD or the Oil Conservation Commission, shall constitute a violation of law and is grounds for an enforcement action, including revocation of this Permit and civil and criminal penalties. Compliance with this Permit does not relieve Permittee of the obligation to comply with any other applicable law, or to exercise due care for the protection of fresh water, public health and safety and the environment. The contents of the Application and Appendix A shall be enforceable terms and conditions of this Permit. [40 CFR 144.51(a); 19.15.5 NMAC]

2. Duty to Halt or Reduce Activity to Avoid Permit Violations. Permittee shall halt or reduce injection to avoid a violation of this Permit or other applicable law. It shall not be a defense in an enforcement action for Permittee to assert that it would have been necessary to halt or reduce injection in order to maintain compliance with this Permit. [40 CFR 144.51(c)]

3. Duty to Mitigate Adverse Effects. Permittee shall take all reasonable steps to minimize, mitigate and correct any waste or effect on correlative rights, public health, or the

environment resulting from noncompliance with the terms and conditions of this Permit. [40 CFR 144.51(d)]

4. Duty to Operate and Maintain Well and Facilities. Permittee shall operate and maintain the Well and associated facilities in compliance with the terms and conditions of this Permit. [40 CFR 144.51(e)]

5. Duty to Provide Information. In addition to any other applicable requirement, Permittee shall provide to OCD by the date and on the terms specified by OCD any information which OCD requests for the purpose of determining whether Permittee is complying with the terms and conditions of this Permit. [40 CFR 144.51(h)]

6. Private Property. This Permit does not convey a property right or authorize an injury to any person or property, an invasion of private rights, or an infringement of state or local law or regulations. [40 CFR 144.51(g)]

7. Inspection and Entry. Permittee shall allow OCD's authorized representative(s) to enter upon the Permittee's premises where the Well is located and where records are kept for the purposes of this Permit at reasonable times and upon the presentation of credentials to:

a. Inspect the Well and associated facilities;

b. Have access to and copy any record required by this Permit;

c. Observe any action, test, practice, sampling, measurement or operation of the Well and associated facilities; and

d. Obtain a sample, measure, and monitor any fluid, material or parameter as necessary to determine compliance with the terms and conditions of this Permit. [40 CFR 144.51(i)]

8. Certification Requirement. Permittee shall sign and certify the truth and accuracy of all reports, records, and documents required by this Permit or requested by OCD. [40 CFR 144.51(k)]

9. Financial Assurance. Permittee shall provide and maintain financial assurance for the Well in the amount specified by OCD until the Well has been plugged and abandoned and the financial assurance has been released by OCD. [40 CFR 144.52; 19.15.8.12 NMAC]

C. PRIOR TO COMMENCING INJECTION

1. Construction Requirements.

a. Permittee shall construct the Well as described in the Application,

Appendix A and as required by the Special Conditions.

b. Permittee shall construct and operate the Well in a manner that ensures the injected fluid enters only the approved injection interval and is not permitted to escape to other formations or onto the surface.

2. Tests and Reports. Permittee shall complete the following actions prior to commencing injection in the Well.

a. Permittee shall obtain and comply with the terms and conditions of an approved APD prior to commencing drilling of the Well, or other OCD approval, as applicable, prior to converting or recompleting the Well. If the APD is approved by the OCD, the Well shall be subject to the construction, testing, and reporting requirements of 19.15.16 NMAC.

b. Permittee shall circulate to surface the cement for the surface and intermediate casings. If cement does not circulate on any casing string, Permittee shall run a cement bond log ("CBL") to determine the top of cement, then notify the OCD Engineering Bureau and the appropriate OCD Inspection Supervisor and submit the CBL prior to continuing with any further cementing on the Well. If the cement did not tie back into next higher casing shoe, Permittee shall perform remedial cement action to bring the cement to a minimum of two hundred (200) feet above the next higher casing shoe.

c. If a liner is approved for the construction of the Well, Permittee shall run and submit to OCD E-Permitting and notify the OCD Engineering Bureau by email, a CBL for the liner to demonstrate placement cement and the cement bond with the tie-in for the casing string.

d. Permittee shall submit the mudlog, geophysical logs, and a summary of depths (picks) for the contacts of the formations demonstrating that only the permitted formation is open for injection. OCD may amend this Permit to specify the depth of the approved injection interval within the stratigraphic interval requested in the application. If Permittee detects a hydrocarbon show during the drilling of the Well, it shall notify OCD Engineering Bureau by email and obtain written approval prior to commencing injection into the Well.

e. Permittee shall obtain and submit on a Form C-103 a calculated or measured static bottom-hole pressure measurement representative of the completion in the approved injection interval.

f. Permittee shall conduct an initial mechanical integrity test ("MIT") on the Well in compliance with the terms and conditions of this Permit and 19.15.26 NMAC, and shall not commence injection into the Well until the results of the initial MIT have been approved by the appropriate OCD Inspection Supervisor. [19.15.26.11(A) NMAC]

g. OCD retains authority to require a wireline verification of the completion and packer setting depths in this Well. [19.15.26.11(A) NMAC]

D. OPERATION

1. Operation and Maintenance.

a. Permittee shall equip, operate, monitor and maintain the Well to facilitate periodic testing, assure mechanical integrity, and prevent significant leaks in the tubular goods and packing materials used and significant fluid movements through vertical channels adjacent to the well bore. [19.15.26.10(A) NMAC]

b. Permittee shall operate and maintain the Well and associated facilities in a manner that confines the injected fluid to the approved injection interval and prevents surface damage and pollution by leaks, breaks and spills. [19.15.26.10(B) NMAC]

c. OCD may authorize an increase in the maximum surface injection pressure upon a showing by the Permittee that such higher pressure will not result in the migration of the disposed fluid from the approved injection interval or induced seismicity. Such proper showing shall be demonstrated by sufficient evidence, including an acceptable step-rate test.

d. If OCD has reason to believe that operation of the Well may have caused or determined to be contributing to seismic activity, Permittee shall, upon OCD's written request:

i. Take immediate corrective action, which could include testing and evaluating of the injection interval and confining layers; suspending or reducing of the rate of injection or maximum surface injection pressure, or both; and providing increased monitoring of the Well's operation; and

ii. Submit a remedial work plan or an application to modify the Permit to implement the corrective action, plug back the injection interval, or incorporate another modification required by OCD.

OCD may approve the remedial work plan, modify the Permit or issue an emergency order or temporary cessation order as it deems necessary.

2. Pressure Limiting Device.

a. The Well shall be equipped with a pressure limiting device, which is in workable condition and can be tested for proper calibration at the well site,

that shall limit surface tubing pressure to the maximum surface injection pressure specified in Appendix A.

b. Permittee shall test the pressure limiting device and all gauges and other metering requirement to ensure their accuracy and proper function no less than every five (5) years.

3. Mechanical Integrity. Permittee shall conduct a MIT prior to commencing injection, at least every five (5) years after the date of the previous MIT, and whenever the tubing is removed or replaced, the packer is reset, mechanical integrity is lost, Permittee proposes to transfer the Well, or requested by OCD.

a. MITs shall be conducted in accordance with 19.15.26 NMAC.

b. Permittee shall submit a sundry notice on Form C-103 of intent to install or replace injection equipment or conduct a MIT no later than three (3) business days prior to the event.

c. Permittee shall report the result of a MIT no later than two (2) business days after the test.

d. Permittee shall cease injection and shut-in the Well no later than twenty-four (24) hours after discovery if:

i. The Well fails a MIT; or

ii. Permittee observes conditions at the Well that indicate the mechanical failure of tubing, casing, or packer.

e. Permittee shall take all necessary actions to address the effects resulting from the loss of mechanical integrity in accordance with 19.15.26.10 NMAC.

f. Permittee shall conduct a successful MIT pursuant to 19.15.26.11 NMAC, including written approval from OCD prior to recommencing injection and the requirements contained in Section I G.3.

4. Additional Tests. Permittee shall conduct any additional test requested by OCD, including but not limited to step-rate tests, tracer surveys, injection surveys, noise logs, temperature logs, and casing integrity logs [19.15.26.11(A)(3) NMAC]

5. Records.

a. Permittee shall retain a copy of each record required by this Permit for a period of at least five (5) years and shall furnish a copy to OCD upon request. [40 CFR 144.51(h)]

b. Permittee shall retain a record of each test, sample, measurement, and certification of accuracy and function collected for the Well, including:

i. Date, location, and time of sample, measurement or calibration;

ii. Person who conducted the sample event, -measurement or calibration;

iii. Calibration of gauge or other equipment in accordance with the manufacturer's specifications;

iv. Description of method and procedures;

v. Description of handling and custody procedures; and

vi. Result of the analysis.

E. PLUGGING AND ABANDONMENT

1. Upon the termination of this Permit, Permittee shall plug and abandon the Well and restore and remediate the location in accordance with 19.15.25 NMAC.

2. If Permittee has received an extension pursuant to Section I. A. 3. b., Permittee shall apply for approved temporary abandonment pursuant to 19.15.25 NMAC.

3. If this Permit expires pursuant to 19.15.26.12 NMAC and OCD has not issued a new permit, then Permittee shall plug and abandon the Well and restore and remediate the location in accordance with 19.15.25 NMAC.

4. Permittee's temporary abandonment of the Well shall not toll the abandonment of injection in accordance with 19.15.26.12(C) NMAC.

F. REPORTING

1. Monthly Reports. Permittee shall submit a report using Form C-115 using the OCD's web-based online application on or before the 15th day of the second month following the month of injection, or if such day falls on a weekend or holiday, the first workday following the 15th, with the number of days of operation, injection volume, and injection pressure. [19.15.26.13 NMAC; 19.15.7.24 NMAC]

2. Corrections. Permittee shall promptly disclose to OCD any incorrect information in the Application or any record required by this Permit and submit corrected information. [40 CFR 144.51(h)(8)]

G. CORRECTIVE ACTION

1. Releases. Permittee shall report any unauthorized release of injection fluid at the Well or associated facilities in accordance with 19.15.29 and 19.15.30 NMAC.

2. Failures and Noncompliance. Permittee shall report the following incidents to appropriate OCD Inspection Supervisor and OCD Engineering Bureau verbally and by e-mail no later than 24 hours after such incident:

a. Any mechanical integrity failures identified in Section I. D. 3. d;

b. The migration of injection fluid from the injection interval [19.15.26.10 NMAC]; or

c. A malfunction of the Well or associated facilities that may cause waste or affect the public health or environment, including: (a) monitoring or other information which indicates that a contaminant may affect a USDW; or (b) noncompliance or malfunction which may cause the migration of injection fluid into or between USDWs. [40 CFR 144.51(l)(6)]

3. Corrective Action. Permittee shall submit a written report describing the incident in Sections I.G.1 or I.G.2, including a corrective active plan, no later than five (5) calendar days after discovery of the incident. [40 CFR 144.51(l)(6)] For an unauthorized release, Permittee also shall comply with the site assessment, characterization and remediation requirements of 19.15.29 and 19.15.30 NMAC.

4. Restriction or Shut-In. OCD may restrict the injected volume and pressure or shut-in the Well if OCD determines that the Well has failed or may fail to confine the injected fluid to the approved injection interval or has caused induced seismicity until OCD determines that Permittee has identified and corrected the failure. [19.15.26.10(E) NMAC]

H. PERMIT CHANGES

1. Transfer. This Permit shall not be transferred without the prior written approval of OCD. Permittee shall file Form C-145 for a proposed transfer of the Well. OCD may require, as a condition of approving the transfer, that this Permit be amended to ensure compliance and consistency with applicable law. If the Well has not been spud prior to the transfer, the OCD may require that the new operator reapply and submit to the OCD a new Form C-108 prior to constructing and injecting into the well. [19.15.26.15 NMAC; 19.15.9.9 NMAC]

2. Insolvency. Permittee shall notify OCD Engineering Bureau of the commencement of a voluntary or involuntary proceeding in bankruptcy which names Permittee or an entity which operates the Well on behalf of Permittee as a debtor no later than ten (10) business days after the commencement of the proceeding.

3. OCD Authority to Modify Permit and Issue Orders

a. The OCD may amend, suspend, or revoke this Permit after notice and an opportunity for hearing if it determines that:

i. The Permit contains a material mistake;

ii. Permittee made an incorrect statement on which OCD relied to establish a term or condition of the Permit or grant this Permit;

iii. this Permit must be amended to ensure compliance and consistency with applicable law, including a change to the financial assurance requirements;

iv. The Well's operation may affect the water quality of fresh water;

v. Injected fluid is escaping from the approved injection interval;

vi. Injection may be caused or contributed to seismic activity: or

vii. Injection may cause or contribute to the waste of oil, gas or potash resources or affect correlative rights, public health, or the environment.

b. OCD retains jurisdiction to enter such orders as it deems necessary to prevent waste and to protect correlative rights, protect public health, and the environment.

c. OCD retains jurisdiction to review this Permit as necessary and no less than once every five (5) years, and may determine whether this Permit should be modified, revoked and reissued, or terminated. [40 CFR 144.36(a)]

4. Permittee Request to Modify Permit. Permittee may apply to modify the terms of this Permit.

a. **Minor Modifications**. OCD may make a minor modification to this Permit without notice and an opportunity for hearing for:

i. Non-substantive changes such as correction of typographical errors;

ii. Requirements for more frequent monitoring or reporting;

iii. Changes to the Well construction requirements provided that any alteration shall comply with the conditions of the Permit and does not change the Area of Review considered in the application for the Permit;

iv. Amendments to the plugging and abandonment plan;

v. Changes in the types of fluids injected which are consistent with sources listed in the application for the Permit and do not change the classification of the Well;

vi. Corrections of the actual injection interval if within the approved formation; or

vii. Transfer of a Permit for a Well that has been spud. [40 CFR 144.41]

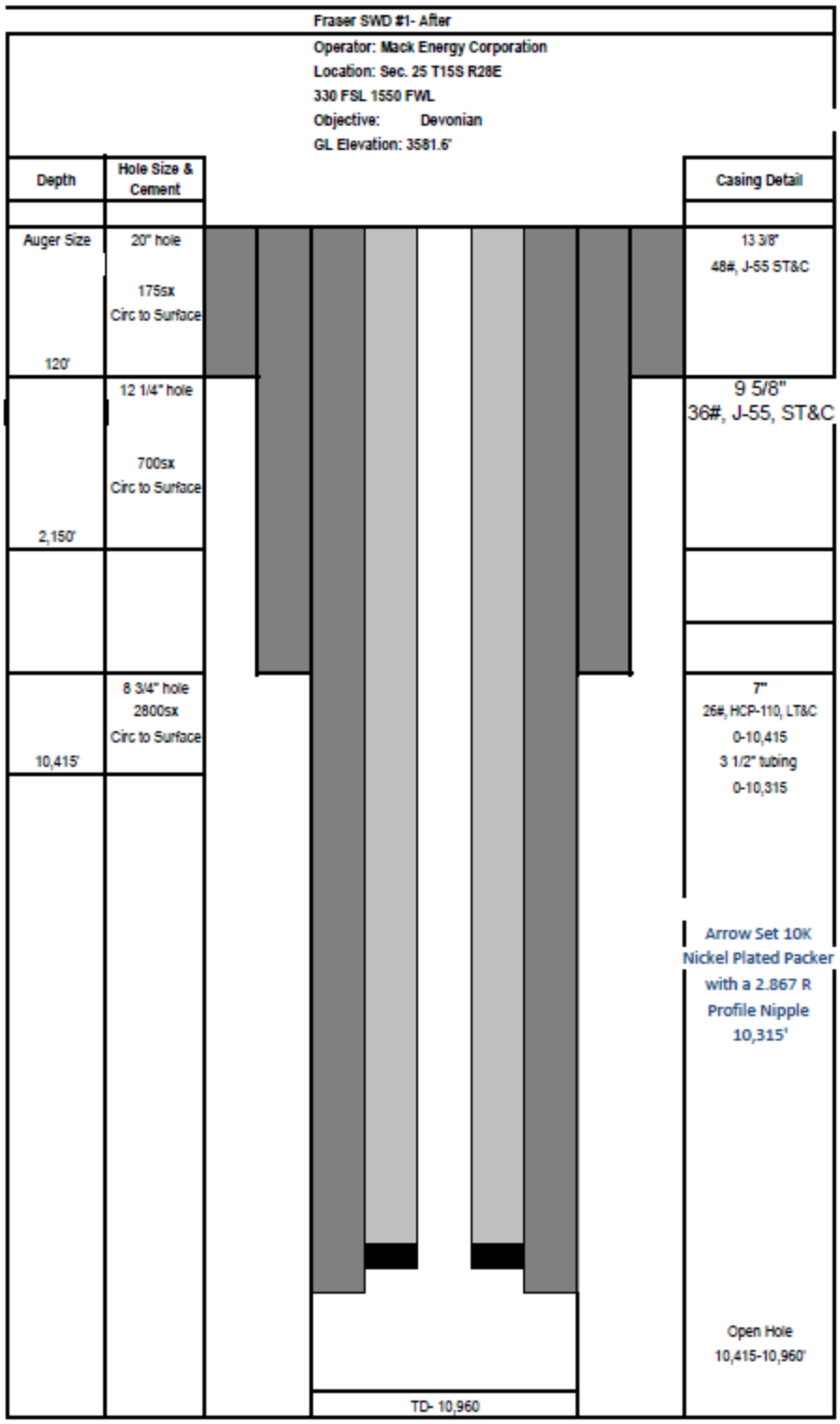
b. **Major Modifications.** OCD shall require notice and an opportunity for hearing for any modification that is not minor. For such modifications, Permittee shall submit Form C-108 and comply with the notice requirements of 19.15.26 NMAC.

II. SPECIAL CONDITIONS

Permittee shall comply with the following special conditions: No special conditions.

III. ATTACHMENT

Well Completion Diagram as Provided in the Application and included below.


Fraser SWD #1- After
Operator: Mack Energy Corporation
Location: Sec. 25 T15S R28E
330 FSL 1550 FWL
Objective: Devonian
GL Elevation: 3581.6'
Depth
Hole Size & Cement
Casing Detail
Auger Size
120'
20" hole
175sx
Circ to Surface
13 3/8"
48#, J-55 ST&C
12 1/4" hole
700sx
Circ to Surface
2,150'
9 5/8"
36#, J-55, ST&C
8 3/4" hole
2800sx
Circ to Surface
10,415'
7"
26#, HCP-110, LT&C
0-10,415
3 1/2" tubing
0-10,315
Arrow Set 10K
Nickel Plated Packer
with a 2.867 R
Profile Nipple
10,315'
Open Hole
10,415-10,960'
TD- 10,960

FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V17]

DATE RECORD: First Rec:_____ **Admin Complete:** _____ **or Suspended:** _____ Add. Request/Reply:_____

ORDER TYPE: _____ Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No._____ Well Name(s):_____

API : 30-0 _____ Spud Date: _____ New or Old (EPA): _____ (***UIC Class II Primacy 03/07/1982***)

Footages _____ Lot____ or Unit ____ Sec _____ Tsp _____ Rge _____County_____

Latitude: _____ Longitude_____ Pool:_____ Pool No.:_____

Operator: _____OGRID: _____Contact: _____ Email:

COMPLIANCE RULE 5.9: Total Wells:_____ Inactive:_____ **Fincl Assur:**_____ Compl. Order?_____ **IS 5.9 OK?**____ **Date:**_____

WELL FILE REVIEWED Current Status: _____

WELL DIAGRAMS: NEW: Proposed ◯ or **RE-ENTER:** Before Conv. ◯ After Conv. ◯ Logs in Imaging: _____

Planned Rehab Work to Well: _____

Well Construction Details	**Sizes (in) Borehole / Pipe**	**Setting Depths (ft)**		**Cement Sx or Cf**	**Cement Top and Determination Method**
Planned ____or Existing ____**Surface**			**Stage Tool**		
Planned___or Existing ___ **Interm/Prod**					
Planned___or Existing ___**Interm/Prod**					
Planned___or Existing ___ **Prod/Liner**					
Planned____or Existing ____ **Liner**					
Planned____or Existing ___ **OH / PERF**			**Inj Length**		

Injection Lithostratigraphic Units:	**Depths (ft)**	**Injection or Confining Units**	**Tops**
Adjacent Unit: Litho. Struc. Por.			
Confining Unit: Litho. Struc. Por.			
Proposed Inj Interval TOP:			
Proposed Inj Interval BOTTOM:			
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD _____ PBTD _____

NEW TD _____ NEW PBTD _____

NEW Open Hole NEW Perfs

Tubing Size _____ in. Inter Coated? _____

Proposed Packer Depth _____ ft

Min. Packer Depth _____ (100-ft limit)

Proposed Max. Surface Press. _____ psi

Admin. Inj. Press. _____ (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P__/A **N/A**__ *Noticed?*____ **BLM Sec Ord WIPP** *Noticed?* ____ **Salt/Salado** T:_____B:_____ **NW: Cliff House fm**____

USDW: Aquifer(s) __**N/A**_____ Max Depth_____ **HYDRO AFFIRM STATEMENT By Qualified Person**____

NMOSE Basin:_____ **CAPITAN REEF:** thru____ adj ___ NA _x__ **No. GW Wells in 1-Mile Radius?** _____ FW Analysis?

Disposal Fluid: Formation Source(s) _____ Analysis? _____ On Lease ◯ Operator Only ◯ Commercial ◯

Disposal Interval: Inject Rate (Avg/Max BWPD): _____ Protectable Waters?_____ Source:_____ System: **C**losed or **O**pen

HC Potential: Producing Interval?_____Formerly Producing?_____Method:Logs /DST /P&A /Other_____ 2-Mi Radius Pool Map__

AOR Wells: **1/2-M** ____ **or ONE-M** ____**RADIUS MAP/WELL LIST: Total Penetrating Wells:** _____ [AOR Hor: ___ AOR SWDs:___]

Penetrating Wells: No. Active Wells____ No. Corrective?____on which well(s)?_____Diagrams?_____

Penetrating Wells: No. P&A Wells____ No. Corrective?____on which well(s)? _____Diagrams?_____

Induced-Seismicity Risk Assess: analysis submitted _____ historical/catalog review_____ fault-slip model _____ **probability** _____

NOTICE: 1/2-M ____ **or ONE-M** _____ **:** Newspaper Date_____ **Mineral Owner*** _____Surface Owner_____N. Date_____

RULE 26.7(A): Identified Tracts? _____ **Affected Persons*:**_____ N. Date_____

*** new definition as of 12/28/2018** [any the mineral estate of United States or state of New Mexico; SWD operators within the notice radius]

Order Conditions: **Issues:**_____

Additional COAs:_____

From: Jerry Sherrell
To: Harris, Anthony, EMNRD; Goetze, Phillip, EMNRD; Gebremichael, Million, EMNRD
Cc: Deana Weaver; Delilah Flores
Subject: RE: [EXTERNAL] FW: Mack Energy Fraser SWD#1 - Contingency plans?
Date: Monday, November 6, 2023 12:06:26 PM
Attachments: image006.png
image008.jpg
image009.png
image003.jpg
image004.jpg
Fraser SWD #1- Wellbore.pdf
C-108.pdf

Tony,

Here is the requested information.

1. Yes 7" casing is the "base case". See attachment revised wellbore diagram and C-108.
2. 7" casing is the "base case design" the tubing will be 3 ½"-9.30#-L-80 ICP with 1850 coating for H2S and Heavy Brines. The 7" nickel coated Arrow set packer with a 2.867 profile nipple. Packer set at 10,315'.

From: Harris, Anthony, EMNRD <Anthony.Harris@emnrd.nm.gov>
Sent: Monday, November 06, 2023 11:02 AM
To: Jerry Sherrell <jerrys@mec.com>; Goetze, Phillip, EMNRD <phillip.goetze@emnrd.nm.gov>; Gebremichael, Million, EMNRD <Million.Gebremichael@emnrd.nm.gov>
Cc: Deana Weaver <dweaver@mec.com>; Delilah Flores <delilah@mec.com>
Subject: RE: [EXTERNAL] FW: Mack Energy Fraser SWD#1 - Contingency plans?

EXTERNAL EMAIL - Verify the sender and use caution before opening attachments or clicking links

Good Morning Jerry.

Thank you for the follow-up and the additional information. I just want to clarify a couple of items:

The "revised design" indicates 7" production casing will be run to 10,415 ft (refer to snapshot below)

1. Is the 7" casing now your "base case" design, with 5" casing reserved as a contingency?
    a. If yes, please include an updated wellbore diagram to reflect the 7" set at 10,415 ft.
2. If 7" Production casing is the "base case" design, will you still run 2.875" tubing?
    a. If larger tubing is planned, please provide an update on tubing size, setting depth, packer details, and internal coating/lining detail.

Regards
Tony Harris
Petroleum Specialist
Anthony.harris@emnrd.nm.gov
505 549 8131.

From: Jerry Sherrell <jerrys@mec.com>
Sent: Monday, November 6, 2023 8:14 AM **To:** Harris, Anthony, EMNRD <Anthony.Harris@emnrd.nm.gov>; Goetze, Phillip, EMNRD <phillip.goetze@emnrd.nm.gov>; Gebremichael, Million, EMNRD <Million.Gebremichael@emnrd.nm.gov>
Cc: Deana Weaver <dweaver@mec.com>; Delilah Flores <delilah@mec.com>
Subject: [EXTERNAL] FW: Mack Energy Fraser SWD#1 - Contingency plans?

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Tony,

See the email below for answers to your concerns. We will also shut in the offset wells prior to drilling the Fraser SWD #1.

Jerry W. Sherrell

Regulatory Supervisor
Mack Energy Corporation
Redwood Operating LLC
PO Box 960
Artesia, NM 88210
Office 575-748-1288
Cell 575-703-7382
jerrys@mec.com

From: Jim Krogman <jimkrogman@mec.com>
Sent: Sunday, November 05, 2023 6:04 AM
To: Jerry Sherrell <jerrys@mec.com>; Lee Livingston <leel@mec.com>
Cc: Jim Krogman <jimkrogman@mec.com>
Subject: RE: Mack Energy Fraser SWD#1 - Contingency plans?

Jerry,

Attached is the revised casing design and cement volumes for the Fraser SWD #1.

Below addresses the concerns form the OCD.

1) Mack Energy has Inc. and Azm. Survey's on the Dawson Creek State Com #1H. Mack Energy plans to run Steering tools with Inc. and Azm to ensure that the Dawson Creek State Com #1H is not intersected. (Mack Energy will also have a anti-collision plan with the concern)

2) Mack Energy contingency plan for lost circulation: Pre-treat the Drilling fluids with 10#/Barrel to 20#/Barrel LCM. If lost circulation is encountered Spot LCM pill on bottom. TOH with Drilling Tools build volume in drilling pits with 10#/barrel to 20#/barrel LCM and stage drilling tools back to bottom. If circulation is not established TOH with Drilling Tools and TIH with Drill Pipe open ended to set Cement plugs to establish circulation.

3) Mack Energy contingency plan if casing setting depth is changed. If the above Drilling fluids with LCM and Cement plugs do not seal off lost circulation
   a) Set 7" casing and cement in place below lost circulation zone to seal off lost zone.
   b) Reduce bit size to 6 ¼" drill to TD. Run 5"-18#-P-110 flush joint casing to TD and cement into place.

Thank you,

From: Jerry Sherrell <jerrys@mec.com>
Sent: Friday, November 03, 2023 2:03 PM
To: Lee Livingston <leel@mec.com>; Cole Ponce <ColePonce@mec.com>; Matt Brewer <mbrewer@mec.com>; Jim Krogman <jimkrogman@mec.com>; Charles Sadler <charless@mec.com>
Cc: Deana Weaver <dweaver@mec.com>; Delilah Flores <delilah@mec.com>
Subject: Fwd: Mack Energy Fraser SWD#1 - Contingency plans?

Sent from my iPhone

Begin forwarded message:

> **From:** "Harris, Anthony, EMNRD" <Anthony.Harris@emnrd.nm.gov>
> **Date:** November 3, 2023 at 1:58:47 PM MDT
> **To:** Jerry Sherrell <jerrys@mec.com>, Deana Weaver <dweaver@mec.com>
> **Cc:** "Goetze, Phillip, EMNRD" <phillip.goetze@emnrd.nm.gov>, "Gebremichael, Million, EMNRD" <Million.Gebremichael@emnrd.nm.gov>
> **Subject: Mack Energy Fraser SWD#1 - Contingency plans?**
>
> EXTERNAL EMAIL - Verify the sender and use caution before opening attachments or clicking links
>
> Good Afternoon
>
> As part of the final review for the subject well, it is evident that your proposed well (Fraser SWD#1) is in close proximity (~110 ft) to the Dawson Creek State Com#1H (30-005-64359) horizontal wellbore. In this regard, OCD requests Mack Energy to provide a statement to address the following items:
>
> 1. Does Mack Energy have any concerns with potential intersection of the Dawson creek wellbore or the propped hydraulic fractures that likely extend outward / perpendicular from the wellbore?
> 2. Does Mack Energy have contingency plans to address potential lost circulation or casing running/ cementing challenges if the subject well intersected the existing

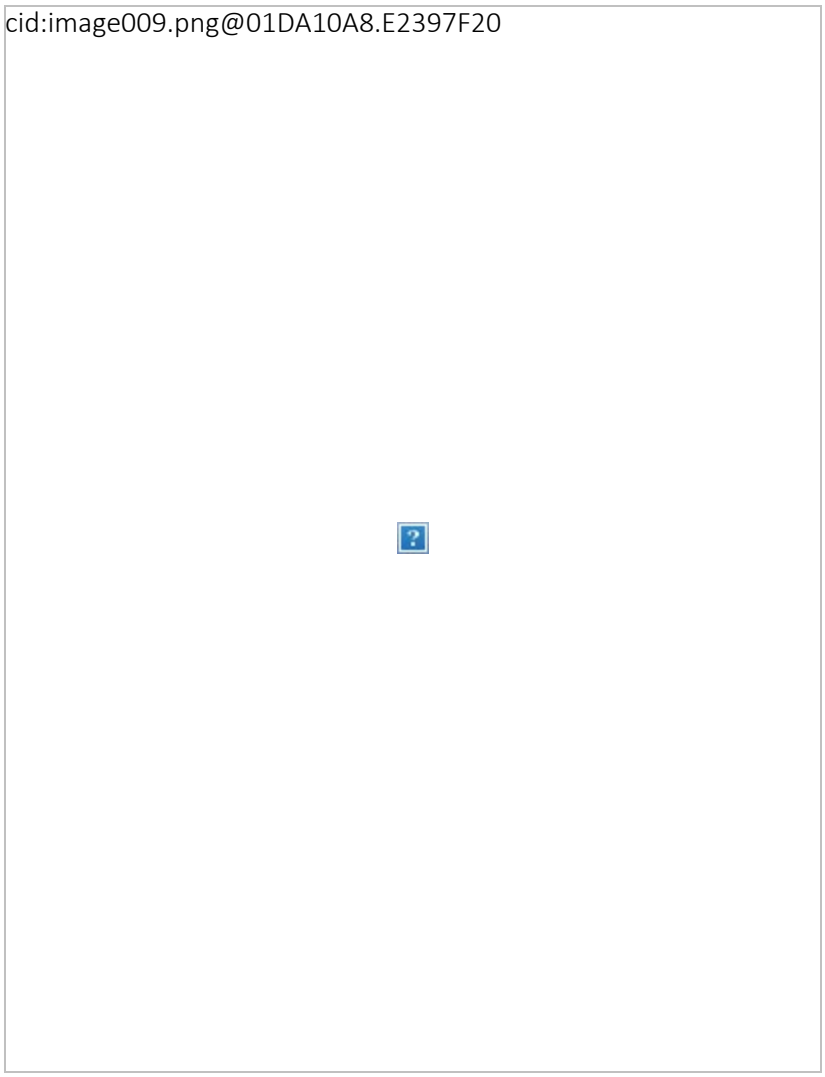
wellbore or its propped hydraulic fracture planes?

3. In the event that the planned casing setting depths had to be changed to address the items noted above, can a “contingency” casing string be run to remedy the situation without compromising the overall objectives of the well design?

The image below provides a plan view of the subject well and its proximity to the existing horizontal well.

Please feel free to contact me if you have any questions or require additional clarification on the above request.

cid:image009.png@01DA10A8.E2397F20



Regards
Tony Harris
Petroleum Specialist
Anthony.harris@emnrd.nm.gov
505 549 8131.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 318909

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 318909
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
anthony.harris	None	2/29/2024