

12/11/2014 DATE IN	SUSPENSE	226 ENGINEER	12/12/2014 LOGGED IN	SWD TYPE	PMA41434659313 APP NO.
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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
☐ NSL ☐ NSP ☐ SD
- 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.

<u>James M. H. V.</u> Print or Type Name	<u>[Signature]</u> Signature	<u>Area Engineer</u> Title	<u>12-12-14</u> Date
		<u>mikeh@yatespetroleum.com</u> e-mail Address	

MARTIN YATES, III

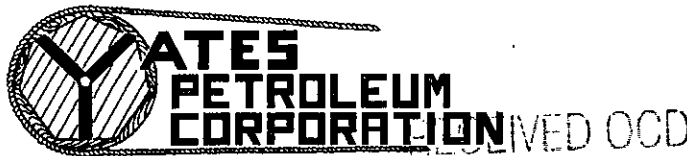
1912-1985

FRANK W. YATES

1936-1986

S.P. YATES

1914-2008



105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210-2118

TELEPHONE (575) 748-1471

www.yatespetroleum.com

JOHN A. YATES
CHAIRMAN EMERITUS

JOHN A. YATES JR.
CHAIRMAN OF THE BOARD
PRESIDENT

JOHN D. PERINI
EXECUTIVE VICE PRESIDENT
CHIEF FINANCIAL OFFICER

JAMES S. BROWN
CHIEF OPERATING OFFICER

November 20, 2014

New Mexico Energy & Minerals Department
Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505-5472,

Dear Mr. Philip Goetze,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) for Yates Petroleum Corporation's Andromeda SWD # 1 located in unit letter "C" of Sec. 25, T26S, R27E in Eddy County, New Mexico.

Yates Petroleum Corporation seeks to optimize efficiency, both economically and operationally, of its operations. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran in the July 14, 2013 edition of the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit is included in this application package. This application also includes wellbore schematics, area of review maps and other required information for a complete Form C-108. This well is located on federal lands and a copy of this application has been sent to the Bureau of Land Management.

Should you have any questions, please feel free to contact me at (575) 748-4219.

Sincerely,

James M. Hill (Mike)
Area Engineer

Enclosure

**C-108 Application for Authorization to Inject
Yates Petroleum Corporation
Andromeda SWD # 1
Unit Letter C, 660' FNL & 2,340' FWL of Sec. 25, T26S, R27E
Eddy County, New Mexico
API No. Not available, but the APD has been applied for.**

- I. The purpose of drilling and completing this well is to make a disposal well for produced water from the Bone Springs formation. The water would be injected into the Devonian formation.**

Yates Petroleum Corporation plans to drill a new disposal well into the Devonian carbonate.

- II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
James (Mike Hill) (575) 748-4219**
- III. Well Data: See Attachment A**
- IV. This is not an expansion of an existing project.**
- V. See attached map, Attachment B.**
- VI. No well within the area of review penetrated the proposed injection zone. (See Attachment C)**
- VII. 1. Proposed average daily injection volume approximately 5,000 BWPd. Maximum daily injection volume approximately 20,000 BWPd.**
- 2. This will be a closed system.**
- 3. Proposed average injection pressure –unknown.
Proposed maximum injection pressure – 2,787 psi.**
- 4. Sources of injected water would be produced water from the Bone Springs formation. (Attachment D)**
- VIII. 1. The proposed injection interval is the portion of the Devonian carbonates consisting of porous dolomite at an estimated depth of +/- 13,935'.**

**Application for Authorization to Inject
Andromeda SWD # 1**

-2-

- 2. Possible Fresh water zones overlie the proposed injection formations at depths to approximately 50'. There are no fresh water zones underlying the formation.**

- IX. The proposed disposal interval may be acidized with 20% HCL acid.**

- X. New logs will be provided after the well has been drilled.**

- XI. There is no water well within a one-mile radius of the subject location.**

- XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval. (Attachment G)**

- XIII. Proof of notice.**
 - A. Certified letters sent to the surface owner and offset operators attached (Attachment E)**

 - B. Copy of legal advertisement attached. (Attachment F)**

- XIV. Certification is signed.**

**Yates Petroleum Corporation
Andromeda SWD # 1
Unit Letter C, 660' FNL & 2,340' FWL
Sec. 25, T26S, R27E
Eddy County, New Mexico
API No. (N/A New Drill Applied For)**

Attachment A

III. Well Data

- A.**
1. Lease Name/Location
Andromeda SWD # 1
Unit Letter C Sec. 25, T26S, R27E
Eddy County, New Mexico
 2. Casing Strings:
 - a. Proposed well construction.
20", 94#/ft. J-55 ST&C @ 400' w/ +/- 1,200 Ft³ cemented to surface
13-3/8", 54.5 & 68#/ft. J-55 ST&C @ 2,400' w/ +/- 3,335 Ft³ cemented to surface
9-5/8", 43.5#/ft. HCP-110 LT&C @ 9,000' w/ +/- 5,640 Ft³ cemented to surface
7", 35#/ft. VST P-110 EC flush joint liner from 8,500' to 13,935' with +/-
1,377 Ft³ cemented back to the 9-5/8" with 500' overlap.
5-7/8" open hole will be drilled into the Devonian carbonate.
 - b. Present Status:
New undrilled proposed well
 3. Proposed well condition:
Drill a new well top to bottom and cement all casing stings back to the surface. A 7" flush joint liner will be placed from 8,500' to +/- 13935' and cemented in place. Then +/- 500' of 5-7/8" open hole will then be drilled in the Devonian carbonate. Then 4-1/2" or 3-1/2" plastic-coated injection tubing will be placed in the well.
 4. Propose to use an Arrowset or Baker plastic-coated or nickel-plated packer set at +/- 13,885' or within 100' of the top of the open hole.
- B.**
1. Injection Formation: Devonian Carbonate
 2. Injection Interval will be Devonian open hole section from +/- 13,935'-14,435'.
 3. This well will be used to dispose of Bone Springs water in the Devonian carbonate from (+/-13,935'-14,435') when work is completed.
 5. Next higher (shallower) oil or gas zone within 2 miles- Morrow.
Next lower (deeper) oil or gas zone within 2 miles-None.

(Attachment "A") Proposed Injection well data

WELL NAME: Andromeda SWD # 1 FIELD: Hay Hollow
LOCATION: Unit letter C, 660' FNL & 2,340' FWL of Sec 25-T26S-R27E Eddy County, NM
GL: _____ ZERO: _____ KB: _____
SPUD DATE: _____ COMPLETION DATE: _____
COMMENTS: This is a new well and no API # has yet been assigned to it.

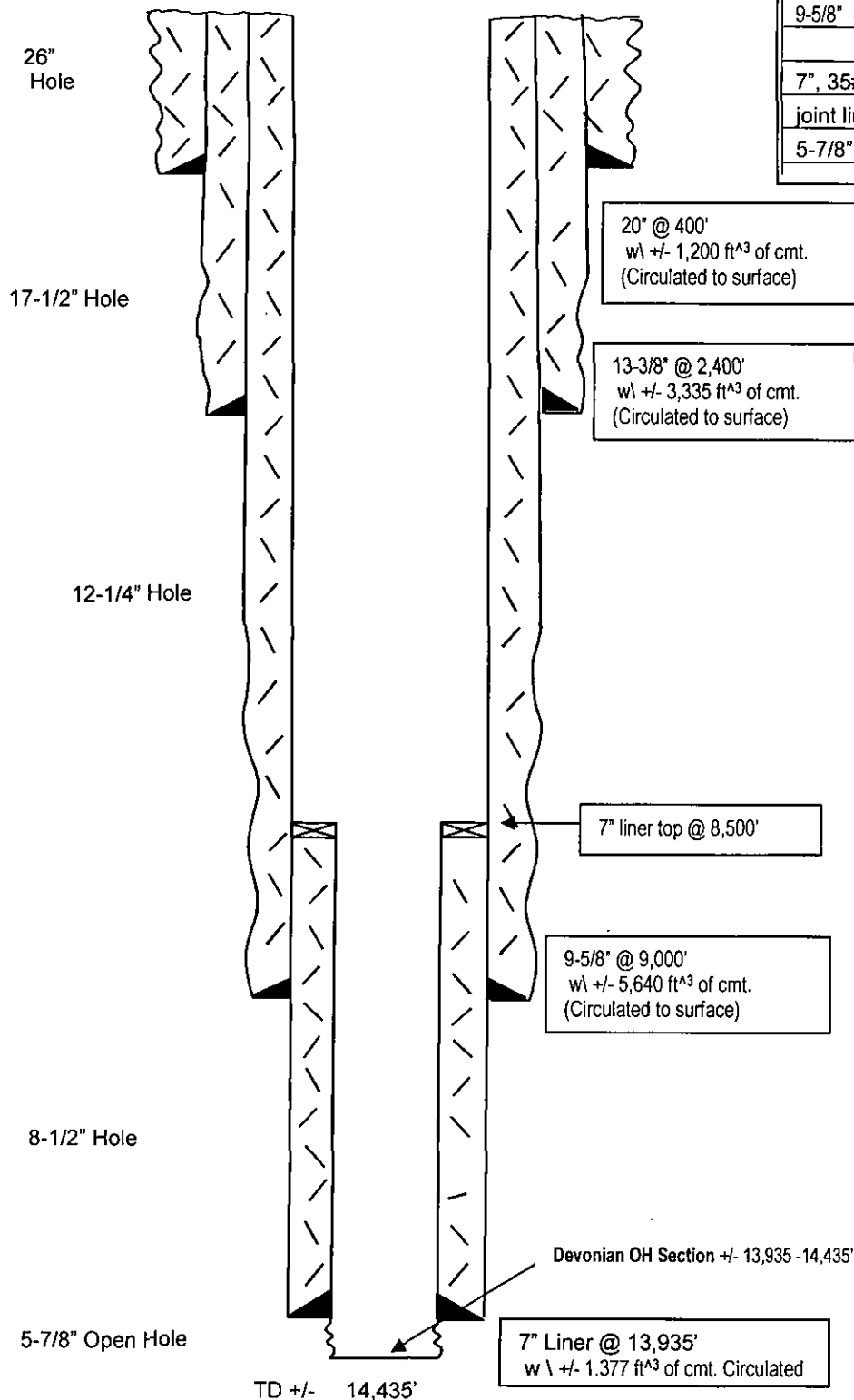
CASING PROGRAM

20" 94# J-55 ST&C	400'
13-3/8" 54.5 & 68#/ft. J-55 ST&C	2,400'
9-5/8" 43.5#/ft. HCP-110 LT&C	9,000'
7", 35#/ft. VST P-110 EC flush joint liner	8,500' to 13,935'
5-7/8" Open hole section	+/- 14,435'

Proposed

Anticipated TOPS

Top of Salt	1,455'
Base of Salt	2,014'
Delaware	2,197'
Bone Spring	5,907'
Wolfcamp	8,885'
Strawn	11,285'
Atoka	11,542'
Morrow	12,061'
Devonian	13,885'



Not to Scale
11/20/14
JMH

(Attachment "A") Proposed Injection well data

WELL NAME: Andromeda SWD # 1

FIELD: Hay Hollow

LOCATION: Unit letter C, 660' FNL & 2,340' FWL of Sec 25-T26S-R27E Eddy County, NM

GL: _____ **ZERO:** _____ **KB:** _____

SPUD DATE: _____ **COMPLETION DATE:** _____

COMMENTS: This is a new well and no API # has yet been assigned to it.

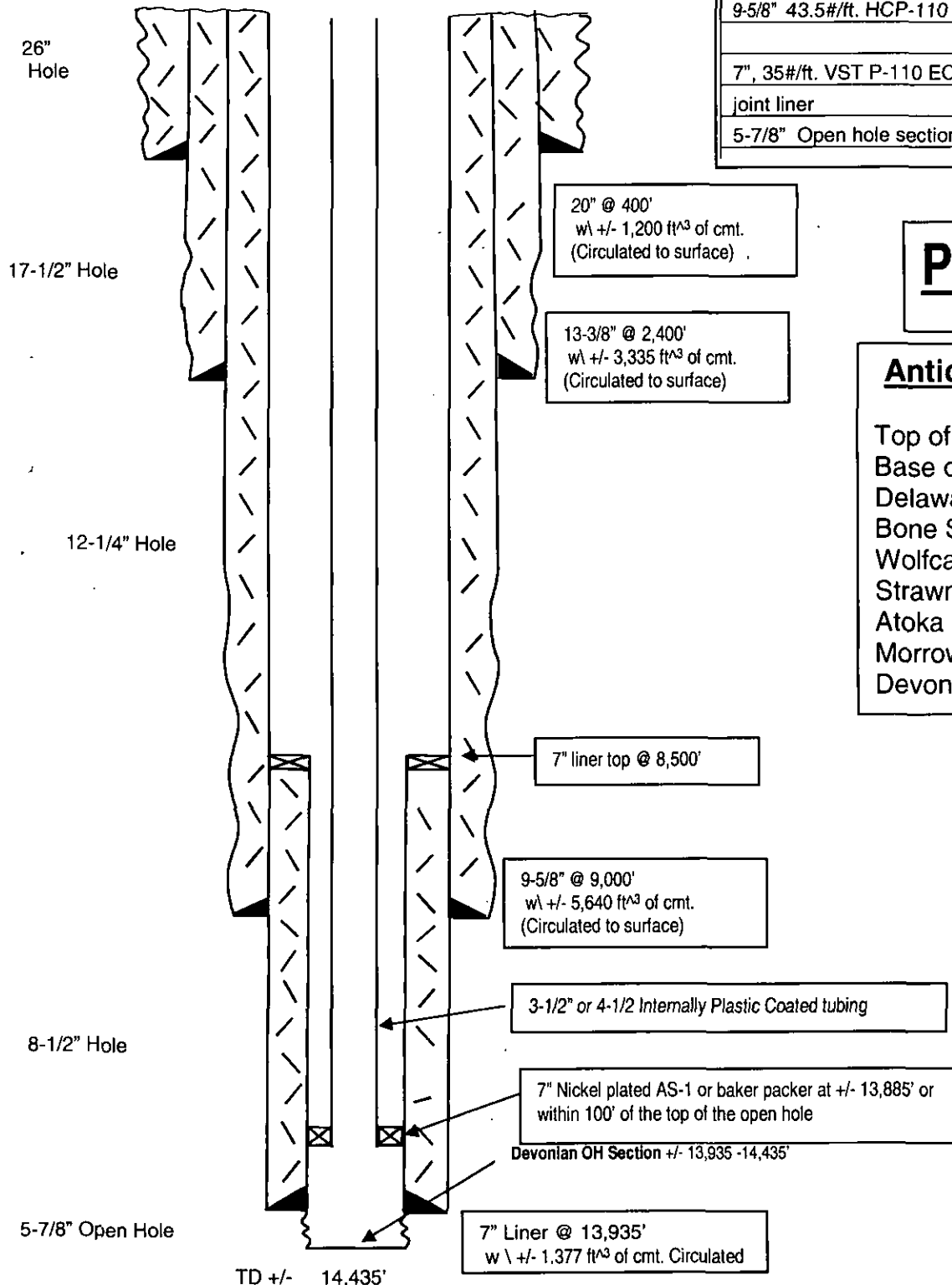
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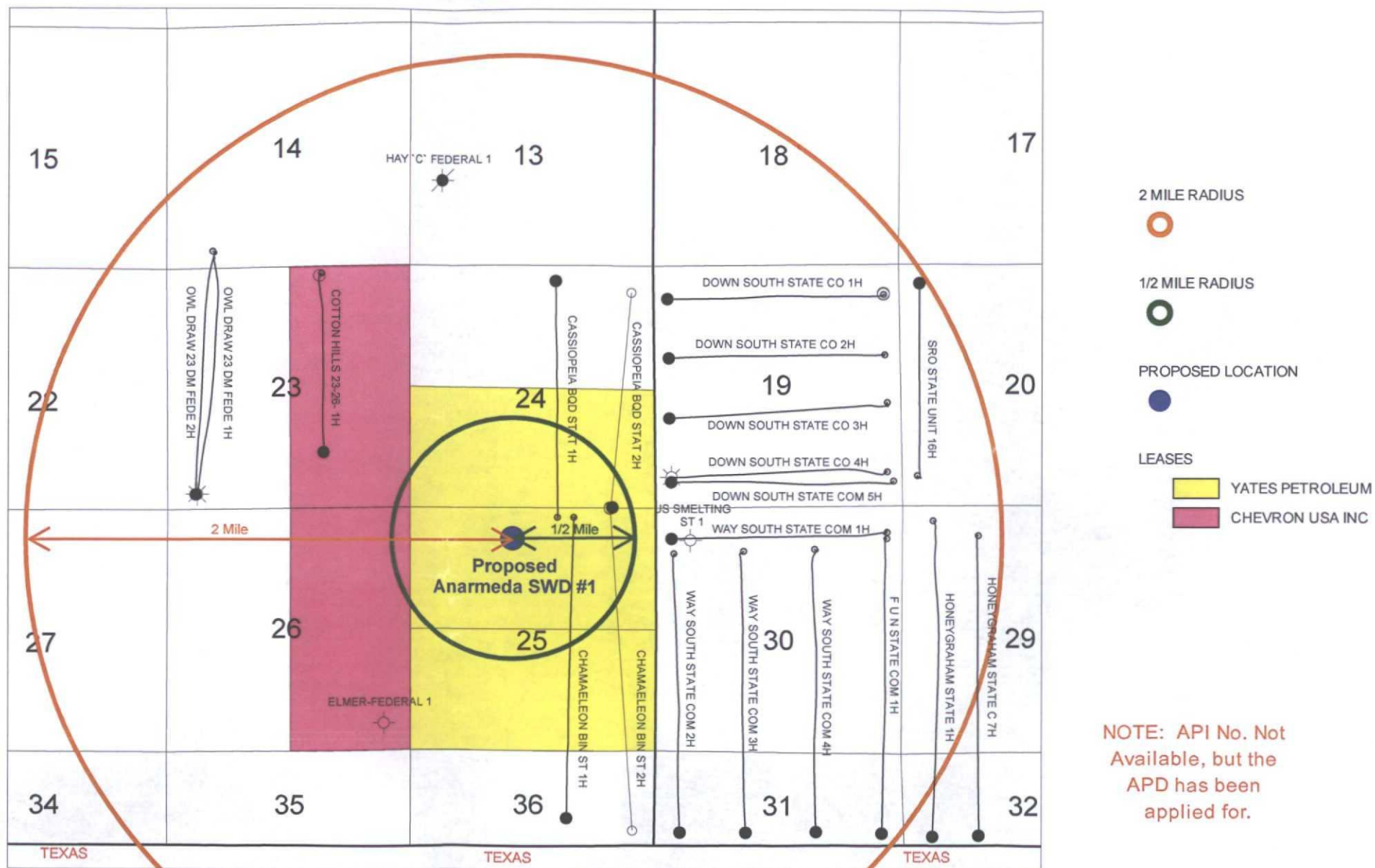


Not to Scale
11/20/14
JMH
Revised

ANDROMEDA SWD #1

Sec. 25, T26S, R27E

**Unit Letter C, 660' FNL & 2340' FWL
Eddy County, NM**



NOTE: API No. Not Available, but the APD has been applied for.

(Attachment C) page 1

(No Wells Penetrated the Proposed Injection Zone)

Well Data:

Wells with in the 1/2 Mile area of Review

API Number	Operator Name	Lease Name	Well Num	Field Name	Hole Direction	Depth Total Driller	Depth True Vertical	Formation at TD	Formation Producing Name
3001537942	YATES PETROLEUM CORP	CHAMAELEON BIN STATE COM	1H	HAY HOLLOW	HORIZONTAL	12783	6449	BONE SPRING	BONE SPRING
3001542059	YATES PETROLEUM CORP	CHAMAELEON BIN STATE COM	2H	HAY HOLLOW	HORIZONTAL	14595	7786	BONE SPRING	BONE SPRING
3001538082	YATES PETROLEUM CORP	CASSIOPEIA BQD STATE COM	1H	HAY HOLLOW	HORIZONTAL	11340	6395	BONE SPRING	BONE SPRING
3001541797	YATES PETROLEUM CORP	CASSIOPEIA BQD STATE COM	2H	HAY HOLLOW	HORIZONTAL	12482	7759	BONE SPRING	BONE SPRING

(Attachment C) page 2

(No Wells Penetrated the Proposed Injection Zone)

Well Data:

Wells with in the 2 Mile radius

API Number	Operator Name	Lease Name	Well Num	Field Name	Hole Direction	Depth Total Driller	Depth True Vertical	Formation at TD	Formation Producing Name
3001501160	CHAMBERS&KENEDY-RITCHIE	ELMER-FEDERAL	1		VERTICAL	2400		UNKNOWN	
3001502535	HIGHLAND OIL COMPANY	US SMELTING-STATE	1	UNKNOWN	VERTICAL	2464		UNKNOWN	
300152414	ABO PETROLEUM CORP	HAY 'C' FEDERAL	1	HAY HOLLOW	VERTICAL	8400		BONE SPRING	BONE SPRING
3001537234	COG OPERATING LLC	WAY SOUTH STATE COM	1H	HAY HOLLOW	HORIZONTAL	10990	6578	BONE SPRING	BONE SPRING
3001537253	COG OPERATING LLC	DOWN SOUTH STATE COM	1	HAY HOLLOW	HORIZONTAL				
3001537254	COG OPERATING LLC	DOWN SOUTH STATE COM	2H	HAY HOLLOW	HORIZONTAL	12197	7675	BONE SPRING	BONE SPRING
3001537255	COG OPERATING LLC	DOWN SOUTH STATE COM	3H	HAY HOLLOW	HORIZONTAL	12247	7672	BONE SPRING	BONE SPRING
3001537256	COG OPERATING LLC	DOWN SOUTH STATE COM	4H	HAY HOLLOW	HORIZONTAL	11005	6570	BONE SPRING	BONE SPRING
3001537465	COG OPERATING LLC	HONEYGRAHAM STATE	1H	HAY HOLLOW	HORIZONTAL	13174	6459	BONE SPRING	BONE SPRING
3001537658	COG OPERATING LLC	SOUTH BOX STATE	1H	HAY HOLLOW	HORIZONTAL				
3001537659	COG OPERATING LLC	NEAR TX STATE COM	1H	HAY HOLLOW	HORIZONTAL				
3001537879	COG OPERATING LLC	F U N STATE COM	1H	HAY HOLLOW	HORIZONTAL	12649	6461	BONE SPRING	BONE SPRING
3001538071	COG OPERATING LLC	SRO STATE UNIT	16H	HAY HOLLOW	HORIZONTAL	10684	6626	BONE SPRING	BONE SPRING
3001538595	COG OPERATING LLC	HONEYGRAHAM STATE COM	7H	HAY HOLLOW	HORIZONTAL	12920	6615	BONE SPRING	BONE SPRING
300154033	COG OPERATING LLC	WAY SOUTH STATE COM	5H	HAY HOLLOW	HORIZONTAL				
3001540336	COG OPERATING LLC	WAY SOUTH STATE COM	2H	HAY HOLLOW	HORIZONTAL	13630	7753	BONE SPRING	BONE SPRING
3001540369	COG OPERATING LLC	WAY SOUTH STATE COM	3H	HAY HOLLOW	HORIZONTAL	13676	7758	BONE SPRING	BONE SPRING
3001540370	COG OPERATING LLC	WAY SOUTH STATE COM	4H	HAY HOLLOW	HORIZONTAL	13740	7744	BONE SPRING	BONE SPRING
3001541144	COG OPERATING LLC	WAY SOUTH STATE COM	5H	HAY HOLLOW	HORIZONTAL				
3001541400	COG OPERATING LLC	DOWN SOUTH STATE COM	5H	HAY HOLLOW	HORIZONTAL	12240	7642	BONE SPRING	BONE SPRING
3001541442	COG OPERATING LLC	DOWN SOUTH STATE COM	1H	HAY HOLLOW	HORIZONTAL	12188	7782	BONE SPRING	BONE SPRING
3001541448	MEWBOURNE OIL COMPANY	OWL DRAW 23 DM FEDERAL COM	1H	UNNAMED	HORIZONTAL	14900	10091	WOLFCAMP	WOLFCAMP
3001541535	CHEVRON U S A INC	COTTON HILLS 23-26-27 FEDERAL COM	1H	UNNAMED	VERTICAL	10354	10350	WOLFCAMP	
3001541535	CHEVRON U S A INC	COTTON HILLS 23-26-27 FEDERAL COM	1H	UNNAMED	HORIZONTAL	13037	9265	WOLFCAMP	WOLFCAMP
3001541629	MEWBOURNE OIL COMPANY	OWL DRAW 23 DM FEDERAL COM	2H	HAY HOLLOW	HORIZONTAL	12530	7569	BONE SPRING	BONE SPRING
3001542326	COG OPERATING LLC	WAY SOUTH STATE COM	6H	HAY HOLLOW	HORIZONTAL				

Attachment D

Representative Sources of injected water

Water Analysis's from the following Yates Petroleum wells attached:

Bolivar "BRD" Federal Com #1H
Unit I, Sec. 33-T24S-R27E
Eddy County, New Mexico
API No.30-015-40742

Bodacious "BSM" Federal #1H
Unit M, Sec. 1-T26S-R26E
Eddy County, New Mexico
API No. 30-015-41158

Jericho "BKJ" State Com #2H
Unit A, Sec. 15-T25S-R27E
Eddy County, New Mexico
API No. 30-015-37500

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(806) 229-8121
Lab Team Leader - Sheila Hernandez
(432) 681-8300

Water Analysis Report by Baker Petrolite

Company:	YATES PETROLEUM INC	Sales RDT:	33514.1
Region:	PERMIAN BASIN	Account Manager:	TONY HERNANDEZ (575) 910-7135
Area:	ARTESIA, NM	Sample #:	664630
Lease/Platform:	BOLIVAR 'BRD' FEDERAL COM	Analysis ID #:	137915
Entity (or well #):	1 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	KNOCK OUT		

Summary		Analysis of Sample 664630 @ 75 F					
Sampling Date:	10/29/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	11/05/13	Chloride:	125542.0	3541.08	Sodium:	58881.0	2561.18
Analyst:	SANDRA SANCHEZ	Bicarbonate:	134.2	2.2	Magnesium:	1233.0	101.43
TDS (mg/l or g/m3):	198762.7	Carbonate:	0.0	0.	Calcium:	9782.0	488.12
Density (g/cm3, tonne/m3):	1.135	Sulfate:	948.0	19.74	Strontium:	1280.0	29.22
Anion/Cation Ratio:	0.8996216	Phosphate:			Barium:	2.0	0.03
		Borate:			Iron:	77.0	2.78
		Silicate:			Potassium:	882.0	22.56
Carbon Dioxide:	300 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		6.6	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.6	Lead:		
					Manganese:	1.500	0.05
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.44	6.65	-0.13	0.00	-0.11	0.00	0.64	344.64	0.95	0.87	0.22
100	0	0.51	7.81	-0.20	0.00	-0.11	0.00	0.62	336.25	0.75	0.87	0.28
120	0	0.57	9.25	-0.26	0.00	-0.09	0.00	0.61	332.49	0.57	0.87	0.34
140	0	0.64	10.99	-0.31	0.00	-0.05	0.00	0.61	331.92	0.42	0.58	0.4

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(806) 229-8121
Lab Team Leader - Sheila Hernandez
(432) 681-8300

Water Analysis Report by Baker Petrolite

Company:	YATES PETROLEUM INC	Sales RDT:	33514.1
Region:	PERMIAN BASIN	Account Manager:	TONY HERNANDEZ (575) 910-7135
Area:	ARTESIA, NM	Sample #:	664629
Lease/Platform:	BODACIOUS 'BSM' FEDERAL	Analysis ID #:	137913
Entity (or well #):	1 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	KNOCK OUT		

Summary		Analysis of Sample 664629 @ 75 °F					
Sampling Date:	10/24/13	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	11/05/13	Chloride:	96137.0	2711.67	Sodium:	45133.0	1963.17
Analyst:	SANDRA SANCHEZ	Bicarbonate:	146.4	2.4	Magnesium:	868.0	71.41
TDS (mg/l or g/m3):	151335.4	Carbonate:	0.0	0.	Calcium:	6136.0	306.19
Density (g/cm3, tonne/m3):	1.105	Sulfate:	732.0	15.24	Strontium:	1441.0	32.89
Anion/Cation Ratio:	0.8768546	Phosphate:			Barium:	3.5	0.05
		Borate:			Iron:	57.0	2.06
		Silicate:			Potassium:	680.0	17.39
Carbon Dioxide:	300 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		6.3	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.3	Lead:		
					Manganese:	1.500	0.05
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.06	0.00	-0.39	0.00	-0.39	0.00	0.70	314.91	1.20	1.82	0.53
100	0	0.03	0.61	-0.46	0.00	-0.39	0.00	0.68	309.46	1.00	1.82	0.66
120	0	0.12	3.03	-0.51	0.00	-0.36	0.00	0.67	307.04	0.83	1.51	0.79
140	0	0.22	5.45	-0.55	0.00	-0.31	0.00	0.67	307.04	0.68	1.51	0.92

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO₂ pressure is actually the calculated CO₂ fugacity. It is usually nearly the same as the CO₂ partial pressure.

North Permian Basin Region
P.O. Box 740
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Lab Team Leader - Sheila Hernandez
(432) 495-7240

Water Analysis Report by Baker Petrolite

Company:	YATES PETROLEUM INC	Sales RDT:	33514.1
Region:	PERMIAN BASIN	Account Manager:	TONY HERNANDEZ (575) 910-7135
Area:	ARTESIA, NM	Sample #:	215451
Lease/Platform:	JERICO BKJ LEASE	Analysis ID #:	104195
Entity (or well #):	2 H	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	HEATER TREATER		

Summary		Analysis of Sample 215451 @ 75 °F					
Sampling Date:	10/27/10	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	11/01/10	Chloride:	120700.0	3404.51	Sodium:	76652.4	3334.19
Analyst:	STACEY SMITH	Bicarbonate:	1830.0	29.99	Magnesium:	302.0	24.84
TDS (mg/l or g/m3):	202649.5	Carbonate:	0.0	0.	Calcium:	1013.0	50.55
Density (g/cm3, tonne/m3):	1.132	Sulfate:	640.0	13.32	Strontium:	215.0	4.91
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.8	0.01
		Borate:			Iron:	16.0	0.58
		Silicate:			Potassium:	1280.0	32.73
Carbon Dioxide:	520 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		7.8	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		7.8	Lead:		
					Manganese:	0.300	0.01
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ *2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	1.84	213.81	-1.20	0.00	-1.17	0.00	-0.23	0.00	0.46	0.29	0.25
100	0	1.69	226.75	-1.29	0.00	-1.19	0.00	-0.27	0.00	0.24	0.29	0.51
120	0	1.56	240.28	-1.36	0.00	-1.19	0.00	-0.29	0.00	0.05	0.00	0.93
140	0	1.47	254.67	-1.43	0.00	-1.16	0.00	-0.30	0.00	-0.11	0.00	1.55

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

Offset Operators / Mineral Owners/ Surface Owner

**Andromeda SWD # 1
Unit Letter C, 660' FNL & 2,340' FWL
Sec. 25, T26S, R27E
Eddy County, New Mexico
API No. (N/A New Drill Applied For)**

Attachment E

Certified Notification Letters Sent to:

Offset Operators / Mineral Owners:

Chevron USA Inc. – E2 23 and E2 26
P.O. Box 2100
Houston, TX 77252

Yates Petroleum Corporation – S2 24 and N2 25 and S2 25
105 South 4Th
Artesia, NM 88210

Surface Owner:

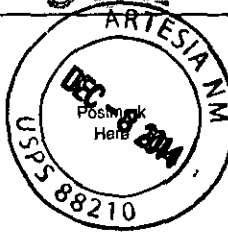
State of New Mexico
Commissioner of Public Lands
P.O. Box 1148
Santa Fe, NM 87504-1148

Attachment E

Certified Mail Receipts:

7007 1490 0002 7972 5558

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
<small>(Domestic Mail Only; No Insurance Coverage Provided)</small>	
<small>For delivery information visit our website at www.usps.com</small>	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.40




Sent To: Chyron USA INC	
Street, Apt. No., or PO Box No. P.O. Box 2100	
City, State, ZIP+4 Houston TX 77252	

PS Form 3800, August 2006 See Reverse for Instructions

7007 1490 0002 7972 5541

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
<small>(Domestic Mail Only; No Insurance Coverage Provided)</small>	
<small>For delivery information visit our website at www.usps.com</small>	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.40

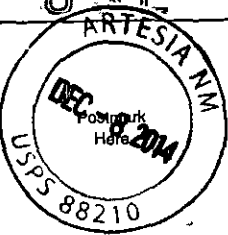


Sent To: State of New Mexico	
Street, Apt. No., or PO Box No. Commissioner of Public Lands	
City, State, ZIP+4 Santa Fe NM 87504-1148	

PS Form 3800, August 2006 See Reverse for Instructions

7007 1490 0002 7972 5555

U.S. Postal Service™	
CERTIFIED MAIL™ RECEIPT	
<small>(Domestic Mail Only; No Insurance Coverage Provided)</small>	
<small>For delivery information visit our website at www.usps.com</small>	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.40



Sent To: State of New Mexico	
Street, Apt. No., or PO Box No. Oil Conservation Division	
City, State, ZIP+4 811 South First St. Artesia NM 88210	

PS Form 3800, August 2006 See Reverse for Instructions

Attachment F

Legal Notice

Yates Petroleum Corporation, 105 south Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well the Andromeda SWD # 1 will be located in unit letter "C" of Sec. 25, T26S, R27E in Eddy County, New Mexico and will be used for saltwater disposal. Disposal waters from the Bone Spring will be re-injected into the Devonian at a depth of approximately 13,935' with a maximum pressure of 2,787 psi and a maximum rate of 20,000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505-5472, within 15 days. Additional information can be obtained by contacting Mike Hill at (575) 748-4219.

Affidavit of Publication

No. 23260

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 November 23, 2014

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

3rd day of December 2014



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Yates Petroleum Corporation, 105 south Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well the Andromeda SWD # 1 will be located in unit letter "C" of Sec. 25, T26S, R27E in Eddy County, New Mexico and will be used for saltwater disposal. Disposal waters from the Bone Spring will be re-injected into the Devonian at a depth of approximately 13,935' with a maximum pressure of 2,787 psi and a maximum rate of 20,000 BWPD.

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Published in the Artesia Daily Press, Artesia, N.M., November 23, 2014 Legal No. 23260.

Affidavit of Publication

No. 23260

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 November 23, 2014

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

3rd day of December 2014



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2015

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

LEGAL NOTICE

Yates Petroleum Corporation, 105 south Fourth Street, Artesia, NM 88210, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well the Andromeda SWD # 1 will be located in unit letter "C" of Sec. 25, T26S, R27E in Eddy County, New Mexico and will be used for saltwater disposal. Disposal waters from the Bone Spring will be re-injected into the Devonian at a depth of approximately 13,935' with a maximum pressure of 2,787 psi and a maximum rate of 20,000 BWPD.

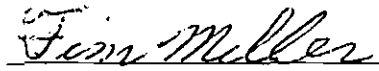
All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505-5472, within 15 days. Additional information can be obtained by contacting Mike Hill at (575) 748-4219.

Published in the Artesia Daily Press, Artesia, N.M., November 23, 2014 Legal No. 23260.

Attachment G

C-108 Application for Authorization to Inject
Yates Petroleum Corporation
Andromeda SWD # 1
Unit Letter C, 660' FNL & 2,240' FWL
Sec. 25, T26S, R27E
Eddy County, New Mexico
API No. (N/A New Drill Applied For)

Available engineering and geological data have been examined and no evidence of open faults of hydrologic connection between the disposal zone and any underground sources of drinking water has been found.



Tim Miller
Geologist
Yates Petroleum Corporation

11/21/14
Date



C-108 Review Checklist: Received 12/11/2014 Add. Request: 2/26/2015 Reply Date: _____ Suspended: _____ [Ver 15]

ORDER TYPE: WFX / PMX (SWD) Number: 1534 Order Date: _____ Legacy Permits/Orders: _____

Well No. 1 Well Name(s): Andromeda SWD

API: 30-0 15-Pending Spud Date: TBD New or Old: N (UIC Class II Primacy 03/07/1982)

Footages 660 FNL 2340 FNL Lot _____ or Unit C Sec 25 Tsp 26S Rge 27E County Eddy

General Location: 2205W MALAGA Pool: SWD DEVONIAN Pool No.: 9601

BLM 100K Map: CANL66A Operator: YATES Petroleum OGRID: 25575 Contact: MIKE HILL

COMPLIANCE RULE 5.9: Total Wells: 2311 Inactive: 5 Fincl Assur: Y Compl. Order: N IS 5.9 OK? Y Date: 3-02-2015

WELL FILE REVIEWED ☐ Current Status: Proposed

WELL DIAGRAMS: NEW: Proposed ☒ or RE-ENTER: Before Conv. ☐ After Conv. ☐ Logs in Imaging: Logging package in Application for new well

Planned Rehab Work to Well: None

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx o <u>CT</u>	Cement Top and Determination Method
Planned ___ or Existing ___ Surface		<u>26" / 20"</u>	<u>400</u>	<u>1200</u>	<u>SURFACE</u>
Planned ___ or Existing ___ Interm/Prod		<u>17 1/2" / 13 3/8"</u>	<u>2400</u>	<u>3335</u>	<u>SURFACE</u>
Planned ___ or Existing ___ Interm/Prod		<u>12 1/4" / 9 5/8"</u>	<u>9000</u>	<u>5640</u>	<u>SURFACE</u>
Planned ___ or Existing ___ Prod/Liner		<u>8 1/2" / 7"</u>	<u>13935</u>		<u>8500</u>
Planned ___ or Existing ___ Liner					
Planned ___ or Existing ___ <u>OH</u> PERF		<u>13935 - 14435</u>			

Injection Lithostratigraphic Units	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		<u>Morrow</u>	<u>1200</u>
Confining Unit: Litho. Struc. Por.	<u>0</u>		
Proposed Inj Interval TOP:	<u>13935</u>	<u>DEVONIAN</u>	<u>13885</u>
Proposed Inj Interval BOTTOM:	<u>14335</u>		
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:	
Drilled TD <u>14435</u>	PBTD _____
NEW TD _____	NEW PBTD _____
NEW Open Hole <input checked="" type="radio"/> or NEW Perfs <input type="radio"/>	
Tubing Size <u>4 1/2</u> in. Inter Coated? <u>Y</u>	
Proposed Packer Depth <u>13885</u> ft	
Min. Packer Depth <u>13885</u> (100-ft limit)	
Proposed Max. Surface Press. <u>2787</u> psi	
Admin. Inj. Press. <u>2787</u> (0.2 psi per ft)	

AOR: Hydrologic and Geologic Information

POTASH: R-111-P _____ Noticed? _____ BLM Sec Ord ☐ WIPP ☐ Noticed? _____ Salt/Salado T: _____ B: _____ **NW:** Cliff House fm _____

FRESH WATER: Aquifer _____ Max Depth _____ **HYDRO AFFIRM STATEMENT By Qualified Person** ☒

NMOSE Basin: CANL66A **CAPITAN REEF:** thru ☐ adj ☐ **NA** ☒ No. Wells within 1-Mile Radius? _____ FW Analysis ☐

Disposal Fluid: Formation Source(s) Bone Spring Analysis? Y On Lease ☐ Operator Only ☒ or Commercial ☒

Disposal Int: Inject Rate (Avg/Max BWPd): 5000/20000 Protectable Waters? _____ Source: _____ System: Closed ☒ or Open ☐

HC Potential: Producing Interval? NO Formerly Producing? NO Method: Logs/DST/P&A/Other Mudlog 2-Mile Radius Pool Map ☒

AOR Wells: 1/2-M Radius Map? Y Well List? Y Total No. Wells Penetrating Interval: 0 Horizontals? _____

Penetrating Wells: No. Active Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

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

NOTICE: Newspaper Date 11-23-2014 Mineral Owner NMSLO Surface Owner NMSLO N. Date 12-8-2014

RULE 26.7(A): Identified Tracts? _____ Affected Persons: Cheuron N. Date 12-8-2014

Order Conditions: Issues: _____, in / MANGROVE SALINITY

Add Order Cond: CBL FOR 9 5/8 7"