

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 _____

- WFX 941
 - Ray Westall Operating Inc.
 119305
 well
 - Culwin Queen Unit #6
 30-015-05653
 - Culwin Queen Unit #14
 30-015-05748
 - Culwin Queen Unit #15
 30-015-04586

[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

2014 OCT 21 A 11:12
 RECEIVED OCD
 - Culwin Queen Unit #17
 30-015-04585
 Pool

[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.

Ben Stone		Agent for Ray Westall Operating	10/16/14
Print or Type Name	Signature	Title	Date
		ben@sosconsulting.us	
		e-mail Address	

- Shady Ant.
 Yates - Takes
 Cu - Grayburg
 56439

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: **WATERFLOOD EXPANSION** and the application *qualifies* for administrative approval.
- II. OPERATOR: **Ray Westall Operating, Inc.**
ADDRESS: **P.O. Box 4, Loco Hills, NM 88255**

CONTACT PARTY: **Donnie Mathews (575) 677-2372**
Agent: SOS Consulting, LLC – Ben Stone (903) 488-9850
- III. WELL DATA: **All well data and applicable wellbore diagrams are attached hereto.**
- IV. **EXPANSION of the existing Culwin Queen Unit Waterflood project, original authorization R-2846 + WFX-817.**
- V. **A map is attached** 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. A tabulation is attached of data on all wells of public record within the area of review which penetrate the proposed injection zone. The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail. **P&A schematics attached.**
- VII. **The following data is attached** 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. Appropriate geologic data on the injection zone is attached 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. **(Previously Submitted.)**
- IX. **No stimulation program is proposed at this time.**
- *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. **There are NO domestic water wells within one mile the proposed injection wells.**
- XII. **An affirmative statement is attached that available geologic and engineering data has been examined and no evidence was found** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. **"Proof of Notice" section on the next page of this form has been completed.**
There are 16 offset lessees and/or operators within ½ mile - all have been noticed.
- 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: **Ben Stone** TITLE: **SOS Consulting, LLC agent for Ray Westall Operating, Inc.**

SIGNATURE: _____

DATE: **10/14/2014**

E-MAIL ADDRESS: **ben@sosconsulting.us**

- 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:

III. WELL DATA – *The following information and data is included:*

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE *pursuant to the following criteria is attached.*

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

C-108 - Item III

Subject Well Data

30-015-05653

CULWIN QUEEN UNIT NO.6; L-31-18S-31E; Perfs 3315'-3423'; TD 3452' ✓

8.675" (11.0" hole) @ 777' w/ 75 sx; 5.5" (7.875" hole) @ 3479' w/ 250 sx

Max surface psi: 663

30-015-05748

CULWIN QUEEN UNIT NO.14; ^{Lot 4} D-6-19S-31E; Perfs 3119'-3143'; TD 3151'

8.675" (12.25" hole) @ 762' w/ 50 sx; 7.0" (8.0" hole) @ 3149' w/ 50 sx

Max surface psi: 624

30-015-04586

CULWIN QUEEN UNIT NO.15; H-1-19S-30E; Perfs 3090'-3118'; TD 3141'

8.675" (12.25" hole) @ 749' w/ 50 sx; 7.0" (8.0" hole) @ 3164' w/ 110 sx

Max surface psi: 618

30-015-04585

CULWIN QUEEN UNIT NO.17; J-1-19S-30E; Perfs 3080'-3112'; PBTD 3130'

8.675" (11.0" hole) @ 760' w/ 50 sx; 5.5" (7.875" hole) @ 3253' w/ 125 sx

Max surface psi: 616

Proposed Wellbore Schematic – Typical

(Attached - next page.)



PROPOSED WELL SCHEMATIC

RAY WESTALL OPERATING, INC.

> Typical Culwin Queen Unit Injection Well <

(Shown: CQU No.15; API 30-015-04586)

SECTION 1-T19S-R30E
EDDY COUNTY, NEW MEXICO

Shugart Yates Seven Rivers Queen Grayburg, Pool Code 56436

Annulus Monitored
or open to atmosphere

Injection Pressure Regulated (Avg. 530 psi / 0.2 psi/ft)
and Volumes Reported

Surface Casing

8.625" Csg. (11.0" hole) @ 749'
w/ 50 sx Class 'C' - Circulated

749'

PROJECT SYNOPSIS

1959 - Wells Completed as Queen Producers
1964 - Original Injection Authorization R-2846
2006 - Waterflood Project Expanded by WFX-817
2002 - RWO Recompletes TA'd wells to Active Oil
2008 - Acquired by Tri-Tex; 2010 - Acquired by Endurance
2014 - Reacquired by Ray Westall Operating

Annulus Loaded w/ Inert Packer Fluid

2.375" Internally Coated Tubing Set in PKR
<100' Above Uppermost OH / Perf

Production Casing

7.0" (8.75" Hole) @ 3164'
w/ 200 sx - TOC @ 1773' by Calc. (Circ. Rpt'd)

8 inch hole
110 sx
in Sunday

Reinjected Lease
Produced Water

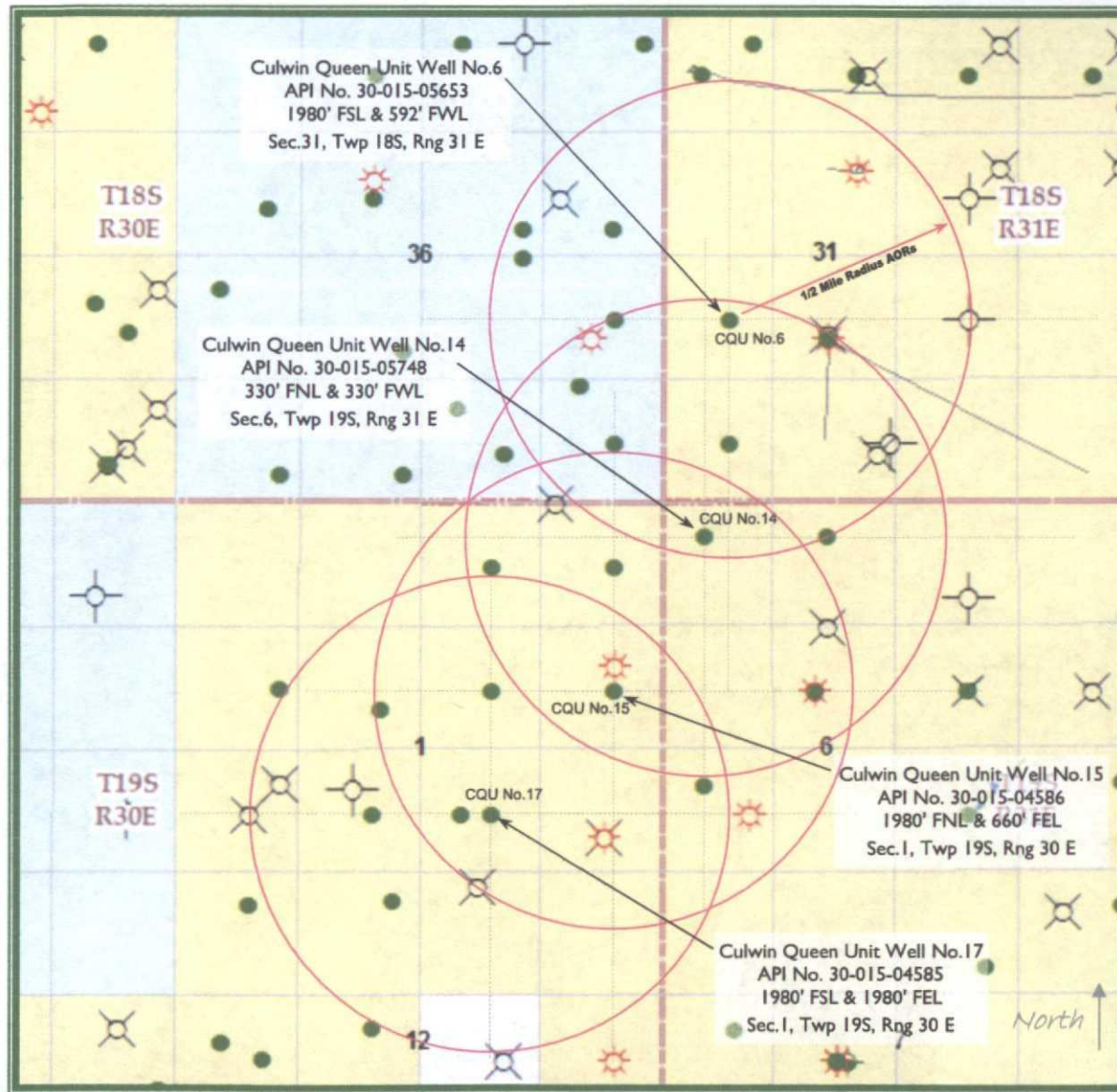
Queen Perfs: 3090' to 3118'

(Well No.6 - 3315' to 3426'; No.14 - 3119' to 3143'; No.17 - 3080' to 3112')

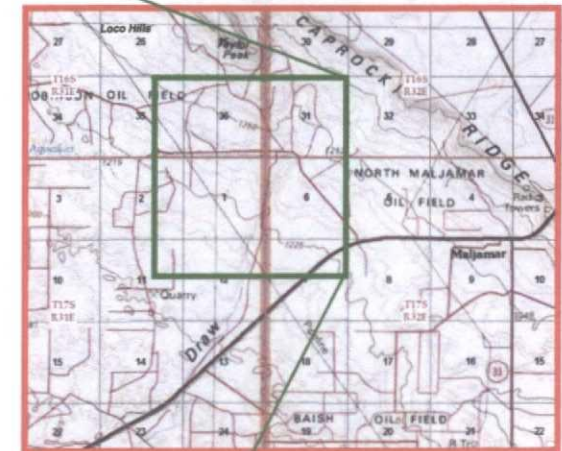
3164'

TD @ 3164'

Culwin Queen Unit Well Nos.6, 14, 15, 17 WFX
Area of Review / Overview Map
(Attachment to NMOCD Form C-108 - Item V)



~3.8 miles West / Northwest of
Maljamar, NM



Eddy County, New Mexico

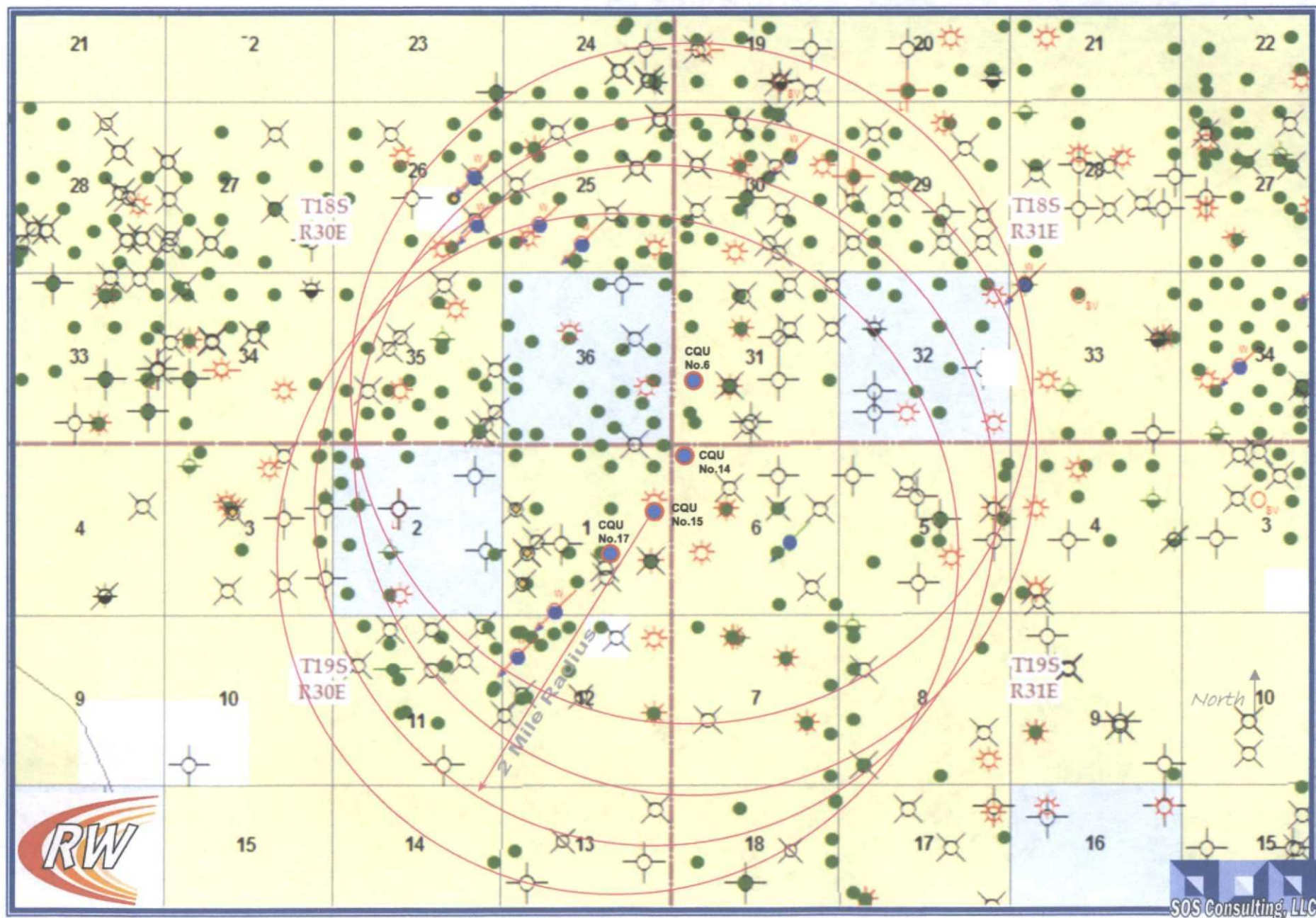


RAY WESTALL OPERATING, INC.



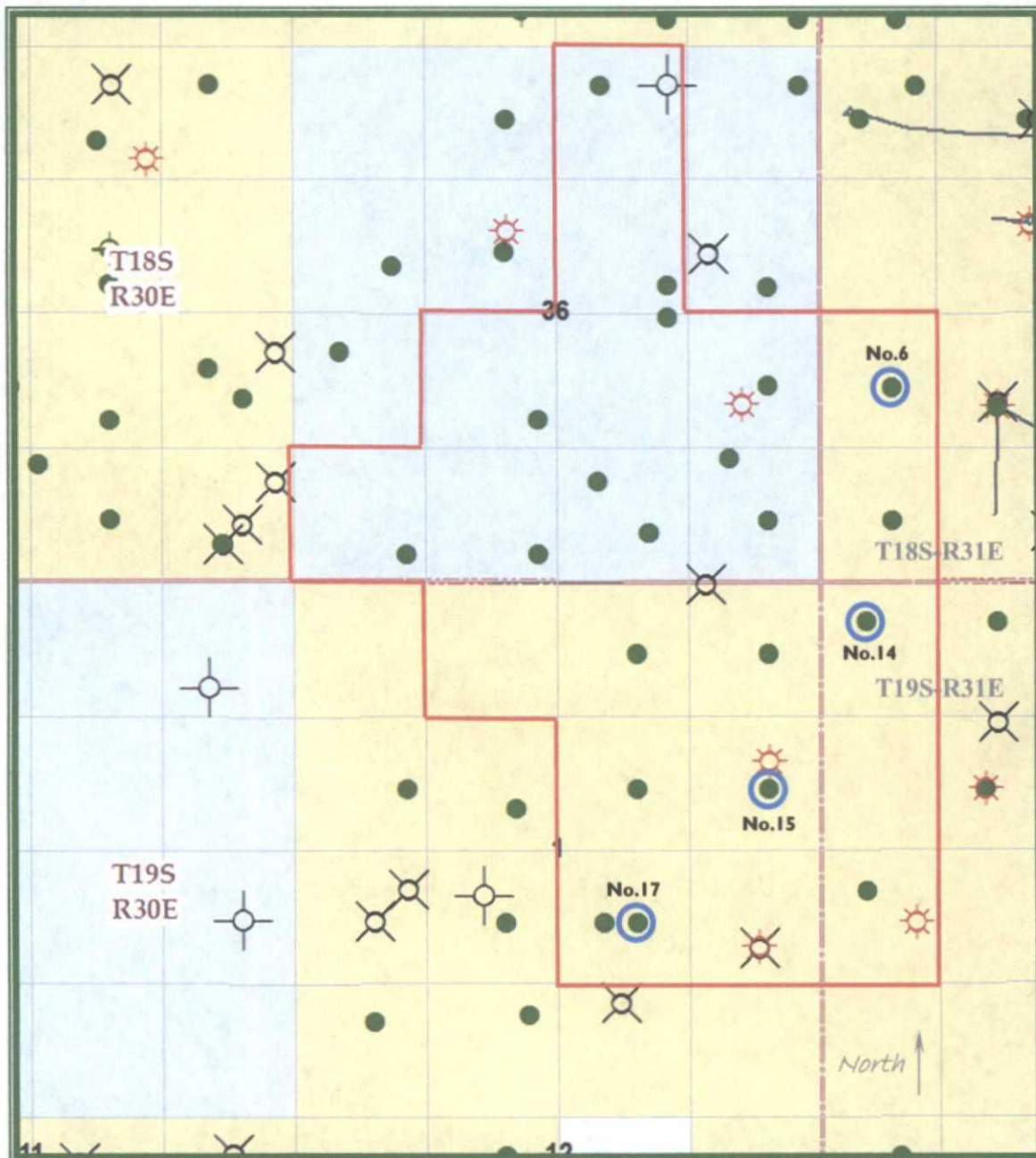
Culwin Queen Unit WF Well No.1 - Area of Review / 2 Miles

(Attachment to NMOCD Form C-108 - Item V)



Culwin Queen Unit – Boundary Map

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



RAY WESTALL OPERATING, INC.

Form C-108 Item VI - Tabulation of AOR Wells

Top of Proposed QUEEN Interval 3080'

ALL Wells PENETRATE Proposed Injection Zone.

SUMMARY: 59 wells; all wells penetrate proposed injection interval. 43 Active (or new); 16 P&A.

Subject Wells

API	Current Operator	Well Name	Well No.	Type	Lease	Status	UL	S-T-R	TV Depth	P&A Dt.
30-015-05653	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#006	Oil	Federal	Active	L	31-18S-31E	3452' PB	
30-015-05748	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#014	Oil	Federal	Active	D	6-19S-31E	3151'	
30-015-04586	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#015	Oil	Federal	Active	H	1-19S-30E	3141'	
30-015-04585	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#017	Oil	Federal	Active	J	1-19S-30E	3340'	

Section 31-18S-31E

30-015-05654	[269324] LINN OPERATING, INC.	FEDERAL E	#002	Oil	Federal	Active	C	31-18S-31E	3650'	
30-015-05652	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	D	31-18S-31E	3597'	1/17/1984
30-015-37350	[162683] CIMAREX ENERGY	WEST SHUGART 31 FEDERAL COM	#003	Oil	Federal	Active	D	31-18S-31E	8780'	
30-015-37785	[162683] CIMAREX ENERGY	WEST SHUGART 31 FEDERAL COM	#004	Oil	Federal	Active	E	31-18S-31E	8803'	
30-015-31821	[162683] CIMAREX ENERGY	WEST SHUGART 31 FEDERAL	#002	Gas	Federal	Active	F	31-18S-31E	12308'	
30-015-10191	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	G	31-18S-31E	4000'	1/1/1900
30-015-05657	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	J	31-18S-31E	0	1/1/1901
30-015-31647	[162683] CIMAREX ENERGY	WEST SHUGART 31 FEDERAL COM	#001	Gas	Federal	Active	K	31-18S-31E	12530'	
30-015-05653	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#006	Oil	Federal	Active	L	31-18S-31E	3480'	
30-015-05658	[23484] TRIGG FAMILY TRUST	CULWIN QUEEN UNIT	#007	Inj.	Federal	P&A	M	31-18S-31E	3144'	5/10/1995
30-015-40050	[192463] OXY USA WTP LTD PRTRNSP	SAMANTHA 31 6 FEDERAL COM	#001H	Oil	Federal	Active	M	31-18S-31E	8770'	

Form C-108 Item VI - Tabulation of AOR Wells (cont.)

Section 36-18S-30E

API	Current Operator	Well Name	Well No.	Type	Lease	Status	UL	S-T-R	TV Depth	P&A Dt.
30-015-22167	[119305] RAY WESTALL OPERATING, INC.	ARCO HONDO	#001	Oil	State	Active	A	36-18S-30E	3410'	
									8.625" (11" hole) @ 787' w/ 350 sx; 5.5" (7.875" hole) @ 3410 w/ 825 sx	
30-015-04579	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#001	Oil	State	Active	H	36-18S-30E	3410'	
									8.625" (12" hole) @ 787' w/ 50 sx; 4.5" (8" hole) @ 3402' 2/ 220 sx	
30-015-04580	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#005	Oil	State	Active	I	36-18S-30E	3169'	
									8.625" (12" hole) @ 725' w/ 100 sx; 4.5" (8" hole) @ 3164' w/ 100 sx	
30-015-31937	[192463] OXY USA WTP LTD PRTRNSP	OXY BITS STATE	#001	Gas	State	Active	I	36-18S-30E	12280'	
									13.375" (17.5" hole) @ 655' w/ 550 sx - circ.; 9.625" (12.25" hole) @ 3220' w/ 1300 sx - circ.; 5.5" (8.75" hole) @ 12280' w/ 775 sx - TOC @ 8478'	
30-015-04578	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#004	Oil	State	Active	J	36-18S-30E	3145'	
									8.625" (10" hole) @ 744' w/ 50 sx; 4.5" (8" hole) @ 3144' w/ 160 sx	
30-015-26963	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#019	Inj.	State	Active	O	36-18S-30E	3416'	
									8.625" (12.25" hole) @ 640' w/ 350 sx - circ.; 5.5" (7.875" hole) @ 3413' 2/ 1125 sx - circ.	
30-015-04577	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#009	Oil	State	Active	O	36-18S-30E	3193'	
									8.625" (10" hole) @ 700' w/ 25 sx; 4.5" (8" hole) @ 3131' w/ 75 sx	
30-015-04576	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#008	Oil	State	Active	P	36-18S-30E	3115'	
									8.625" (12" hole) @ 690' w/ 20 sx; 4.5" (8" hole) @ 3071' w/ 75 sx	
30-015-26964	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#020	Oil	State	Active	P	36-18S-30E	3405'	
									8.625" (12" hole) @ 426' w/ 480 sx - circ.; 5.5" (8" hole) @ 3400' w/ 600 sx - circ.	

Section 1-19S-30E

API	Current Operator	Well Name	Well No.	Type	Lease	Status	UL	S-T-R	TV Depth	P&A Dt.
30-015-04583	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#012	Oil	Federal	Active	2	1-19S-30E	3320'	
									8.625" (x" hole) @ 760' w/ 75 sx - circ.; 5.5" (x" hole) @ 3317" w/ 150 sx	
30-015-04584	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#013	Oil	Federal	Active	A	1-19S-30E	3339'	
									8.625" (xx" hole) @ 755' w/ 50 sx - circ.; 5.5" (xx" hole) @ 3175' w/ 125 sx - circ.	
30-015-38543	[4378] CHI OPERATING INC	WIZARD FEDERAL COM	#006	Oil	Federal	New	B	1-19S-30E	8688'	
									13.375" (17.5 hole) @ 515' w/ 600 sx - circ.; 8.625" (12.25" hole) @ 2050' w/ 1010 sx - circ.; 7" (8.75" hole) @ 8200' w/ 725 sx - circ.	
30-015-38524	[162683] CIMAREX ENERGY	CRESCENT HALE 1 FEDERAL COM	#002	Oil	Federal	Active	C	1-19S-30E	8702'	
									13.375" (17.5" hole) @ 515' w/ 500 sx - circ.; 9.625" (12.25" hole) @ 4020' w/ 1400 sx - circ.; 5.5" (8.75" hole) @ 13268' w/ 2030 sx - TOC @ 2464'	
30-015-24375	[13837] MACK ENERGY CORP	HALE FEDERAL	#003	Oil	Federal	P&A	E	1-19S-30E	3155'	11/15/1995
									8.625" (10" hole) @ 524' w/ xx sx - circ.; 5.5" (7.875" hole) @ 3088' w/ 425 sx - TOC @ 1300'	
30-015-24082	[13837] MACK ENERGY CORP	HALE FEDERAL	#002	Oil	Federal	P&A	F	1-19S-30E	3397'	11/20/1995
									8.625" (12.5" hole) @ 707' w/ 500 sx - circ.; 4.5" (8" hole) @ 3410' w/ 1900 sx - circ.	

Form C-108 Item VI - Tabulation of AOR Wells (cont.)

30-015-04582	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#016	Oil	Federal	Active	G	1-19S-30E	3330'	8.625" (xx" hole) @ 760' w/ 75 sx; 5.5" (xx" hole) @ 3317' w/ 150 sx
30-015-04586	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#015	Oil	Federal	Active	H	1-19S-30E	3141'	8.625" (xx" hole) @ 750' w/ 50 sx - circ.; 7" (xx" hole) @ 3140' w/ 110 sx - circ.
30-015-31875	[4378] CHI OPERATING INC	WIZARD FEDERAL COM	#002	Gas	Federal	Active	H	1-19S-30E	12300'	13.375" (17.5" hole) @ 450' w/ 804 sx - circ.; 8.625" (11" hole) @ 3200' w/ 1150 sx - circ.; 5.5" (7.875" hole) @ 12300' w/ 750 sx
30-015-31715	[4378] CHI OPERATING INC	WIZARD FEDERAL COM	#001	Gas	Federal	Active	I	1-19S-30E	12260'	13.375" (17.5" hole) @ 490' w/ 127 sx - circ.; 8.625" (11" hole) @ 3244' w/ 170sx - circ.; 5.5" (7.875" hole) @ 12265' w/ 900 sx - TOC @ 5358'
30-015-32210	[4378] CHI OPERATING INC	BENSON DELAWARE UNIT	#030	Inj.	Federal	Active	J	1-19S-30E	5500'	9.625" (12.25" hole) @ 480' w/ 635 sx - circ.; 5.5" (7.875" hole) @ 5500' w/ 1181 sx - circ.
30-015-04585	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#017	Oil	Federal	Active	J	1-19S-30E	3340'	8.625" (xx" hole) @ 760' w/ 50 sx - circ.; 5.5" (xx" hole) @ 3253' w/ 125 sx - circ.
30-015-31796	[4378] CHI OPERATING INC	MUNCHKIN FEDERAL	#003	Oil	Federal	P&A	K	1-19S-30E	6700'	2/6/2002 8.625" (12.25" hole) @ 500' w/ 400 sx - circ.; no pipe (8.75" hole) @ 6700' incomplete, P/A
30-015-24081	[13837] MACK ENERGY CORP	HALE FEDERAL	#001	Oil	Federal	P&A	K	1-19S-30E	3500'	9/8/1999 8.625" (12.25" hole) @ 618' w/ 450 sx - circ.; 5.5" (7.875" hole) @ 3480' w/ 850 sx - circ.
30-015-31778	[4378] CHI OPERATING INC	BENSON DELAWARE UNIT	#002	Inj.	Federal	Active	M	1-19S-30E	5390'	9.625" (12.5" hole) @ 483' w/ 425 sx - circ.; 5.5" (7.875" hole) @ 5350' w/ 407 sx - circ.
30-015-30715	[4378] CHI OPERATING INC	BENSON DELAWARE UNIT	#001	Oil	Federal	Active	N	1-19S-30E	6707'	9.625" (12.25" hole) @ 494' w/ 545 sx - circ.; 5.5" (7.875" hole) @ 3472' w/ 1200 sx - TOC @ 4170'
30-015-38298	[4378] CHI OPERATING INC	BENSON DELAWARE UNIT	#015	Inj.	Federal	Active	N	1-19S-30E	5200'	13.375" (17.5" hole) @ 504' w/ 600 sx - circ.; 8.625" (12.25" hole) @ 2072' w/ 650 sx - circ.; 5.5" (7.875" hole) @ 5200' w/ 665 sx - circ.
30-015-38315	[4378] CHI OPERATING INC	WIZARD FEDERAL COM	#005	Oil	Federal	New	P	1-19S-30E	8767'	13.375" (17.5" hole) @ 538' w/ 500 sx - circ.; 9.625" (12.25" hole) @ 2068' w/ 700 sx - circ.; 7" (8.75" hole) @ 8908' w/ 1000 sx - TOC @ 8814'

Section 12-19S-30E

API	Current Operator	Well Name	Well No.	Type	Lease	Status	UL	S-T-R	TV Depth	P&A Dt.
30-015-31903	[4378] CHI OPERATING INC	LAND RUSH 12 FEDERAL COM	#002	Gas	Federal	Active	A	12-19S-30E	12260'	13.375" (17.5" hole) @ 475' w/ 664 sx - circ.; 8.625" (11" hole) @ 3210' w/ 1823 sx - circ.; 5.5" (7.875" hole) @ 12250' w/ 1504 sx circ.
30-015-40837	[162683] CIMAREX ENERGY	CRESENT HALE 12 FED COM	#003	Oil	Federal	Active	B	12-19S-30E	8747'	13.375" (17.5" hole) @ 447' w/ 900 sx - circ.; 9.625" (12.25" hole) @ 2418' w/ 1100 sx - circ.; 5.5" (8.75" hole) @ 12989' w/ 2700 sx - TOC @ 838'
30-015-33380	[4378] CHI OPERATING INC	BENSON DELAWARE UNIT	#004	Oil	Federal	Active	C	12-19S-30E	5526'	9.625" (12.25" hole) @ 506' w/ 750 sx - circ.; 5.5" (8.75" hole) @ 5526' w/ 1166 sx - circ.
30-015-40054	[162683] CIMAREX ENERGY	CRESCENT HALE 12 FEDERAL	#002	Oil	Federal	Active	C	12-19S-30E	8686'	13.375" (17.5" hole) @ 478' w/ 375 sx - circ.; 9.625" (12.25" hole) @ 4022' w/ 1860 sx - circ.; 5.5" (7.875" hole) @ 8023' w/ 2000 sx - TOC @ 540'

Form C-108 Item VI - Tabulation of AOR Wells (cont.)

Section 6-19S-31E

API	Current Operator	Well Name	Well No.	Type	Lease	Status	UL	S-T-R	TV Depth	P&A Dt.
30-015-31925	[192463] OXY USA WTP LTD PRTRNSP	OXY BOOT JACK FEDERAL	#001	Gas	Federal	P&A	B	6-19S-31E	12340'	11/6/2002
13.375" (17.5" hole) @ 660' w/ 523 sx - circ.; 9.625" (12.25" hole) @ 3635' w/ 1400 sx - circ.; 5.5" (8.75" hole) @ 12340' w/ 1470 sx - TOC @ 4830'										
30-015-05755	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	C	6-19S-31E	3495'	10/29/1962
8.625" @ 600' w/ 400 sx; 5.5" @ 3495' w/ 200 sx										
30-015-41248	[192463] OXY USA WTP LTD PRTRNSP	HACKBERRY 6 FEDERAL COM	#004H	Oil	Federal	New	C	6-19S-31E	13028'	
11.75" (14.75" hole) @ 610' w/ 470 sx; 8.625" (10.625" hole) @ 4200' w/ 1090 sx; 5.5" (7.875" hole) @ 13028' w/ 1270 sx										
30-015-05748	[119305] RAY WESTALL OPERATING, INC.	CULWIN QUEEN UNIT	#014	Oil	Federal	Active	D	6-19S-31E	3151'	
8.625" (12.25" hole) @ 762' w/ 50 sx; 7" (8" hole) @ 3149' w/ 50 sx										
30-015-26353	[13954] MANZANO OIL CORP	ACEITE FEDERAL	#001	Oil	Federal	P&A	F	6-19S-31E	6285'	3/21/2005
8.625" (12.25" hole) @ 650' w/ 400 sx - circ.; 5.5" (7.875" hole) @ 6200' w/ 450 sx										
30-015-05751	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	G	6-19S-31E	0	1/1/1900
TA on April 25, 1939 at TD 850 (possible surface TD) No information										
30-015-05749	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	I	6-19S-31E	0	1/1/1901
Logs on file - TD at 3449' / Perf 3314 to 3416 (4 sets/not cont) - perfd casing indicated										
30-015-05750	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#002	Oil	Federal	P&A	J	6-19S-31E	3490'	6/16/1974
8.625" @ 865' w/ 110 sx; 7" @ 3106' w/ 10 sx (mud); 5.5" @ 3446' w/ 120 sx										
30-015-31020	[6137] DEVON ENERGY PROD. CO., LP	HACKBERRY 6 FEDERAL	#001	Gas	Federal	Active	J	6-19S-31E	12272'	
13.375" (17.5" hole) @ 600' w/ 550 sx - circ.; 8.625" (11" hole) @ 3200' w/ 400 sx - circ.; 5.5" (7.875" hole) @ 12272' w/ 1125 sx circ.										
30-015-05754	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#018	Oil		P&A	L	6-19S-31E	3362'	5/21/1975
8.625" @ 769' w/ 50 sx; 4.5" @ 3197' w/ 160 sx										
30-015-31419	[192463] OXY USA WTP LTD PRTRNSP	HACKBERRY 6 FEDERAL	#002	Gas	Federal	Active	L	6-19S-31E	12300'	
13.375" (17.5" hole) @ 670' w/ 600 sx; 9.625" (12.25" hole) @ 3200' w/ 1130 sx; 5.5" (8.75" hole) @ 12300' w/ 820 sx										
30-015-38483	[6137] DEVON ENERGY PROD. CO., LP	HELIOS 6 FEDERAL COM	#002H	Oil	Federal	Active	O	6-19S-31E	8804'	
13.375" (17.5" hole) @ 654' w/ 735 sx - circ.; 9.625" (12.25" hole) @ 3420' w/ 1700 sx - circ.; 5.5" (8.75" hole) @ 13080' w/ 1425 sx - TOC @ 2302'										
30-015-05753	[214263] PRE-ONGARD WELL OPER.	PRE-ONGARD WELL	#001	Oil	Federal	P&A	O	6-19S-31E	3310'	11/1/1967
8.625" @ 200' w/ 50 sx; 5.5" @ 3299' w/ 150 sx										
30-015-42316	[6137] DEVON ENERGY PROD. CO., LP	HELIOS 6 FEDERAL COM	#004H	Oil	Federal	New	O	6-19S-31E	7856'	
13.375" (17.5" hole) @ 600' w/ 500 sx - circ.; 9.625" (12.25" hole) @ 4100' w/ 1820 sx - circ.; 5.5" (8.75" hole) @ 12600' w/ 2130 sx - TOC @ 4100' (APD)										
30-015-05752	[21986] SWR OPERATING CO	HODGES FEDERAL	#001	Oil	Federal	P&A	P	6-19S-31E	3330'	2/15/2002
8.625" @ 198' w/ 50 sx - circ.; 4.5" @ 3319' w/ 150 sx - circ.										
30-015-41619	[6137] DEVON ENERGY PROD. CO., LP	HELIOS 6 FEDERAL COM	#003H	Oil	Federal	New	P	6-19S-31E	0	
13.375" (17.5" hole) @ 650' w/ 700 sx - circ.; 9.625" (12.25" hole) @ 4000' w/ 1550 sx - circ.; 5.5" (8.75" hole) @ 12441' w/ 775 sx - TOC @ 3500' (APD)										
30-015-38482	[6137] DEVON ENERGY PROD. CO., LP	HELIOS 6 FEDERAL COM	#001H	Oil	Federal	Active	P	6-19S-31E	13325'	
13.375" (17.5" hole) @ 650' w/ 625 sx - circ.; 9.625" (12.25" hole) @ 3153' w/ 1600 sx - circ.; 5.5" (8.75" hole) @ 13235' w/ 2785 sx - circ.										

SUMMARY: 59 wells; all wells penetrate proposed injection interval. 43 Active (or new); 16 P&A.

C-108 ITEM VII – CURRENT & PROPOSED OPERATION

The Culwin Queen Unit Waterflood is operating in the Shugart Yates Seven Rivers Queen Pool.

Wells typically inject at an average rate of 100 bwpd with a maximum of 500 bwpd. Produced water from the project will be reinjected.

The system will be closed utilizing the injection station facility located in the unit.

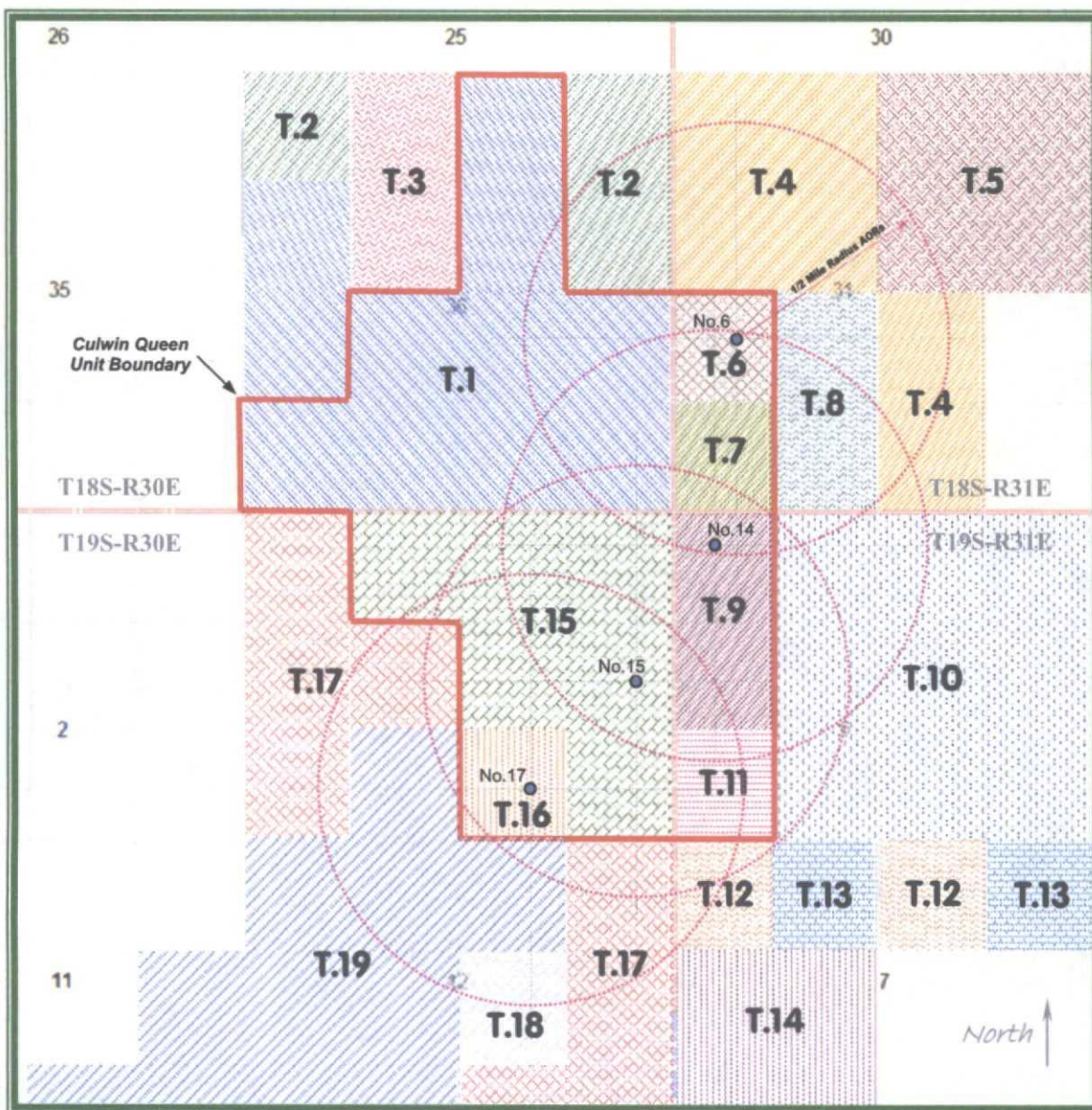
Average daily injection pressure will be 400 psi with a maximum average pressure of 630 psi or, 0.2 psi per foot to the uppermost injection depth.

Routine maintenance will be ongoing and any releases will be reported within 24 hours to OCD on form C-141 pursuant to various portions of 19.15.30 NMAC.

The wells and facility will be available for inspections at any time deemed necessary by OCD.

Culwin Queen Unit Waterflood – Area of Review Leasehold Plat

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



RAY WESTALL OPERATING, INC.

LEGEND

- | | |
|---|---|
| T.1 – E0-7811-0002 – BP America Production Company | T.11 – NMNM-0005709 – Robert G. Payne |
| T.2 – B0-2023-0018 – Occidental Permian, LTD | T.12 – NMNM-0560355 – McBride Oil & Gas Corporation |
| T.3 – B0-1565-0012 – Chevron USA, Inc. | T.13 – NMLC-0065244A – McBride Oil & Gas Corporation |
| T.4 – NMNM-0560352 – Magnum Hunter Resources Corp. | T.14 – NMNM-100561 – Devon Energy Production Company |
| T.5 – NMLC-0062085 – Magnum Hunter Resources Corp. | T.15 – NMLC-0063616 – Crescent Porter Hale Foundation |
| T.6 – NMLC-0062084 – Magnum Hunter Resources Corp. | T.16 – NMNM-129044 – Crescent Porter Hale Foundation |
| T.7 – NMNM-0002460 – Trigg Oil & Gas | T.17 – NMNM-0560353 – Crescent Porter Hale Foundation |
| T.8 – NMNM-099038 – Devon Energy Production Company | T.18 – VO-6639-0000 – Featherstone Development Corp. |
| T.9 – NMLC-0065244 – Featherstone Development Corp. | T.19 – NMNM-129043 – Crescent Porter Hale Foundation |
| T.10 – NMNM-066437 – Manzano, LLC | |

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST**

SURFACE OWNER

U.S. DEPARTMENT OF INTERIOR (FedEx'ed copy)
Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220

OFFSET MINERALS LESSEES and OPERATORS (All Notified via USPS Certified Mail)

State Lease E0-7811-0002

Lessee

- 1 BP AMERICA PRODUCTION COMPANY
P.O. Box 3092
Houston, TX 77253-3092

Operators

- 2 OXY USA WTP LTD
P.O. Box 4294
Houston, TX 77210

RAY WESTALL OPERATING, INC. (Applicant)
P.O. Box 4
Loco Hills, NM

State Lease B0-2023-0018

Lessee

- 3 OCCIDENTAL PERMIAN, LTD.
P.O. Box 4294
Houston, TX 77210

Operators

OXY USA WTP LTD
P.O. Box 4294
Houston, TX 77210

RAY WESTALL OPERATING, INC.
P.O. Box 4
Loco Hills, NM

State Lease B0-1565-0012

Lessee

- 4 CHEVRON, USA
15 Smith Road
Midland, TX 79705

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)**

BLM Leases NMNM-0560352, NMLC-0062085, NMLC-0062084

Lessee

- 5 MAGNUM HUNTER RESOURCES CORP.
600 N. Marienfeld, Suite 600
Midland, TX 79701

Operators

- 6 LINN OPERATING, INC.
600 Travis, Ste.5100
Houston, TX 77002
- 7 CIMAREX ENERGY COMPANY OF COLORADO
202 S. Cheyenne Ave., Ste.1000
Tulsa, OK 74103
- RAY WESTALL OPERATING, INC.
P.O. Box 4
Loco Hills, NM

BLM Lease NMNM-0002460

Lessee

- 8 TRIGG OIL & GAS
P.O. Box 520
Roswell, NM 88202

BLM Lease NMNM-099038

Lessee

- 9 DEVON ENERGY PRODUCTION COMPANY, LP
333 W. Sheridan
OKC, OK 73102

Operators

CIMAREX ENERGY COMPANY OF COLORADO
202 S. Cheyenne Ave., Ste.1000
Tulsa, OK 74103

BLM Lease NMLC-0065244

- 10 FEATHERSTONE DEVELOPMENT CORP.
P.O. Box 429
Roswell, NM 88202

Operator

RAY WESTALL OPERATING, INC.
P.O. Box 4
Loco Hills, NM

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)**

BLM Lease NMNM-066437

Lessee

11 MANZANO, LLC
P.O. Box 2107
Roswell, NM 88202-2107

Operators

OXY USA WTP LTD
P.O. Box 4294
Houston, TX 77210

DEVON ENERGY PRODUCTION COMPANY, LP
333 W. Sheridan
OKC, OK 73102

BLM Lease NMNM-0005709

Lessee

12 ROBERT G. PAYNE
2800 Republic Bank
Dallas, TX 75201

Operator

OXY USA WTP LTD
P.O. Box 4294
Houston, TX 77210

BLM Leases NMNM-0560355, NMLC-0065244A

Lessee

13 McBRIDE OIL & GAS CORP.
P.O. Box 1515
Roswell, NM 88202-1515

Operator

OXY USA WTP LTD
P.O. Box 4294
Houston, TX 77210

BLM Lease NMNM-100561

Lessee

DEVON ENERGY PRODUCTION COMPANY, LP
333 W. Sheridan
OKC, OK 73102

BLM Leases NMLC-0063613, NMNM-129044, NMNM-0560353, NMNM-129043

Lessee

14 CRESCENT PORTER HALE FOUNDATION
220 Bush Street, Ste. 1069
San Francisco, CA 94104-3567

**C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)**

BLM Leases NMLC-0063613, NMNM-129044, NMNM-0560353, NMNM-129043 (cont.)

Operators

RAY WESTALL OPERATING, INC.
P.O. Box 4
Loco Hills, NM

CIMAREX ENERGY COMPANY OF COLORADO
202 S. Cheyenne Ave., Ste.1000
Tulsa, OK 74103

- 15 CHI OPERATING, INC.
P.O. Box 1799
Midland, TX 79702

- 16 MACK ENERGY CORPORATION
P.O. Box 960
Artesia, NM 88211

MANZANO OIL CORPORATION
P.O. Box 2107
Roswell, NM 88202-2107

State Lease V0-6639-0000

Lessee

FEATHERSTONE DEVELOPMENT CORP.
P.O. Box 429
Roswell, NM 88202

Operator

CIMAREX ENERGY COMPANY OF COLORADO
202 S. Cheyenne Ave., Ste.1000
Tulsa, OK 74103

REGULATORY

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed original and copy)
1220 S. St. Francis Dr.
Santa Fe, NM 87505

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed copy)
811 S. First St.
Artesia, NM 88210

NEW MEXICO STATE LAND OFFICE (FedEx'ed copy)
Commissioner of Public Lands
310 Old Santa Fe Trail
Santa Fe, NM

October 13, 2014

NOTIFICATION TO INTERESTED PARTIES
via U.S. Certified Mail

To Whom It May Concern:

Ray Westall Operating, Inc., Loco Hills, New Mexico, has made application to the New Mexico Oil Conservation Division to expand its Culwin Queen Unit Waterflood by converting 4 additional wells to injection. Well Nos. 6, 14, 15 and 17 are the proposed injectors and are located in Section 31 Township 18 South, Range 31 East, Section 6 Township 19 South, Range 31 East and Section 1 Township 19 South, Range 30 East in Eddy County, New Mexico.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on August 22, 2014.

LEGAL NOTICE

Ray Westall, Inc., P.O. Box 4, Loco Hills, NM 88255 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to expand its Culwin Queen Unit Waterflood Project in the Shugart Yates-Seven Rivers-Queen-Grayburg Pool in Eddy County, New Mexico. The proposed expansion includes 4 wells; Culwin Queen Well Nos. 6, 14, 15 and 17; API Nos. 30-015-05653, 05748, 04586 and 04585, respectively. The project and wells are located in Section 31, Township 18 South, Range 31 (No. 6); Section 6, Township 19 South, Range 31 East (No. 14) and, Section 1, Township 19 South, Range 30 (Nos. 15 & 17). Produced water from the lease (with compatible makeup water as/if necessary) will be reinjected through open hole and perforated intervals between a maximum top of 3080 feet and a maximum depth of 3170 feet. Approximate injection pressure will be 620 psi (or .2 psi/foot to top of interval) with average rates of 80 to 150 bwpd. (Higher rates may be obtained up to the maximum allowed pressure.)

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

You have been identified as a party who may be interested as an offset lessee or operator.

You are entitled to a full copy of the application. A full copy in PDF format on a mini-CD will be arriving within a few days of this notice. If you do not receive it, please call or email SOS Consulting, LLC at 903-488-9850, info@sosconsulting.us, and a copy will be expedited to you and may also be sent via email if preferred.

Thank you for your attention in this matter.

Best regards,

A handwritten signature in blue ink, appearing to read "Ben Stone".

Ben Stone, SOS Consulting, LLC
Agent for Ray Westall Operating, Inc.

Cc: Application File

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

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 202 S. Cheyenne Ave., Ste. 1000
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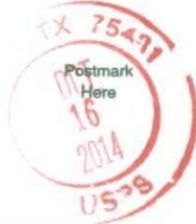
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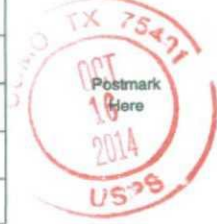
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MANZANO, LLC
 P.O. Box 2107
 Roswell, NM 88202-2107

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 San Francisco, CA 94104-3567

PS Form 3849

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Restricted Delivery Fee (Endorsement Required)		
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CHI OPERATING, INC.
 P.O. Box 1799
 Midland, TX 79702


PS Form 3849

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Total Postage & Fees	\$6.49	

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MACK ENERGY CORPORATION
 P.O. Box 960
 Artesia, NM 88211

PS Form 3849

Affidavit of Publication

No. 23146

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 August 22, 2014

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Subscribed and sworn before me this

22nd day of August 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

Ray Westall, Inc., P.O. Box 4, Loco Hills, NM 88255 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to expand its Culwin Queen Unit Waterflood Project in the Shugart Yates-Seven Rivers-Queen-Grayburg Pool in Eddy County, New Mexico. The proposed expansion includes 4 wells; Culwin Queen Well Nos. 6, 14, 15 and 17; API Nos. 30-015-05653, 05748, 04586 and 04585, respectively. The project and wells are located in Section 31, Township 18 South, Range 31 (No. 6); Section 6, Township 19 South, Range 31 East (No. 14) and, Section 1, Township 19 South, Range 30 (Nos. 15 & 17). Produced water from the lease (with compatible makeup water as/if necessary) will be reinjected through open hole and perforated intervals between a maximum top of 3080 feet and a maximum depth of 3170 feet. Approximate injection pressure will be 620 psi (or .2 psi/foot to top of interval) with average rates of 80 to 150 bwpd. (Higher rates may be obtained up to the maximum allowed pressure.)

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., August 22, 2014 Legal No. 23146.



October 16, 2014

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Attn: Ms. Jami Bailey, Director

Re: Application of Ray Westall Operating, Inc. for Expansion of its Culwin Queen Unit Waterflood Project by converting four (4) wells located in various Sections in Townships 18 South, Range 31 East, 19 South and 31 East and 19 South and 30 East, NMPM, Eddy County, New Mexico.

Dear Ms. Bailey,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced waterflood expansion of the Culwin Queen Unit Waterflood Project.

The subject waterflood project was originally permitted in 1964 by Division Order R-2846 and expanded in 2006 by WFX-817. The project is one of many long term projects in the Shugart Yates Seven Rivers Queen Grayburg Pool. In fact, there are currently over 300 active oil wells operating in the pool and benefiting from more than 40 injectors as part of several large EOR projects. Waterflooding will continue to be an enhanced recovery strategy in the area for decades.

Ray Westall Operating seeks to optimize efficiency, both economically and operationally, of its operations. In addition to enhanced recovery potential, only lease produced water will be reinjected thereby eliminating the need to remove and otherwise dispose of produced water. Approval of this application is consistent with these goals as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran in the Friday, August 22, 2014 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. The application also includes wellbore schematics, area of review maps and other required information for a complete Form C-108. The wells are on unitized acreage on state and federal lands and a copy of this application has been submitted to the State Land Office as well as the Bureau of Land Management, Carlsbad Field Office.

I respectfully request that the approval of this waterflood expansion proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

Ben Stone, Partner
SOS Consulting, LLC
Agent for Ray Westall Operating, Inc.

Cc: Application attachment and file



C-108 Review Checklist: Received 10/21/15 Add. Request: — Reply Date: — Suspended: — [Ver 15]

ORDER TYPE: WFX / PMX / SWD Number: 941 Order Date: 02/05/15 Legacy Permits/Orders: R-2846 / C#3155

Well No. 6 Well Name(s): Culwin Queen Unit WFX-817
WFX-460 - No order in Imaging

API: 30-0 15-05653 Spud Date: 09/28/1959 New or Old: Old (UIC Class II Primacy 03/07/1982)

Footages 1980 FSL / 592 FWL Lot — or Unit L Sec 31 Tsp 18S Rge 31E County Eddy

General Location: 7 miles SW of Maljamar Pool: Shugart; Yates-7R-QU-4B Pool No.: 56439

BLM 100K Map: Hobbs Operator: Ray Westall Operating, Inc. OGRID: 119305 Contact: Ben Stone / SOS

COMPLIANCE RULE 5.9: Total Wells: 92 Inactive: 0 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Yes Date: 02/05/15

WELL FILE REVIEWED ☒ Current Status: Active producer

WELL DIAGRAMS: NEW: Proposed ☐ or **RE-ENTER:** Before Conv. ☒ After Conv. ☒ Logs in Imaging: None

Planned Rehab Work to Well: None

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface		11 / 8 5/8	0 to 777		75 7" RMP	Surface/calc.
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod		7 7/8 / 5 1/2	0 to 3479	None	250 5" Plug	M2400 calc.
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod		—	—	—	—	—
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner		—	—	—	—	—
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner		—	—	—	—	—
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERF		7 7/8 / 5 1/2	3315 to 3423 ^[1959]	Inj Length		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Tansill	
Confining Unit: Litho. Struc. Por.		Yates-SR	
Proposed Inj Interval TOP:	Unitized	Queen fm	
Proposed Inj Interval BOTTOM:	formation	fm	
Confining Unit: Litho. Struc. Por.		Grayberg fm	
Adjacent Unit: Litho. Struc. Por.		San Andres ls	

Completion/Operation Details:	
Drilled TD	3480 PBDT 3452
NEW TD	NEW PBDT
NEW Open Hole	NEW Perfs
Tubing Size	2 3/8 in. Inter Coated? Yes
Proposed Packer Depth	23215 ft
Min. Packer Depth	3215 (100-ft limit)
Proposed Max. Surface Press.	663 psi
Admin. Inj. Press.	663 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information (Call 4 wells)

POTASH: R-111-P No Noticed? NA BLM Sec Ord NO WIPP NO Noticed? NA Salt/Salado T: — B: — NW: Cliff House fm NA

FRESH WATER: for all 4 Basin Yes 15417 #4436 600 ft Max Depth

NMOSE Basin: Capitan **CAPITAN REEF:** thru adj NA **No. Wells within 1-Mile Radius?** 0 **FW Analysis** NA

Disposal Fluid: Formation Source(s) Shugart produced water Analysis? Provided On Lease ☒ **Operator Only** ☐ or **Commercial** ☐

Disposal Int: Inject Rate (Avg/Max BWPD): 100/500 Protectable Waters? No Source: Producer System: Closed ☒ or **Open** ☐

HC Potential: Producing Interval? Yes Formerly Producing? — Method: water flood expansion Logs/DST/P&A/Other — **2-Mile Radius Pool Map** ☐

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 59 Horizontals? 0

Penetrating Wells: No. Active Wells 43 Num Repairs? 0 on which well(s)? — Diagrams? No

Penetrating Wells: No. P&A Wells 16 Num Repairs? 0 on which well(s)? — Diagrams? 16

NOTICE: Newspaper Date 08/22/14 Mineral Owner BLM Surface Owner BLM N. Date 10/16/2014

RULE 26.7(A): Identified Tracts? Yes Affected Persons: 16 listed - Leases/operators N. Date 10/16/2014

Order Conditions: Issues: None

Add Order Cond: No special requirements



C-108 Review Checklist: Area Order

Supplemental Checklist for Multiple Well Application

ORDER TYPE: WFX PMX Number: 941 SUPPLEMENTAL PAGE 2 of 3

Relevant Hearing Order(s): R-2846 / WFX-817

MULTIPLE WELL APPLICATION: 2 of 4 Well No. 14 Well Name(s): Culwin Queen Unit
API: 30-0 15-05748 Spud Date: 11/27/1959 New or Old: Old (UIC Class II Primacy 03/07/1982)
Footages 330 FNL / 330 FWL Lot 4 or Unit D Sec 6 Tsp 19S Rge 31E County Eddy
WELL FILE REVIEWED ☒ Current Status: Active producer Lot 4
WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☐ Logs in Imaging: GB/Neutron
Planned Rehab Work to Well: (former Federal "B" No. 1 / Featherstone)

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface	<u>12 1/4 / 8 5/8</u>	<u>0 to 762</u>	<u>50</u>	<u>7 ft (Circ to top)</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	<u>8 / 7</u>	<u>0 to 3149</u>	<u>50</u>	<u>5 ft Calc. 2721 / 2500</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERP	<u>8 / 7</u>	<u>3119 - 3143</u>	<u>Inj Length</u>	<u>Hydrologic Information and AOR Well Summary on Coversheet</u>

Completion/Operation Details: Drilled TD 3151 PBTD 3151 NEW TD — NEW PBTD —
NEW Open Hole ☒ or NEW Perfs ☒ Tubing Size 2 3/8 in. Coated? Y Prop. Packer Depth ≥ 3019 ft Min. Depth 3019 (100-ft limit)
Proposed Max. Surface Press. 624 psi Admin. Inj. Press. 624 (0.2 psi per ft) ANY AREA IPI APPROVAL: None
Specific Requirement(s) for Well: None

MULTIPLE WELL APPLICATION: 3 of 4 Well No. 15 Well Name(s): Culwin Queen Unit
API: 30-0 15-04586 Spud Date: 06/14/1959 New or Old: Old (UIC Class II Primacy 03/07/1982)
Footages 1980 FNL / 660 FEL Lot — or Unit H Sec 1 Tsp 19S Rge 30E County Eddy
WELL FILE REVIEWED ☒ Current Status: Active producer (also Federal "E" No. 3)
WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☒ Logs in Imaging: None
Planned Rehab Work to Well: None specified - adding tubing / convert

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface	<u>12 1/4 / 8 5/8</u>	<u>0 to 749</u>	<u>50</u>	<u>Circulated to Surf.</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	<u>8 / 7</u>	<u>0 to 3164</u>	<u>110</u>	<u>Circulated to Surf.</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERP	<u>8 / 7</u>	<u>3090 - 3118</u>	<u>Inj Length</u>	<u>Hydrologic Information and AOR Well Summary on Coversheet</u>

Completion/Operation Details: Drilled TD 3141 PBTD — NEW TD — NEW PBTD —
NEW Open Hole ☒ or NEW Perfs ☒ Tubing Size 2 3/8 in. Coated? Y Prop. Packer Depth ≥ 2990 ft Min. Depth 2990 (100-ft limit)
Proposed Max. Surface Press. 618 psi Admin. Inj. Press. 618 (0.2 psi per ft) ANY AREA IPI APPROVAL: None
Specific Requirement(s) for Well: None



C-108 Review Checklist: Area Order

Supplemental Checklist for Multiple Well Application

ORDER TYPE: WFX PMX Number: 941 SUPPLEMENTAL PAGE 3 of 3

Relevant Hearing Order(s): R-2846 / WFX-817

MULTIPLE WELL APPLICATION: 4 of 4 Well No. 17 Well Name(s): Culwin Queen Unit
API : 30-0 15-04585 Spud Date: 03/24/1989 New or Old: Old (UIC Class II Primacy 03/07/1982)
Footages 1980 FSL / 1980 FEL Lot 5 or Unit — Sec 1 Tsp 19S Rge 30E County Eddy
WELL FILE REVIEWED ☒ Current Status: Active producer - (former Federal "E" No. 2) - approved under
WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☒ Logs in Imaging: None R-2846
Planned Rehab Work to Well: [Injection until 2002 → producer]

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Surface	<u>11 / 8 5/8</u>	<u>0 to 760</u>	<u>50</u>	<u>Circulated to surf.</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> Interm/Prod	<u>7 7/8 / 5 1/2</u>	<u>0 to 3253</u>	<u>None</u>	<u>Circulated to surf.</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/> OH / PERF	<u>7 7/8 / 5 1/2</u>	<u>3080 to 3112</u>	<u>Inj Length</u>	<u>Hydrologic Information and AOR Well Summary on Coversheet</u>

Completion/Operation Details: Drilled TD 3340 PBDT 3130 NEW TD — NEW PBDT —
NEW Open Hole ☒ or NEW Perfs ☐ Tubing Size 2 3/8 in. Coated? Yes Prop. Packer Depth 32980 ft Min. Depth 2980 (100-ft limit)
Proposed Max. Surface Press. 616 psi Admin. Inj. Press. 616 (0.2 psi per ft) ANY AREA IPI APPROVAL: None
Specific Requirement(s) for Well: None

MULTIPLE WELL APPLICATION: — of — Well No. — Well Name(s): —
API : 30-0 — Spud Date: — New or Old: — (UIC Class II Primacy 03/07/1982)
Footages — Lot — or Unit — Sec — Tsp — Rge — County —
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 <input type="checkbox"/> or Existing <input type="checkbox"/> Surface	<u>—</u>	<u>—</u>	<u>Stage Tool</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Interm/Prod	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Prod/Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> Liner	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Planned <input type="checkbox"/> or Existing <input type="checkbox"/> OH / PERF	<u>—</u>	<u>—</u>	<u>Inj Length</u>	<u>Hydrologic Information and AOR Well Summary on Coversheet</u>

Completion/Operation Details: Drilled TD — PBDT — NEW TD — NEW PBDT —
NEW Open Hole ☐ or NEW Perfs ☐ Tubing Size — in. Coated? — Prop. Packer Depth — ft Min. Depth — (100-ft limit)
Proposed Max. Surface Press. — psi Admin. Inj. Press. — (0.2 psi per ft) ANY AREA IPI APPROVAL: —
Specific Requirement(s) for Well: —