

06/16/2014 DATE IN	SUSPENSE	PAK ENGINEER	06/16/2014 LOGGED IN	SWD TYPE	1416759167 APP NO.
-----------------------	----------	-----------------	-------------------------	-------------	-----------------------

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
 [A] Location - Spacing Unit - Simultaneous Dedication *SWD*
☐ NSL ☐ NSP ☐ SD *13837*
MAK ENERGY CORPORATION
ART-30-015-Pending
 Check One Only for [B] or [C]
 [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
 [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
 [D] Other: Specify _____

- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply
 [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☒ Offset Operators, Leaseholders or Surface Owner
 [C] ☒ Application is One Which Requires Published Legal Notice
 [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

- [4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that no action will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Deana Weaver
Print or Type Name

Deana Weaver
Signature

Production Clerk
Title

6.11.14
Date

dweaver@mec.com
e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance X _____ Disposal _____ Storage
Application qualifies for administrative approval? X _____ Yes _____ No
- II. OPERATOR: Mack Energy Corporation
ADDRESS: P.O. Box 960 Artesia, NM 88211-0960
CONTACT PARTY: Deana Weaver PHONE: (575)748-1288
- 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 freshwater from two or more freshwater 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: Deana Weaver TITLE: Production Clerk
SIGNATURE: Deana Weaver DATE: 6.11.14
- * 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: _____

INJECTION WELL DATA SHEET

OPERATOR: **Mack Energy Corporation**WELL NAME & NUMBER: **Ghost SWD #1**WELL LOCATION: **175 FNL & 2000 FEL****B****15****23S****27E**

FOOTAGE LOCATION

UNIT LETTER

SECTION

TOWNSHIP

RANGE

WELLBORE SCHEMATIC**WELL CONSTRUCTION DATA**Surface CasingHole Size: 12 1/4 Casing Size: 8 5/8", J-55Cemented with: 700sx sx. or _____ ftTop of Cement: Surface Method Determined: CirculatedIntermediate Casing

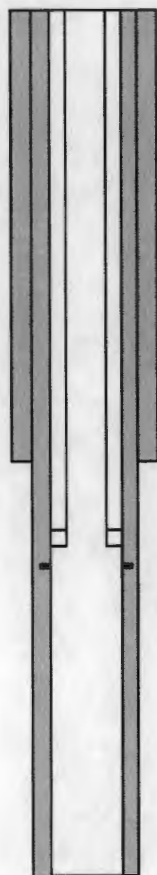
Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. or _____ ft

Top of Cement: _____ Method Determined: _____

Production CasingHole Size: 7 7/8 Casing Size: 5 1/2" L-80Cemented with: 625sx sx. or _____ ftTop of Cement: Surface Method Determined: CirculatedTotal Depth: 4300'Injection Interval2190' feet to 4100'

(Perforated or Open Hole; indicate which)

8 5/8" csg @ 1,100'
w/ 700sx, circ2 7/8 PC tubing @
2140' set w/ 10K
Nickel Plated PRK

Perfs @ 2190-4100'

5 1/2" csg @ 4,300'
w/ 625sx, circ

TD-4300'

INJECTION WELL DATA SHEETTubing Size: 2 7/8" Lining Material: Plastic CoatedType of Packer: Halliburton Trump PackerPacker Setting Depth: 2140'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? ☒ Yes ☐ No

If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Bell Canyon and Cherry Canyon

3. Name of Field or Pool (if applicable): _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. _____

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Overlying- Lamar Limestone , Underlying- Brushy Canyon

VII. DATA SHEET: PROPOSED OPERATIONS

1. Proposed average and maximum daily rate and volume of fluids to be injected;
Respectively, 2000 BWPD and 4000 BWPD
2. The system is closed or open;
Closed
3. Proposed average and maximum injection pressure;
0-438#
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water;
We will be re-injecting produced water
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;
N/A

VIII. GEOLOGICAL DATA

1. Lithologic Detail; **Sandstone**
2. Geological Name; **SWD; Bell Canyon – Cherry Canyon**
3. Thickness; **1910'**
4. Depth; **2190'-4100'**

IX. PROPOSED STIMULATION PROGRAM

1. To be treated with 10000 gallons 15% acid

X. LOGS AND TEST DATA

1. Well data will be filed with the OCD.

XI. ANALYSIS OF FRESHWATER WELLS

1. Will be forwarded, when complete. — *4 submitted*

Additional Information

Waters Injected: Delaware Sand & Bone Spring

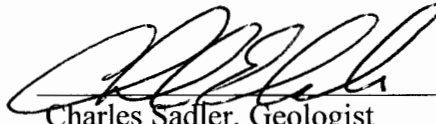
XII. AFFIRMATIVE STATEMENT

RE: Ghost SWD #1

We have examined the available geologic and engineering data and find no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water.

Mack Energy Corporation

Date: 6/11/14



Charles Sadler, Geologist

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code 96802	³ Pool Name SWD; Bell Canyon-Cherry Canyon
⁴ Property Code	⁵ Property Name GHOST SWD	⁶ Well Number 1
⁷ OGRID No. 13837	⁸ Operator Name MACK ENERGY CORPORATION	⁹ Elevation 3108.5

¹⁰ Surface Location

U.L. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	15	23 S	27 E		175	NORTH	2000	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

U.L. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

<p>N89°57'15"E 2628.86 FT</p> <p>NW CORNER SEC. 15 LAT. = 32.3125974°N LONG. = 104.1864732°W NMSP EAST (FT) N = 477486.36 E = 586707.27</p>		<p>N89°57'15"E 2628.86 FT</p> <p>NE CORNER SEC. 15 LAT. = 32.3125880°N LONG. = 104.1694582°W NMSP EAST (FT) N = 477490.56 E = 591963.77</p>	
<p>DNF</p> <p>SURFACE LOCATION</p> <p>175'</p> <p>2000'</p> <p>GHOST SWD #1 ELEV. = 3108.5' LAT. = 32.3121105°N (NAD83) LONG. = 104.1759313°W NMSP EAST (FT) N = 477313.88 E = 589964.26</p>		<p>DNF</p>	
<p>DNF</p> <p>NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE.</p>		<p>DNF</p>	
<p>SW CORNER SEC. 15 LAT. = 32.2976802°N LONG. = 104.1864568°W NMSP EAST (FT) N = 472059.69 E = 586719.79</p>		<p>SE CORNER SEC. 15 LAT. = 32.2979944°N LONG. = 104.1694675°W NMSP EAST (FT) N = 472181.62 E = 591969.00</p>	
<p>S88°40'10"W 2625.93 FT</p>		<p>S88°40'10"W 2625.93 FT</p>	

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Deana Weaver 6.11.14
Signature Date

Deana Weaver
Printed Name

dweaver@mec.com
E-mail Address

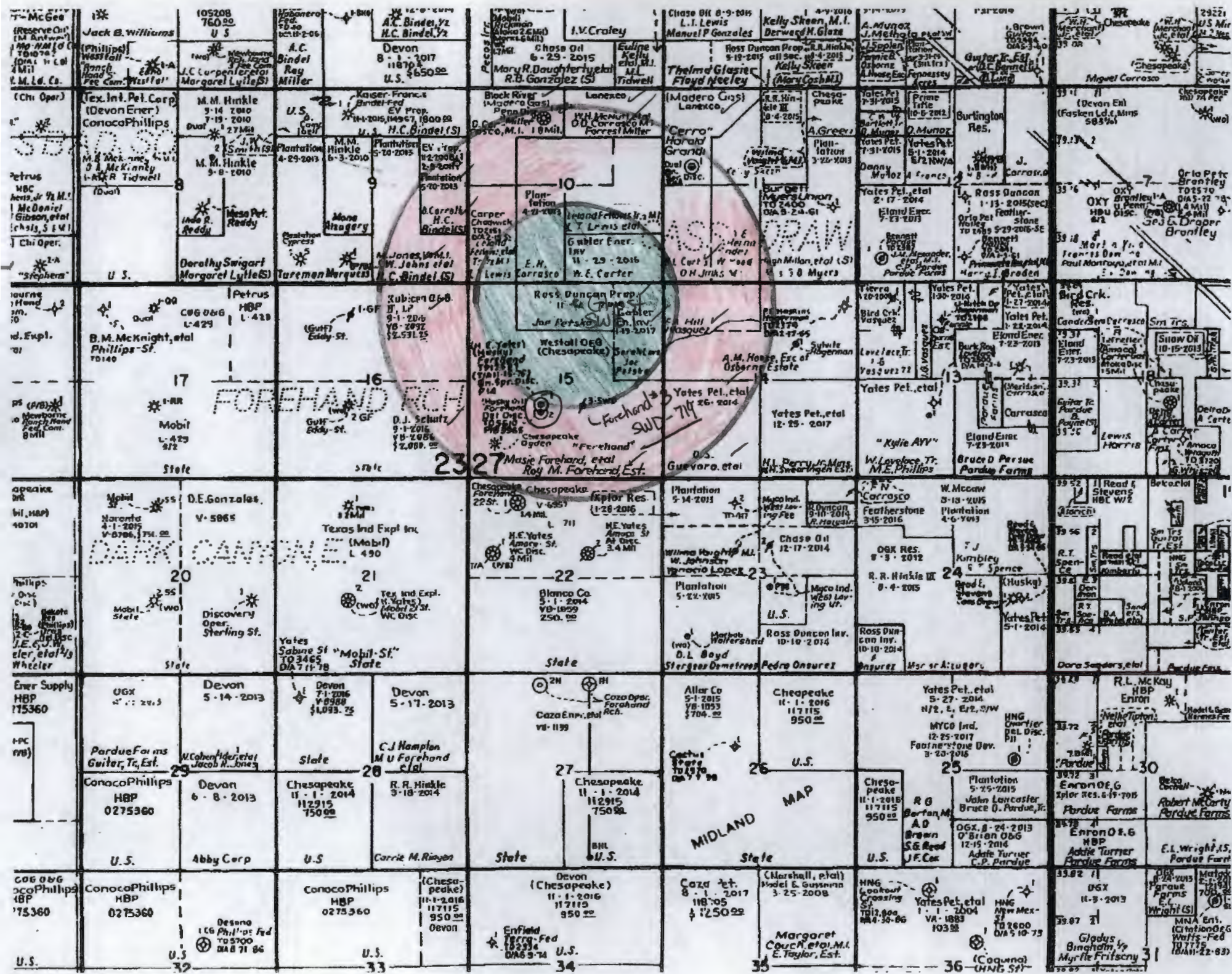
¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MAY 9, 2014
Date of Survey

[Signature]
Signature and Seal of Registered Surveyor

Certificate Number FILMON E. PARAMILLO, PLS 12797
SURVEY NO. 2979



AREA OF REVIEW WELL DATA

LEASE/API	WELL#	LOCATION	TD (PBSD)	TYPE & DATE DRILLED	HOLE SIZE	CASING SIZE & WEIGHT	SETTING DEPTH	SX CMT	TOC	PERFS
Ghost SWD	1	175' FNL 2000' FEL 15-23S-27E	4300'	SWD	12 1/4 7 7/8	8 5/8", 32# 5 1/2", 17#	1,100' 4,300'	700 625	Circ Circ	2190-4100'
Forehand 30-015-21599	1	1980' FSL 1980' FWL 15-23S-27E	12,352' PBSD 8922'	Oil Well 8/13/1975	17 1/2 11 7 7/8	13 3/8, 48# 8 5/8, 32# 5 1/2, 17&20#	428 5590 12352	425 3275 1150	Circ Circ 7270'	8642.5-8857'
Forehand 30-015-21855	2	1880' FSL 1980' FWL 15-23S-27E	5610' PBSD 3965'	Oil Well 7/8/1976	15 11 7 7/8	12 3/4, 41# 8 5/8, 24# 7 7/8, 17#	444 1966 5581	400 625 1300	Circ Circ 2850'	3737-3751'
Forehand 30-015-22192	3	1980' FSL 1980' FEL 15-23S-27E	4000' PBSD 3994'	SWD 8/29/1977	12 1/4 7 7/8	8 5/8, 32# 5 1/2, 17#	464 3994	275 1160	Circ Circ	IPI-213 SWD-719 3146-3974'
Ogden 15 30-015-34032	1	660' FSL 1980' FEL 15-23S-27E	12,450' PBSD 11,845'	Oil Well 8/12/2005	17 1/2 11 7 7/8	13 3/8, 48# 8 5/8, 32# 5 1/2, 20 & 17#	428 2060 12447	385 665 1845	Circ Circ Circ	11,657-11767' CIBP @ 11860 11880-11894 CIBP @ 11920 12061-12071 CIBP @ 12011 12061-12071 CIBP 12170 12279-12293
Hagerman 14 30-015-26899	1	1650' FNL 1650' FEL 14-23S-27E	5820' PBSD 5761'	Oil Well 1/4/1992	12 1/4 7 7/8	8 5/8, 24# 5 1/2, 15.50#	575 5820	450 908	Circ Circ	5432-5593'
Miller Com 30-015-22552	1	760' FNL 2080' FWL 10-23S-27E	12,350' PBSD 11,160'	Gas Well 5/22/1978	17 1/2 12 1/4	13 3/8, 48# 10 3/4, 40.5# 7 5/8" 5"	349 5635 5410-11497 11367-12349	400 1850 770 150	Circ Circ Circ Circ	9896-9932

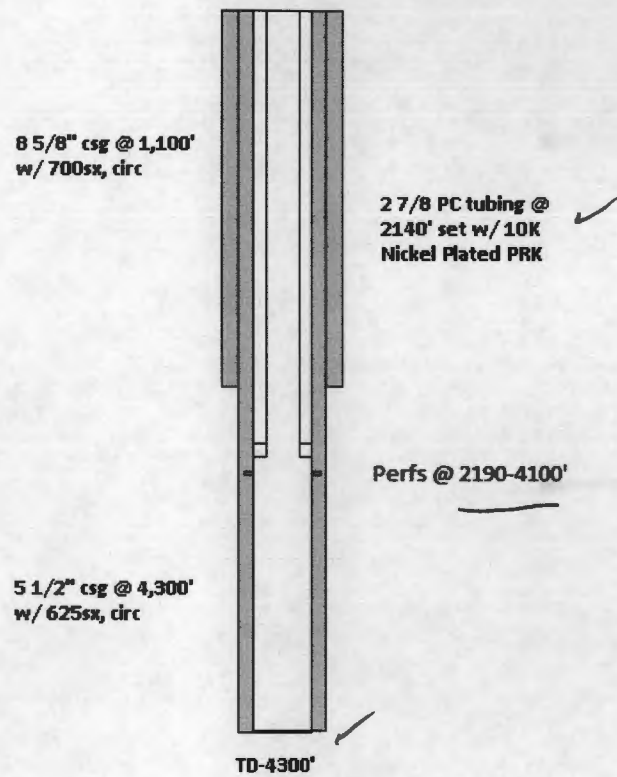
Application well

cont

See Diagram

See Diagram

Ghost SWD #1
Sec. 15 T23S R27E
175 FNL 2000 FEL



Forehand #2
Sec. 15 T23S R27E
1880 FSL 1980 FWL
30-015-21855

12 3/4" csg @ 444'
w/ 400sx, circ

8 5/8" csg @ 1966'
w/ 625sx, circ

TOC
2850

5 1/2" csg @ 5581'
w/ 1300sx, TOC 2850' ✓
LRA



1873 Salt Bottom

1966/ Shoe

Delaware Sand 2094

Perfs @ 3737-3751'

well at 1/2-mile
radius edge.

TD-5610'
PBTD-3965'

Forehand #3
Sec.15 T23S R27E
1980 FSL 1980' FEL
30-015-22192

8 5/8" csg @ 464'
w/ 275sx, circ



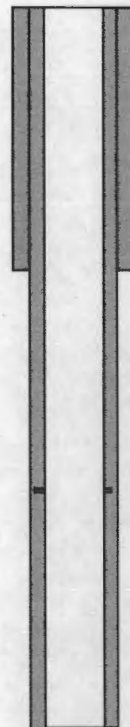
Perfs @ 3146-3974'

5 1/2" csg @ 3994'
w/ 1160sx, Circ

TD- 4000
PBTD-3994

Hagerman 14 #1
Sec. 14 T23S R27E
1650' FNL 1650' FEL
30-015-26899

8 5/8" csg @ 575'
w/ 450sx, circ

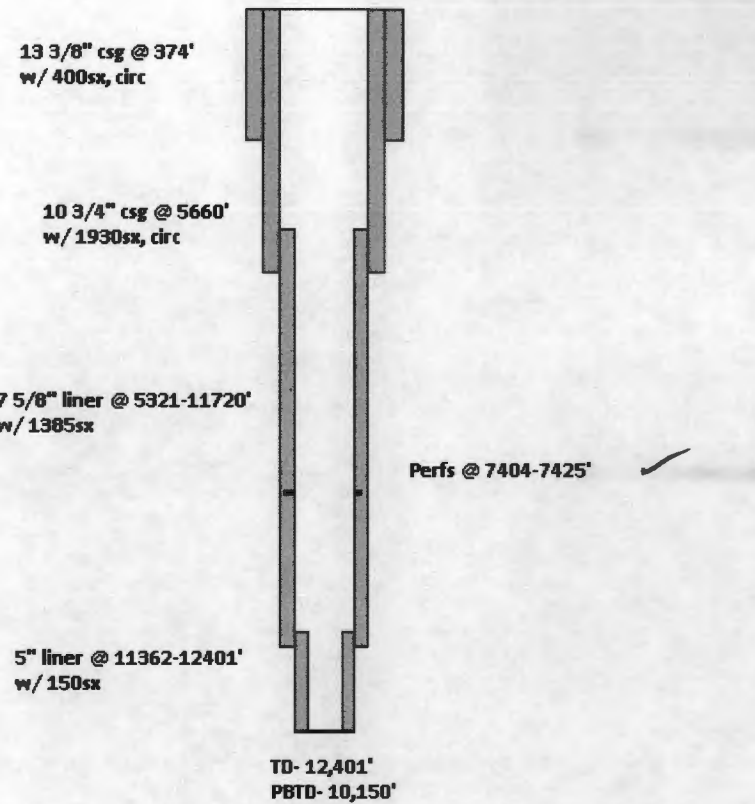


Perfs @ 5432-5593'

5 1/2" csg @ 5820'
w/ 908sx, circ

TD-5820'
PBD-5761'

Cerro Com #1
Sec. 11 T23S R27E
2080' FNL 760' FWL
30-015-22626

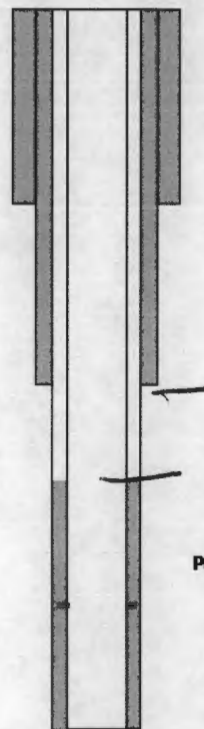


Forehand #1
Sec. 15 T23S R27E
1980 FSL 1980 FWL
30-015-21599

13 3/8" csg @ 428'
w/ 425sx, circ

8 5/8" csg @ 5590'
w/ 3275sx, circ

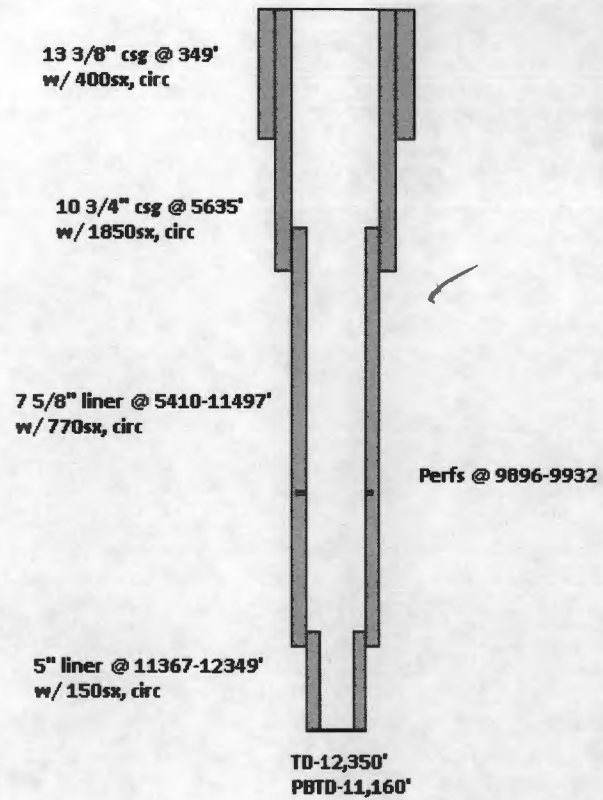
5 1/2" csg @ 12,352'
w/ 1150sx, TOC 7270'



Perfs @ 8642.5-8857'

TD-12,352
PBTD- 8922'

Miller Com #1
Sec. 10 T23S R27E
760' FNL 2080' FWL
30-015-22552



Ogden 15 #1
Sec. 15 T23S R27E
660' FSL 1980' FEL
30-015-34032

13 3/8" csg @ 428'
w/ 385ss, circ

8 5/8" csg @ 2060'
w/ 665ss, circ

Perfs @ 11,657-11,767'

OIBP @ 11,860

Perfs @ 11880-11894'

OIBP @ 11,920

Perfs @ 12,061-12,071'

OIBP @ 12,011

Perfs @ 12061-12071'

OIBP @ 12,170

Perfs @ 12,279-12,293'

5 1/2" csg @ 12,447'
w/ 1845ss, circ

TD-12,450'
PBTD- 11,845'



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 #: 20553
Area: Artesia Analysis ID #: 19662
Lease: Ghost
Location: FW #1 0
Sample Point: pit

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	5/29/2014	Chloride:	3368.9	Sodium:	1100.0
Analysis Date:	6/6/2014	Bicarbonate:	22.0	Magnesium:	369.6
Analyst:	Catalyst	Carbonate:		Calcium:	819.2
TDS (mg/l or g/m3):	6934.3	Sulfate:	1200.0	Potassium:	35.1
Density (g/cm3):	1.007			Strontium:	16.8
				Barium:	0.0
Hydrogen Sulfide:	0			Iron:	0.0
Carbon Dioxide:	0			Manganese:	0.000
Comments:		pH at time of sampling:	7		
		pH at time of analysis:			
		pH used in Calculation:	7		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	10830
				Resistivity (ohm meter):	.9234

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ *2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.71	0.00	-0.24	0.00	-0.31	0.00	-0.22	0.00	0.00	0.00
100	-0.60	0.00	-0.25	0.00	-0.25	0.00	-0.21	0.00	0.00	0.00
120	-0.47	0.00	-0.24	0.00	-0.17	0.00	-0.18	0.00	0.00	0.00
140	-0.35	0.00	-0.23	0.00	-0.06	0.00	-0.15	0.00	0.00	0.00
160	-0.22	0.00	-0.21	0.00	0.07	65.79	-0.11	0.00	0.00	0.00
180	-0.09	0.00	-0.18	0.00	0.21	184.84	-0.07	0.00	0.00	0.00
200	0.03	0.00	-0.14	0.00	0.36	285.78	-0.02	0.00	0.00	0.00
220	0.15	0.70	-0.11	0.00	0.52	367.59	0.03	1.04	0.00	0.00



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 #:	20554
Area:	Artesia	Analysis ID #:	19663
Lease:	Ghost		
Location:	FW #2		0
Sample Point:	pit		

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	5/29/2014	Chloride:	3406.4	Sodium:	1165.0
Analysis Date:	6/6/2014	Bicarbonate:	43.9	Magnesium:	366.4
Analyst:	Catalyst	Carbonate:		Calcium:	837.8
TDS (mg/l or g/m3):	7174	Sulfate:	1300.0	Potassium:	35.2
Density (g/cm3):	1.007			Strontium:	16.8
Hydrogen Sulfide:	0			Barium:	0.0
Carbon Dioxide:	0			Iron:	0.0
Comments:				Manganese:	0.000
		pH at time of sampling:	7		
		pH at time of analysis:			
		pH used in Calculation:	7		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	10770
				Resistivity (ohm meter):	.9285

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.41	0.00	-0.21	0.00	-0.28	0.00	-0.19	0.00	0.00	0.00
100	-0.30	0.00	-0.22	0.00	-0.22	0.00	-0.18	0.00	0.00	0.00
120	-0.17	0.00	-0.21	0.00	-0.13	0.00	-0.16	0.00	0.00	0.00
140	-0.04	0.00	-0.20	0.00	-0.03	0.00	-0.13	0.00	0.00	0.00
160	0.09	0.70	-0.17	0.00	0.10	103.01	-0.09	0.00	0.00	0.00
180	0.23	1.39	-0.14	0.00	0.24	223.07	-0.05	0.00	0.00	0.00
200	0.36	2.44	-0.11	0.00	0.39	325.04	0.00	0.00	0.00	0.00
220	0.50	3.83	-0.08	0.00	0.56	408.22	0.05	1.39	0.00	0.00



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 #:	20555
Area:	Artesia	Analysis ID #:	19664
Lease:	Ghost		
Location:	FW #3		0
Sample Point:	pit		

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	5/29/2014	Chloride:	3534.9	Sodium:	1160.0
Analysis Date:	6/6/2014	Bicarbonate:	20.7	Magnesium:	370.5
Analyst:	Catalyst	Carbonate:		Calcium:	859.0
TDS (mg/l or g/m3):	7198.8	Sulfate:	1200.0	Potassium:	34.5
Density (g/cm3):	1.007			Strontium:	16.9
				Barium:	0.0
Hydrogen Sulfide:	0			Iron:	0.0
Carbon Dioxide:	0			Manganese:	0.000
Comments:		pH at time of sampling:	7		
		pH at time of analysis:			
		pH used in Calculation:	7		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	10810
				Resistivity (ohm meter):	.9251

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.73	0.00	-0.23	0.00	-0.30	0.00	-0.22	0.00	0.00	0.00
100	-0.61	0.00	-0.24	0.00	-0.24	0.00	-0.21	0.00	0.00	0.00
120	-0.49	0.00	-0.24	0.00	-0.16	0.00	-0.19	0.00	0.00	0.00
140	-0.36	0.00	-0.22	0.00	-0.05	0.00	-0.16	0.00	0.00	0.00
160	-0.24	0.00	-0.20	0.00	0.07	75.52	-0.12	0.00	0.00	0.00
180	-0.11	0.00	-0.17	0.00	0.22	193.84	-0.07	0.00	0.00	0.00
200	0.01	0.00	-0.14	0.00	0.37	294.06	-0.03	0.00	0.00	0.00
220	0.13	0.35	-0.10	0.00	0.53	374.80	0.03	0.70	0.00	0.00



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 #:	20552
Area:	Artesia	Analysis ID #:	19665
Lease:	Ghost		
Location:	FW #4		0
Sample Point:	Wellhead		

		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	5/29/2014	Chloride:	3542.4	Sodium:	1144.0
Analysis Date:	6/6/2014	Bicarbonate:	22.0	Magnesium:	369.0
Analyst:	Catalyst	Carbonate:		Calcium:	837.9
TDS (mg/l or g/m3):	7071.3	Sulfate:	1100.0	Potassium:	35.8
Density (g/cm3):	1.007			Strontium:	16.9
				Barium:	0.0
Hydrogen Sulfide:	0			Iron:	0.0
Carbon Dioxide:	0			Manganese:	0.000
Comments:		pH at time of sampling:	7		
		pH at time of analysis:			
		pH used in Calculation:	7		
		Temperature @ lab conditions (F):	75	Conductivity (micro-ohms/cm):	10350
				Resistivity (ohm meter):	.9662

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.70	0.00	-0.27	0.00	-0.34	0.00	-0.25	0.00	0.00	0.00
100	-0.59	0.00	-0.28	0.00	-0.28	0.00	-0.24	0.00	0.00	0.00
120	-0.46	0.00	-0.28	0.00	-0.20	0.00	-0.22	0.00	0.00	0.00
140	-0.34	0.00	-0.26	0.00	-0.09	0.00	-0.18	0.00	0.00	0.00
160	-0.21	0.00	-0.24	0.00	0.04	34.11	-0.14	0.00	0.00	0.00
180	-0.08	0.00	-0.21	0.00	0.18	151.75	-0.10	0.00	0.00	0.00
200	0.04	0.00	-0.18	0.00	0.33	250.94	-0.05	0.00	0.00	0.00
220	0.16	0.70	-0.14	0.00	0.49	330.64	0.00	0.00	0.00	0.00



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3930
RETURN RECEIPT REQUESTED

Gabler Energy Investments, LLC
1008 N. CR 1110
Midland, TX 79706

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCDD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4036
RETURN RECEIPT REQUESTED

Catherine W. Barnhill as Trustee of the
William B. Barnhill and Catherine W. Barnhill Trust
P.O. Box 700968
San Antonio, TX 78270-0968

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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

A handwritten signature in black ink that reads "Deana Weaver".

Deana Weaver
Production Clerk

DWA

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4043
RETURN RECEIPT REQUESTED

Tierra Oil Company, LLC
P.O. Box 700968
San Antonio, TX 78270-0968

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4050
RETURN RECEIPT REQUESTED

Santo Legado LLLP
P.O. Box 1020
Artesia, NM 88210

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4067
RETURN RECEIPT REQUESTED

Clayton M. Barnhill
P.O. Box 2304
Roswell, NM 88202-2304

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCDD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4074
RETURN RECEIPT REQUESTED

Endurance Resources LLC
15445 Dallas Parkway, Suite 600
Addison, TX 75234

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DWM

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4081
RETURN RECEIPT REQUESTED

Chevron USA, Inc.
1400 Smith Street
Houston, TX 77252

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3985
RETURN RECEIPT REQUESTED

Yates Petroleum Corporation
105 4th Street
Artesia, NM 88210-2177

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3992
RETURN RECEIPT REQUESTED

Abo Petroleum Corporation
105 4th Street
Artesia, NM 88210-2177

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCDD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4005
RETURN RECEIPT REQUESTED

Sharbro Oil Ltd., Co.
105 4th Street
Artesia, NM 88210-2177

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCDD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4012
RETURN RECEIPT REQUESTED

Mulberry Partners II, LLP
105 4th Street
Artesia, NM 88210-2177

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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

A handwritten signature in cursive script that reads "Deana Weaver".

Deana Weaver
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 4029
RETURN RECEIPT REQUESTED

Richard Yates
105 4th Street
Artesia, NM 88210-2177

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DWM

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3947
RETURN RECEIPT REQUESTED

Commissioner of Public Lands
PO Box 1148
Santa Fe, NM 87504-1148

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCDD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3954
RETURN RECEIPT REQUESTED

Curtis Kelly Skeen & Carole D. Skeen
1508 Riverside Drive
Carlsbad, NM 88220

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DW

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3961
RETURN RECEIPT REQUESTED

Jimmy Skains De Maret
P.O. Box 208
Dixon, NM 87527

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DWM

Attachments



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

June 11, 2014

VIA CERTIFIED MAIL 7012 3460 0002 8734 3978
RETURN RECEIPT REQUESTED

MRC Permian Corporation
5400 LBJ Freeway, Suite 1500
Dallas, TX 75240

Gentlemen:

Enclosed for your review, is a copy of Mack Energy Corporation's application for a Bell Canyon-Cherry Canyon SWD well. Produced water will be injected at a proposed depth of 2190-4100'. The Ghost SWD #1 located 175 FNL & 2000 FEL, Sec. 15 T23S R27E, Eddy County.

This letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to convert this well into a water disposal well. 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
Production Clerk

DWM

Attachments

LEGAL NOTICE

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Ghost SWD #1 175 FNL & 2000 FEL of Section 15, T23S R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Bell Canyon – Cherry Canyon formations at a disposal depth of 2190-4100'. Water will be injected at a maximum surface pressure of 438 pounds and a maximum injection rate of 4000 BWPD. Any interested party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, New Mexico 88211-0960 or call (575) 748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of the publication of this notice.

Published in the Artesia Daily Press, Artesia, N.M., June 13 2014 Legal No. 23043.

Legal Notice

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Ghost SWD #1 175 FNL & 2000 FEL of Section 15, T23S R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Bell Canyon – Cherry Canyon formations at a disposal depth of 2190-4100'. Water will be injected at a maximum surface pressure of 438 pounds and a maximum injection rate of 4000 BWPD. Any interested party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, New Mexico 88211-0960 or call (575) 748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of the publication of this notice.



C-108 Review Checklist: Received 06/16/14 Add. Request: — Reply Date: — Suspended: — [Ver 13]

PERMIT TYPE: WFX / PMX / SWD Number: 1499 Permit Date: 09/22/14 Legacy Permits/Orders: None

Well No. 1 Well Name(s): Ghost Federal SWD

API: 30-015-42463 Spud Date: TBD New or Old: New (UIC Class II Primacy 03/07/1982)

Footages 175 FNL / 2000 FEL Lot — or Unit B Sec 15 Tsp 23S Rge 27E County Eddy

General Location: South of Carlsbad east of Irving Pool: SWD: Bell Canyon / Cherry Canyon Pool No.: 96802

BLM 100K Map: Carlsbad Operator: Mack Energy Corp. OGRID: 13837 Contact: Deanna Weaver

COMPLIANCE RULE 5.9: Total Wells: 386 Inactive: 2 Fincl Assur: Yes Compl. Order: 13 IS 5.9 OK? Yes Date: 09/22/14

WELL FILE REVIEWED ☒ Current Status: New well / - no fd APD / state Sundry for API

WELL DIAGRAMS: NEW: Proposed ☒ or RE-ENTER: Before Conv. ☐ After Conv. ☐ Logs in Imaging: NA

Planned Rehab Work to Well: New

Well Construction Details:	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input checked="" type="checkbox"/> or Existing <u>Surface</u>	<u>12 1/4 / 8 5/8</u>	<u>0 to 1100</u>	<u>700</u>	<u>Cir. to surface</u>
Planned <input type="checkbox"/> or Existing <u>Interm/Prod</u>	<u>7 7/8 / 5 1/2</u>	<u>0 to 4300</u>	<u>625</u>	<u>Cir. to surface</u>
Planned <input type="checkbox"/> or Existing <u>Interm/Prod</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <u>Prod/Liner</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <u>Liner</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input checked="" type="checkbox"/> or Existing <u>OH (PERF)</u>	<u>5 1/2</u>	<u>2190' to 4100'</u>	<u>1910</u>	

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.		<u>Lynner</u>	Drilled TD <u>—</u> PBTD <u>—</u>
Confining Unit: Litho. Struc. <u>Por.</u>	<u>± 40</u>	<u>Delaware Line</u>	NEW TD <u>4300</u> NEW PBTD <u>4300</u>
Proposed Inj Interval TOP:	<u>2190</u>	<u>Bell Canyon fm</u>	NEW Open Hole <input type="checkbox"/> or NEW Perfs <input checked="" type="checkbox"/>
Proposed Inj Interval BOTTOM:	<u>4100</u>	<u>Cherry Canyon fm</u>	Tubing Size <u>2 7/8</u> in. Inter Coated? <u>Yes</u>
Confining Unit: Litho. Struc. Por.	<u>± 90</u>	<u>Brushy Canyon fm</u>	Proposed Packer Depth <u>2140</u> ft
Adjacent Unit: Litho. Struc. Por.		<u>Bone Spring</u>	Min. Packer Depth <u>2090</u> (100-ft limit)
			Proposed Max. Surface Press. <u>438</u> psi
			Admin. Inj. Press. <u>438</u> (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P ☒ Noticed? NA BLM Sec Ord ☒ WIPP ☒ Noticed? NA SALT/SALADO T: ~190 B: 1875 CLIFF HOUSE NA

FRESH WATER: Aquifer Alluvial / valley fill / recharge max Depth ~325 HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: Carlsbad CAPITAN REEF: thru ☐ adj ☒ NAC ☒ No. Wells within 1-Mile Radius? 7 FW Analysis 34

Disposal Fluid: Formation Source(s) Bone Spring / Delaware Analysis? No-Historical On Lease ☐ Operator Only ☒ or Commercial ☐

Disposal Int: Inject Rate (Avg/Max BWPD): 2000/4000 Protectable Waters? No Source: Historical System: Closed ☒ or Open ☐

HC Potential: Producing Interval? Yes Formerly Producing? Yes Method: Logs ☒ DST ☒ P&A ☒ Other Cores 2-Mile Radius Pool Map ☒

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 7 Horizontals? No

Penetrating Wells: No. Active Wells 7 Num Repairs? 0 on which well(s)? 30-015-21855 - Cont top for Prod - at 1/2 radius edge Diagrams? Yes

Penetrating Wells: No. P&A Wells 0 Num Repairs? 0 on which well(s)? NA Diagrams? NA

NOTICE: Newspaper Date 06/13/14 Mineral Owner Private Surface Owner Private N. Date 06/11/13

RULE 26.7(A): Identified Tracts? Yes Affected Persons: Gober / Tierra / Santa Legado / Cheuron / Yates / R. Yates Date 06/11/13

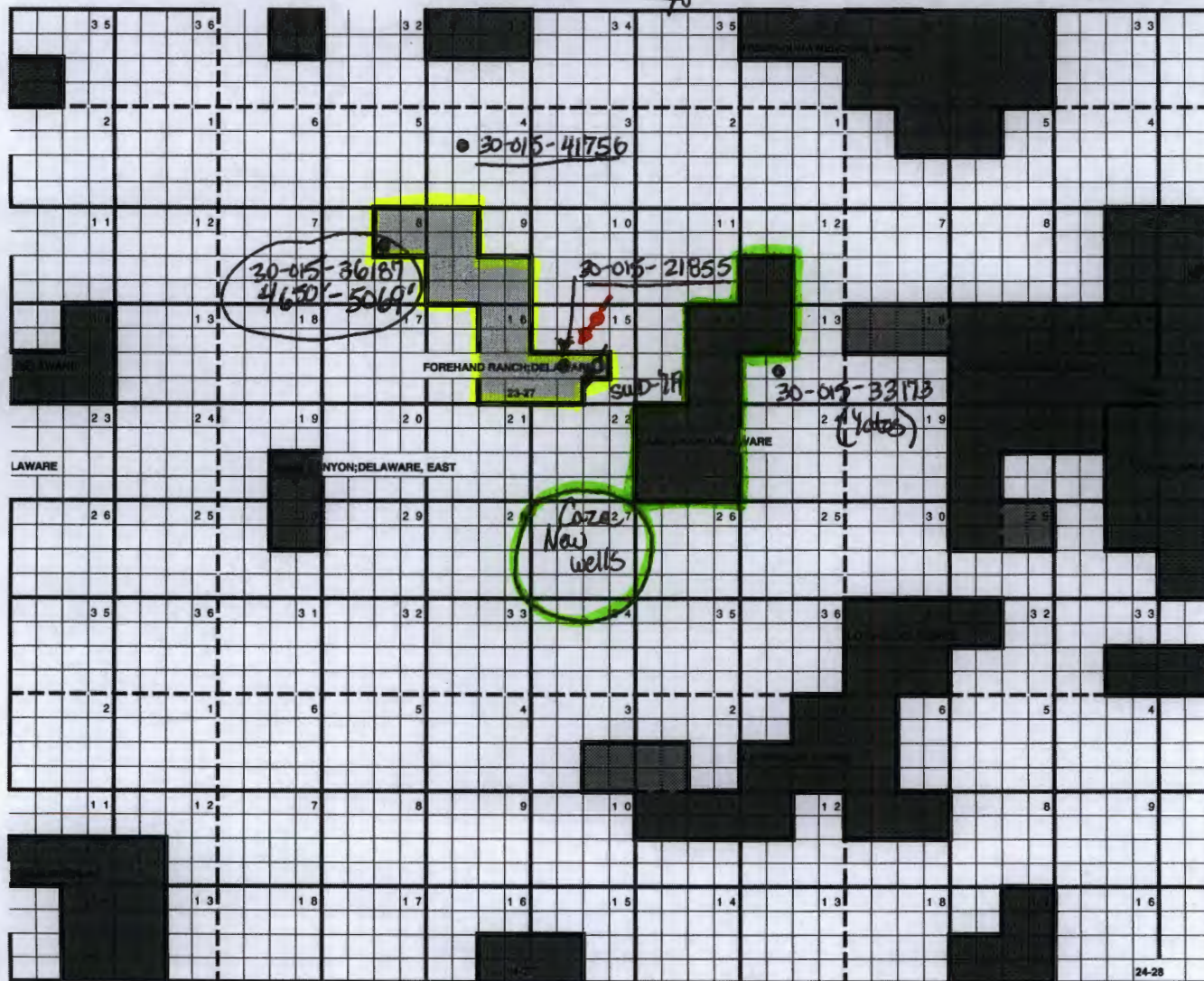
Permit Conditions: Issues: Injection length / HC potential in Bell & Brushy Canyons
Add Permit Cond: Injection survey within 2 years & following IPI; mudlog or swab test w/sample

Delaware ^{Seal} Hydrocarbon Potential

Cass Draw, Delaware (10410)

Sec. 16 - two plugged Morrow
wells only; Sec. 9 - 3 plugged
and 1 active - all Morrow; Sec.

New wells in Sec. 27 - Caza - Ramsey SS / Bell Canyon [APDs good till 2015] and Bone Springs, Sec. 12, 13, 14, and 23 - 7 P&Ad and 1 producer (Yates) - 4812' to 5760' + DHC with BS



Increase to 800 Pys

7/2014 - 5380/1195 BW over 31 days



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)					(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed)		(quarters are smallest to largest)		(NAD83 UTM in meters)							
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y	Distance	
C 01561		IRR		0 VASQUEZ MAX M	ED	C 01561			3	3	4	10	23S	27E	147	
C 00626	GUB	IRR		0 JOE PAUL PETSKA	ED	C 00626			1	2	1	15	23S	27E	494	
C 00508		IRR	660.75	CURTIS KELLY SKEEN ESTATE	ED	C 00508	Prod. well; TD:190	Shallow	3	1	4	10	23S	27E	532	
C 03060	C	DOL		3 MAX VASQUEZ	ED	C 03060	DTW:87;TD:139	Shallow	4	4	4	10	23S	27E	539	
C 01595	C	PRO		0 OGDEN FARMS & CATTLE COMPANY	ED	C 01595			4	1	15	23S	27E	704		
C 01083	C	DOM		3 JOE P. PETSKA	ED	C 01083	DTW:45; TD: 325	Shallow	4	2	15	23S	27E	720		
C 00508		IRR	660.75	CURTIS KELLY SKEEN ESTATE	ED	C 00508 S-2		Shallow	1	1	4	10	23S	27E	730	
C 01250	EXP			0 OTIS WATERUSERS COOP.	ED	C 01250					15	23S	27E	822		
C 03760	C	PRO		0 JACK WAGON LLC	ED	C 03760 POD1	NON		1	3	1	14	23S	27E	907	
C 03767	C	PRO		0 JACK WAGON LLC	ED	C 03767 POD1	NON		1	3	1	14	23S	27E	907	
C 03760	C	PRO		0 JACK WAGON LLC	ED	C 03760 POD1	NON		1	3	1	14	23S	27E	907	
C 03170	C	DOL		0 G VASQUEZ	ED	C 03170			2	1	1	14	23S	27E	934	
C 00291		IRR	315	KELLY & MARTHA SKEEN	ED	C 00291	Prod. well; DTW:70; TD:180	Shallow	4	3	3	11	23S	27E	940	
C 00187	C	PRO		0 OGDEN FARMS AND CATTLE CO.	ED	C 00187		Shallow	3	1	15	23S	27E	990		
C 00508		IRR	660.75	CURTIS KELLY SKEEN ESTATE	ED	C 00508 S		Shallow	2	1	3	10	23S	27E	994	
C 01160	C	STK		3 DAVID D. CARRASCO	ED	C 01160			2	10	23S	27E	577783	3576560*	1247	
C 02001	C	DOM		0 ARTURO V CHAVEZ	ED	C 02001			4	3	11	23S	27E	578806	3575573*	1255
C 02002	C	DOM		0 MIKE A GREIGO	ED	C 02002			4	3	11	23S	27E	578806	3575573*	1255

*UTM location was derived from PLSS - see Help

(R=POD has been replaced
and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE)
C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)				C=the file is closed)				(quarters are smallest to largest)				(NAD83 UTM in meters)						
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	6416	4	Sec	Tws	Rng	X	Y	Distance	
C 02113	C	DOM		3 MARGARITO N. URANGA	ED	C 02113	DTW:80; TD:235		Shallow	4	3	11	23S	27E	578806	3575573*	1255	
C 01562		IRR		0 VASQUEZ I G	ED	C 01562				2	2	1	14	23S	27E	578907	3575268*	1334
C 02456	C	DOM		3 WILLIAM TULLY CAVENDER II	ED	C 02456	DTW:60; TD:180		Shallow	4	4	3	11	23S	27E	578905	3575472*	1338
C 00765	CUB	IRR		0 F.A. HILL	ED	C 00765				4	2	1	14	23S	27E	578907	3575068*	1358
C 00098 A		IRR		12 BINDEL HERBERT C	ED	C 00098 A-S-3				3	2	4	09	23S	27E	576273	3575833*	1394
C 00068		IRR		305 NEW MEXICO INTERSTATE STREAM COMMISSION	ED	C 00068			Shallow	1	3	1	10	23S	27E	576673	3576441*	1430
C 02032	C	DOL		3 DALE L JOHNSON	ED	C 02032				1	3	1	10	23S	27E	576673	3576441*	1430
C 00766		IRR		315 ENEA GRANDI	ED	C 00766	DTW:22; TD:190		Shallow	3	1	1	11	23S	27E	578282	3576672*	1517
C 00607	C	DOM		3 DAVID D. CARRASCO	ED	C 00607				1	1	2	10	23S	27E	577476	3576858*	1531
C 00340 A		IRR		150 MARTHA SKEEN	ED	C 00340			Shallow	3	3	4	11	23S	27E	579107	3575477*	1540
C 00420	C	CLS		0 CARPER DRILLING CO.	ED	C 00420		C		4	2	09	23S	27E	576370	3576337*	1569	
C 01247	C	DOM		3 GUADALUPE GUEVARA	ED	C 01247				3	14	23S	27E	578615	3574152*	1571		
C 00195		IRR		582 M.E. SIBLEY	ED	C 00195			Shallow	4	1	4	09	23S	27E	576069	3575827*	1585

Record Count: 31

POD Search:

POD Basin: Carlsbad

UTMNAD83 Radius Search (in meters):

Easting (X): 577574

Northing (Y): 3575329.85

Radius: 1609

Usage Filter:

Use: All Usages

Sorted by: Distance

Denied, cancelled, or expired permit/application;
approved but pending (active permit) and POD
consolidations for water rights

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/23/14 12:03 PM

Page 2 of 2

ACTIVE & INACTIVE POINTS OF DIVERSION

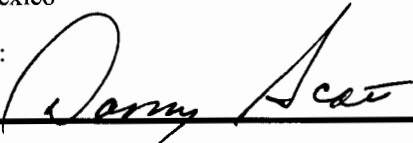
Affidavit of Publication

No. 23043

State of New Mexico

County of Eddy:

Danny Scott



being duly sworn, says that he is the

Publisher

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for
1 Consecutive weeks/day on the same

day as follows:

First Publication June 13, 2014

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

13th day of June 2014



OFFICIAL SEAL

Latisha Romine

NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires:

5/12/2015



Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

SPECIAL NOTICE

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Ghost SWD #1 175 FNL & 2000 FEL of Section 15, T23S R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Bell Canyon - Cherry Canyon formations at a disposal depth of 2190-4100'. Water will be injected at a maximum surface pressure of 438 pounds and a maximum injection rate of 4000 BWPD. Any interested party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, New Mexico 88211-0960 or call (575) 748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of the publication of this notice.
Published in the Artesia Daily Press, Artesia, NM on June 13 2014 Legal No. 23043.

2014 JUN 20 P 2 59