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ATTORNEY AT LAW

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jamesbruc@aol.com

Case 15235

October 21, 2014

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

Dear David:

Enclosed is an application for a pressure maintenance project, filed on behalf of Caza Operating, LLC. Please set this matter for the November 20, 2014 Examiner hearing.

Very truly yours,

James Bruce

Attorney for Caza Operating, LLC

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION OF CAZA OPERATING, LLC FOR APPROVAL OF A LEASE PRESSURE MAINTENANCE PROJECT, EDDY COUNTY, NEW MEXICO.

Case No. 15235

APPLICATION

Caza Operating, LLC applies for an order approving a lease pressure maintenance project, and in support thereof, states:

1. Applicant is the operator of State Lease VB-1139, which covers the N/2 and SW/4 of Section 27, Township 23 South, Range 27 East, N.M.P.M., Eddy County, New Mexico.

2. Applicant seeks approval to inject produced water into the upper Delaware formation at depths of 3315-3337 feet subsurface in the Forehand Ranch 27 State Well No. 4, located 1980 feet from the north line and 660 feet from the east line (the SE/4NE/4) of Section 27, Township 23 South, Range 27 East, NMPM, Eddy County, New Mexico. The expected maximum injection rate is 2880 BWPD, and the maximum injection pressure is 663 psi.

3. Injection will provide pressure maintenance support for the following existing or proposed wells, operated by applicant:

   (a) Forehand Ranch 27 State Com. Well No. 1H (API No. 3001539844);

   (b) Forehand Ranch 27 State Com. Well No. 2H (API No. 3001539955);

   (c) Forehand Ranch 27 State Well No. 3 (API No. 3001541531); and

   (d) Forehand Ranch 27 State Well No. 5 (API No. 3001541530).

4. A copy of the C-108 for the project is attached hereto as Exhibit A.

5. The purpose granting of this application will prevent waste and protect correlative rights.

WHEREFORE, applicant requests that, after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

James Bruce
Post Office Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043

Attorney for BOPCO, L.P.

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery ___XXX___ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes ____XXX__ No

II. OPERATOR: Caza Operating, LLC

ADDRESS: 200 N. Loraine, Suite 1550, Midland, Texas 79701

CONTACT PARTY: Richard Wright PHONE: 432-682-7424

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 ___XX___ 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:

EXHIBIT A

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 fresh water from two or more fresh water 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: Richard R. Albro TITLE: Vice President Land

SIGNATURE: _____ DATE: 10/6/2014

E-MAIL ADDRESS: ralbro@cazapetro.com

* 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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

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

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.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 1

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): III.

EXHIBIT: III. A. - WELL LOCATION PLAT

EXHIBIT: III. A. - INJECTION WELL DATA SHEET (side 1)

EXHIBIT: III. A. - WELLBORE DIAGRAM

EXHIBIT: III. A. & III. B. - INJECTION WELL DATA SHEET (side 2)

EXHIBIT: III. A. - CEMENT WORKSHEET

EXHIBIT: III. A. - PROPOSED CASING

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, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name

Property Code	Property Name	Well Number
	FOREHAND 27 STATE	4
OGRID No.	Operator Name	Elevation
	CAZA OPERATING, LLC	3147'

Surface Location

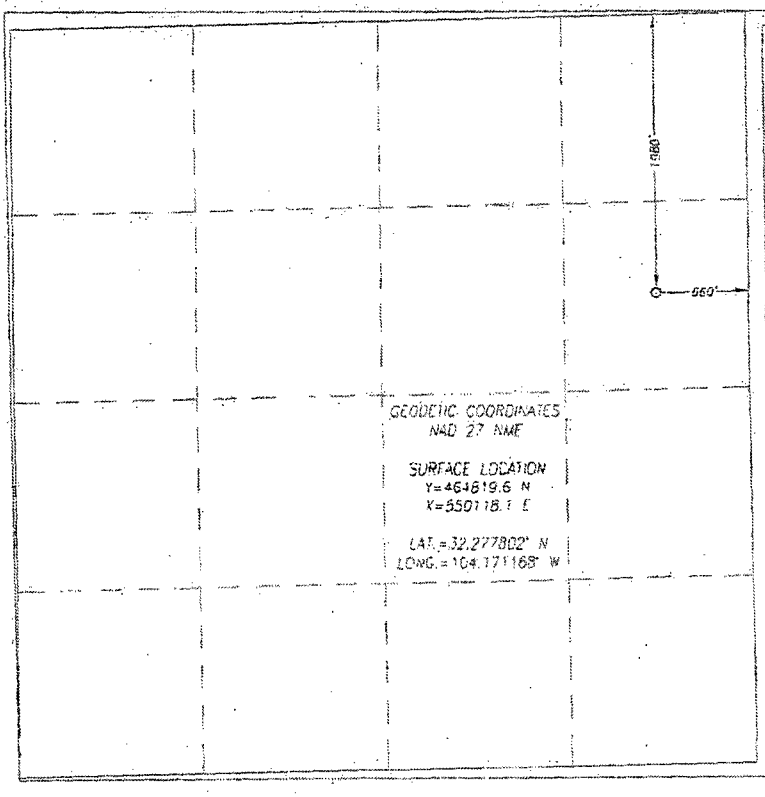
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	27	23-S	27-E		1980	NORTH	660	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

E-mail Address

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.

MARCH 13, 2014

Date of Survey
Signature & Seal of Professional Surveyor:

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

ACS WSC W.O. 14.11.0144

EXHIBIT III. A.

Side I

INJECTION WELL DATA SHEET

OPERATOR: Caza Operating, LLC

WELL NAME & NUMBER: Forehand Ranch 27 St # 4

WELL LOCATION:	1980 FNL & 660 FEL	H	27	23 S	27 E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8" 48 # H-40

Cemented with: 415 "C" sx. *or* 665 ft^3

Top of Cement: Surface Method Determined: Visual

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 8-5/8" 24 lb J-55

Cemented with: 795 "C" sx. *or* 1486 ft^3

Top of Cement: Surface Method Determined: Visual

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2

Cemented with: 650 sx. *or* 858 ft^3

Top of Cement: 1592 ft Method Determined: CBL

Total Depth: 4710

Injection Interval

3315 feet to 3337 feet

(Perforated or Open Hole; indicate which)

EXHIBIT III. A.

Forehand 27 State # 4

Location: *Section 22_T23S_R27E_Eddy County, New Mexico*

1980 FNL & 660 FEL API # 30-015-42309

Caza

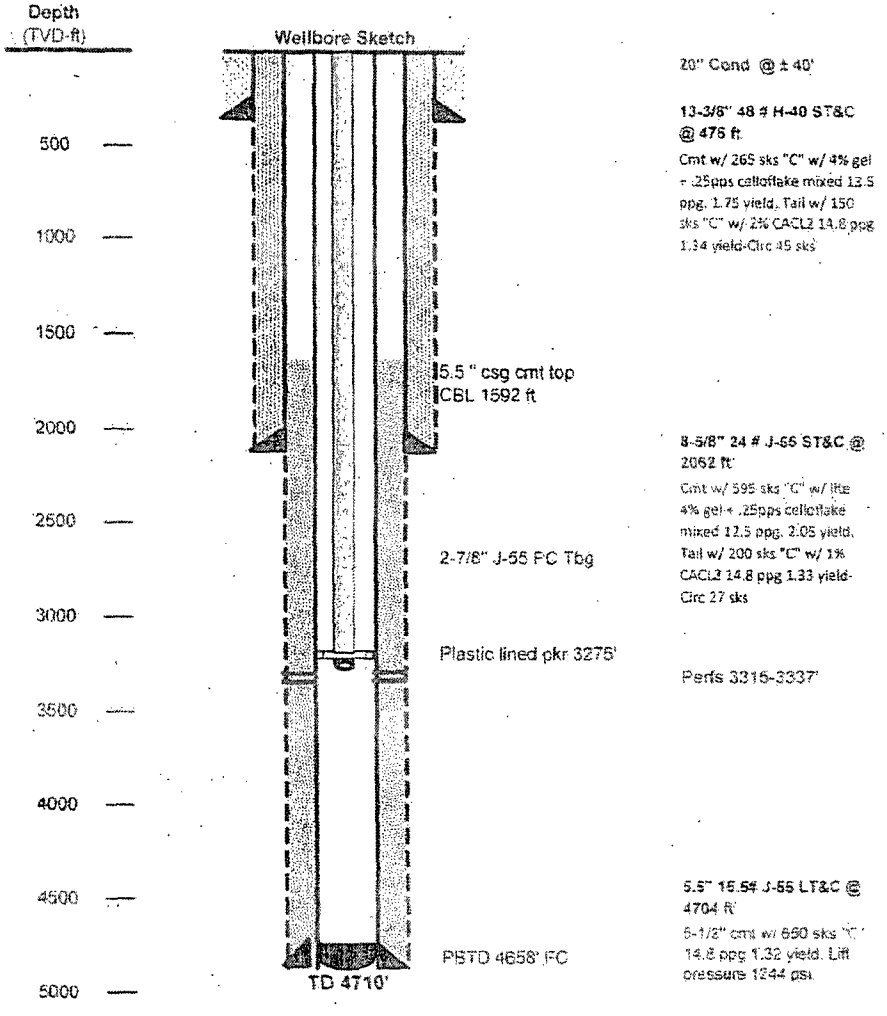


EXHIBIT III. A.

Side 2

EXHIBIT III. A.

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" 6.5# J-55 Lining Material: Plastic

Type of Packer: Arrow Set 1X plastic lined

Packer Setting Depth: 3275 ft

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

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

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

2. Name of the Injection Formation: Delaware

3. Name of Field or Pool (if applicable): Cass Draw; Delaware 10410

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. Not Perforated in different interval

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Underlying Potential in Brushy Canyon and Bone Springs

NABORS COMPLETION & PRODUCTION SERVICES CO.

CEMENT TREATMENT REPORT

Customer:	CAZA OIL & GAS	Date:	6/12/2014	Invoice #:		Serv. Supv:	CAMERON CRAIG
Lease:	FOREHAND	Well Name:	FOREHAND 17 ST #15 H DELAWARE			County:	EDDY
District:	MIDLAND	Rig:	SOVEREIGN	Type of Job:		13 3/8 SURFACE	

Plugs	Casing Hardware	Physical Slurry Properties

Materials Furnished by Nabors		Sacks of Cement	Slurry Wt PPG	Slurry Yield Cu/Ft	Water GPS	Slurry Bbls	Mix Water Bbls
Spacer							
LEAD	CLASS C+4%Bentonite+2%CaCl2+.25pps Sspr/Flake	285	13.5	1.74	9.1	82	58
TAIL	CLASS C+2%CaCl2	150	14.8	1.34	6.33	36	23

HOLE			TUBING - CASING - DRILL PIPE						COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT	TYPE	DEPTH	GRADE		SHOE	FLOAT	STAGE
17 1/2		475	13.35	48	C&C	475	J-55		43	435	

LAST CASING			PKR / CMT RET / LINER PKR		PERF DEPTH		TOP CONN		WELL FLUID	
SIZE	WT	DEPTH	BRAND / TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT
							13 3/8	SEC	S	WATER/MUD

DISPL VOLUME		DISPL FLUID		CAL PSI			MAX TUBING PRES		MAX CSG PRESSURE		MIX
VOLUME	UOM	TYPE	WGT	BMP PLUG			RATED	WORKING	RATED	WORKING	WATER
68	BBL	H2O	8.34	NA					1730	1384	68

Time	Rate	Pressure	Bbls Pumped	Fluid Type	Time Left Yard: 1700 Time Left Loc	Time Arrived Loc: 2000 Time Arrived Yard
2000	0	0	0	NA	Arrive, Test H2O, Chlorides 300, PH 7, Solubles 10	
2010	0	0	0	NA	Hazard Assessment	
2020	0	0	0	NA	Spot Equipment, Rig Up	
0000	0	0	0	NA	Safety Meeting	
0010	0	0	0	NA	Rig up Rig Floor	
0021	3		0	H2O	Test Lines	
0023			10	H2O	Space	
0038			82	CMT	Lead @ 13.5ppg weighed @ 13.5ppg	
0040			36	CMT	Tail @ 14.8ppg weighed @ 14.8ppg	
0051	0	0	0	NA	Shut Down, Release Plug	
0054			56	H2O	Displacement	
0104			10	H2O	Slow rate	
0109	0		68	H2O	Land Plug	
0114	0	0	0	NA	Check Float	
0135	0	0	0	NA	Safety Meeting	
0135	0	0	0	NA	Rig down	
0200	0	0	0	NA	Depart	
					Cement Returned 14 bbls=45 sacks	

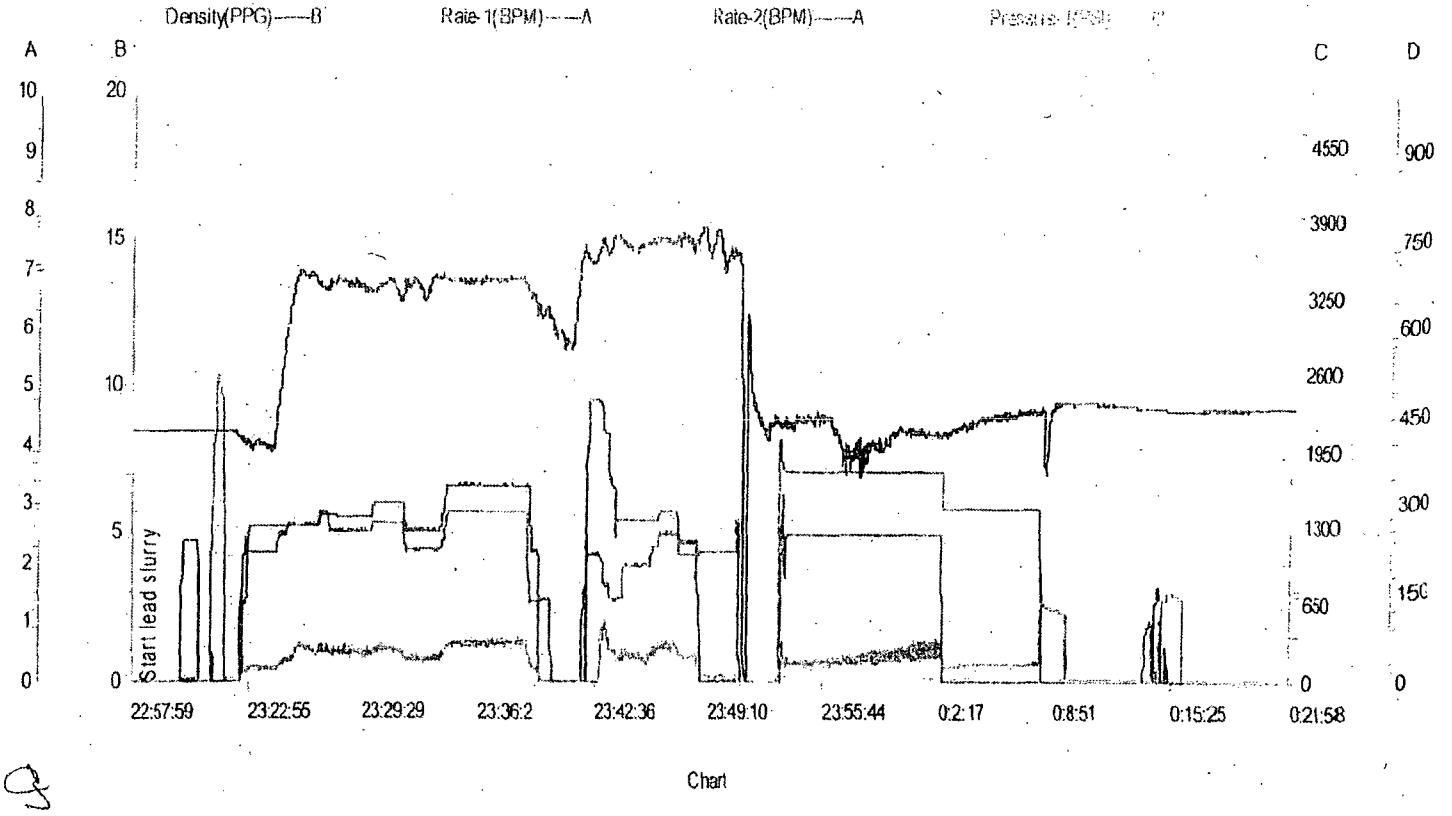
Bumped Plug	Final Lift Pressure	Floats Held	PSI Left on Casing	Cement to Surface	
NA	140	NA	0	14	BBL

Service Supervisor

EXHIBIT III. A.

EXHIBIT III. A.

Date:6-12-14 Well Name:FOREHAND STATE27 #4 DELAWARE Location:EDDY Country:USA Operator:ERIC BROWN Supervisor:CAMERON CRAIG Type of Job:SURF. Contact Address: Comment:



NABORS COMPLETION & PRODUCTION SERVICES CO.

CEMENT TREATMENT REPORT

Customer:	CAZA	Date:	8/23/2014	Invoice #:	#REF!	Serv. Supv:	CARLOS A PALOMO
Lease	FOREHAND 27	Well Name:	FOREHAND 27 STATE COM 4 DELAWARE			County:	EDDY
District:	MIDLAND	Rig:	SOVEREIGN	Type of Job:	5 1/2 LONG STRING		

Plugs	Casing Hardware	Physical Slurry Properties					
5 1/2		Sacks of Cement	Slurry Wt PPG	Slurry Yield Cu/Ft	Water GPS	Slurry Bbls	Mix Water Bbls
Materials Furnished by Superior							
Spacer							
LEAD						0	0
TAIL	C + 25 PPS SUPER FLAKE	850	14.8	1.32	6.28	152.8068	97.190476

HOLE			TUBING - CASING - DRILL PIPE						COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	SIZE	WGT	TYPE	DEPTH	GRADE		SHOE	FLOAT	STAGE
7 7/8	0	4719	5.5	15.5	CSG	4707.38	J-55		44.5	4662.38	

LAST CASING			PKR / CMT RET / LINER PKR		PERF DEPTH		TOP CONN		WELL FLUID	
SIZE	WT	DEPTH	BRAND / TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT
							5 1/2	8 RD	WBM	9

DISPL VOLUME		DISPL FLUID		CAL PSI		MAX TUBING PRES	MAX CSG PRESSURE	MIX
111	BBLS	WATER	8.43	1563			4810	3848	97.1905

Time	Rate	Pressure	Bbls Pumped	Fluid Type				
					Time Left Yard	15:30	Time Left Loc	22:30
					Time Arrived Loc	18:15	Time Arrived Yard	0:00
					ALL TIMES CENTRAL			
1445					PRE CONVOY MEETING			
1815					ON LOCATION			
1845					TEST WATER PH-7, CHL<1500, S< 200			
1900					PUMP TEST			
1910					HAZARD ASSESMENT			
1955	2	70	2	WATER	LOAD LINES			
2001		4200			PRESSURE TEST			
2004	5	129	20		SPACER AHEAD			
2008				SLURRY	BATCH UP SLURRY			
2012	6	337	152	SLURRY	TAIL SLURRY @ 14.8#/GAL VERIFIED WITH MUD SCALES			
2049					SHUTDOWN/DROP PLUG			
2052	7	255	100	WATER	DISPLACEMENT			
2118	3	1243	11	WATER	SLOW RATE			
2120		2010			BUMP PLUG			
2125					FLOAT HELD 1/2 BBL RETURNED			
2130					JOB COMPLETE NCPS RELEASED			
					THANK YOU FROM CARLOS AND CREW			
					NO CEMENT CIRCULATED TO SURFACE			

Bumped Plug	Final Lift Pressure	Floats Held	PSI Left on Casing	Cement to Surface	
2010	1380	YES	0	0	Bbls

Service Supervisor

EXHIBIT III. A.

EXHIBIT III. A.

Well name: **Forehand 27 State # 4**

Operator: **Caza Operating, LLC**

String type: **Surface Casing**

Design parameters:			Minimum design factors:		Environment:		
Collapse			Collapse:		H2S considered?	No	
Mud weight:	8.50	ppg	DF	1.125	Surface temperature:	75.00	°F
Design is based on evacuated pipe.					Bottom hole temperature:	78	°F
					Temperature gradient:	0.65	°F/100ft
					Minimum section length:	50	ft
			Burst:		Minimum Drift:	12.250	in
			DF	1.10	Cement top:	Surface	
Burst:							
Max anticipated surface pressure:	236.70	psi					
Internal gradient:	0.12	psi/ft	Tension:		Non-directional string.		
Calculated BHP	292.70	psi	8 Rd STC:	1.80	(J)		
			8 Rd LTC:	1.80	(J)		
No backup mud specified.			Buttress:	1.80	(J)		
			Premium:	1.50	(J)		
			Body yield:	1.60	(B)		
					Re subsequent strings:		
					Next setting depth:	2,050	ft
			Tension is based on buoyed weight.		Next mud weight:	10.000	ppg
			Neutral pt:	394.02 ft	Next setting BHP:	1,065	psi
					Fracture mud wt:	11.500	ppg
					Fracture depth:	500	ft
					Injection pressure	299	psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)
1	450	13.375	48.00	H-40	ST&C	450	450	12.59

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	199	740	3.724	293	1730	5.91	18.9	322	17.03 J

Date: February 26,2014

R.Wright

Midland, Texas

Remarks:

Collapse is based on a vertical depth of 450 ft, a mud weight of 8.5 ppg. The casing is considered to be evacuated for collapse purposes.

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

EXHIBIT III. A.

Well name: **Forehand 27 State # 4**

Operator: **Caza Operating, LLC**

String type: **Intermediate Casing**

Design parameters:			Minimum design factors:		Environment:		
Collapse			**Collapse:**		H2S considered?	No	
Mud weight:	10.00	ppg	DF	1.125	Surface temperature:	75.00	°F
Design is based on evacuated pipe.					BHT	88	°F
					Temp Gradient	0.65	°F/100ft
					Min Sec Length	450	ft
			Burst:				
			DF	1.00	Cement top:	Surface	
Burst							
Max anticipated surface pressure:	978.68	psi					
Internal gradient:	0.12	psi/ft	**Tension:**		Non-directional string.		
Calculated BHP	1,224.68	psi	8 Rd STC:	1.80	(J)		
			8 Rd LTC:	1.80	(J)		
No backup mud specified.			Buttress:	1.60	(J)		
			Premium:	1.50	(J)		
			Body yield:	1.60	(B) **Re subsequent strings:**		
					Next setting depth:	4,000	ft
			Tension is based on buoyed weight.		Next mud weight:	8.500	ppg
			Neutral pt: 1,742.30 ft		Next setting BHP:	1,766	psi
					Fracture mud wt:	11.500	ppg
					Fracture depth:	2,050	ft
					Injection pressure	1,225	psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)
1	2050	8.625	24.00	J-55	ST&C	2050	2050	7.972

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1065	1370	1.286	1225	2950	2.41	41.8	244	5.84 J

R.Wright

Date: February 26,2014
Midland, Texas

Remarks:

Collapse is based on a vertical depth of 2050 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

EXHIBIT III. A.

Well name: **Forehand 27 State # 4**

Operator: **Caza Operating, LLC**

String type: **Production Csg: Frac**

Design parameters:			Minimum design factors:			Environment:		
Collapse			**Collapse:**			H2S considered?	No	
Mud weight:	12.40	ppg	DF	1.200		Surface temperature:	75.00	°F
Design is based on evacuated pipe.						Bottom hole temperature:	110	°F
						Temperature gradient:	0.75	°F/100ft
						Minimum section length:	1,000	ft
			Burst:			Minimum Drift:	4.750	in
			DF	1.20		Cement top:	800	ft
Burst								
Max anticipated surface pressure:	3,027.53	psi						
Internal gradient:	0.00	psi/ft	**Tension:**			Non-directional string.		
Calculated BHP	3,027.53	psi	8 Rd STC:	1.80	(J)			
			8 Rd LTC:	1.80	(J)			
No backup mud specified.			Buttress:	1.60	(J)			
			Premium:	1.50	(J)			
			Body yield:	1.60	(B)			

Tension is based on buoyed weight.
Neutral pt: 3,818.29 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)
1	4700	5.5	15.50	J-55	LT&C	4700	4700	4.825

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	3028	4040	1.334	2930	4810	1.64	59.2	217	3.67 J

Date: July 24,2014
Richard L. Wright — Midland, Texas

Remarks:
Collapse is based on a vertical depth of 4700 ft, a mud weight of 12.4 ppg. The casing is considered to be evacuated for collapse purposes.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

EXHIBIT III. A.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 2

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): V.

EXHIBIT: V. A. - LEASE MAP

EXHIBIT: V. B. - GEOLOGICAL MAPS

EXHIBIT:

EXHIBIT:

EXHIBIT:

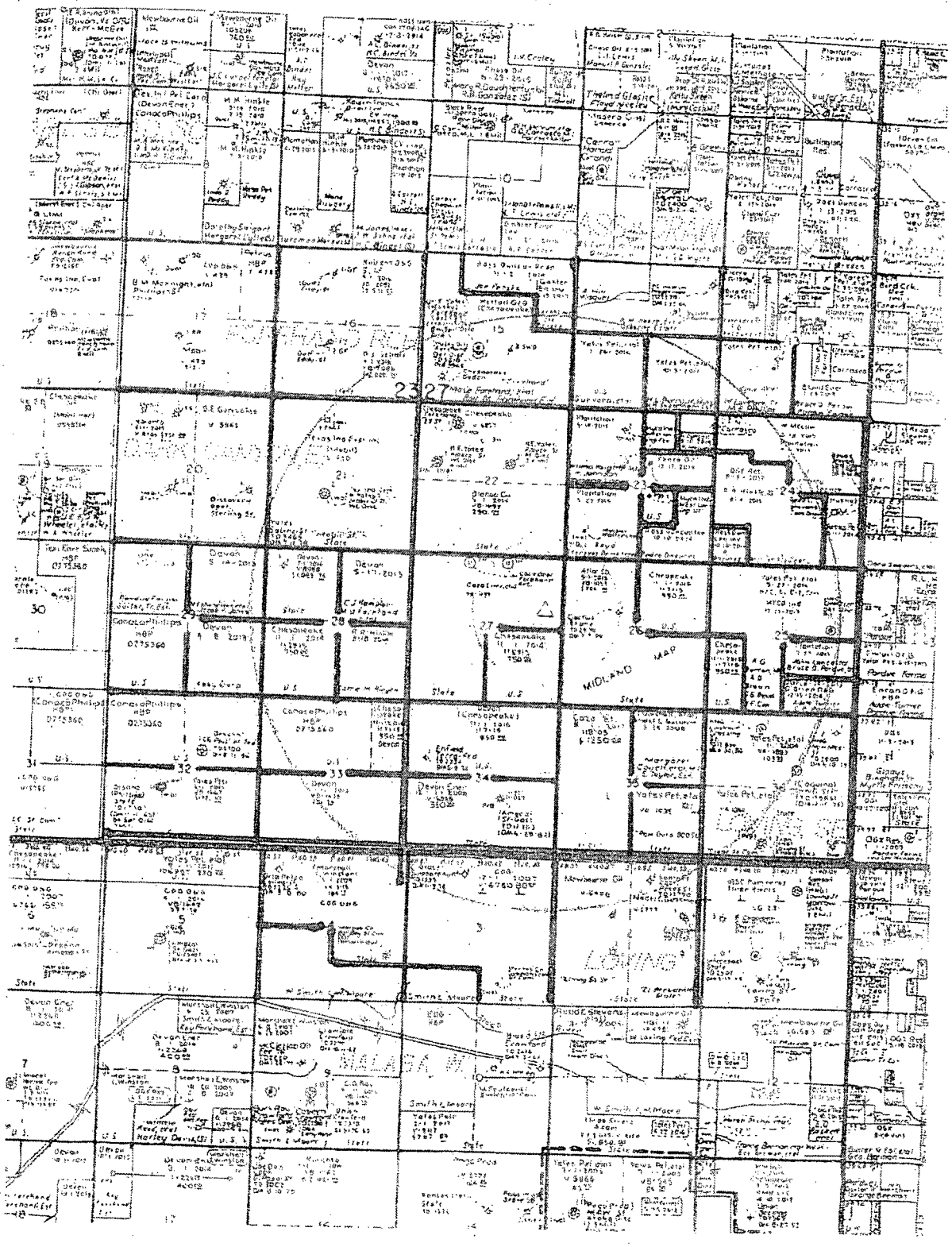
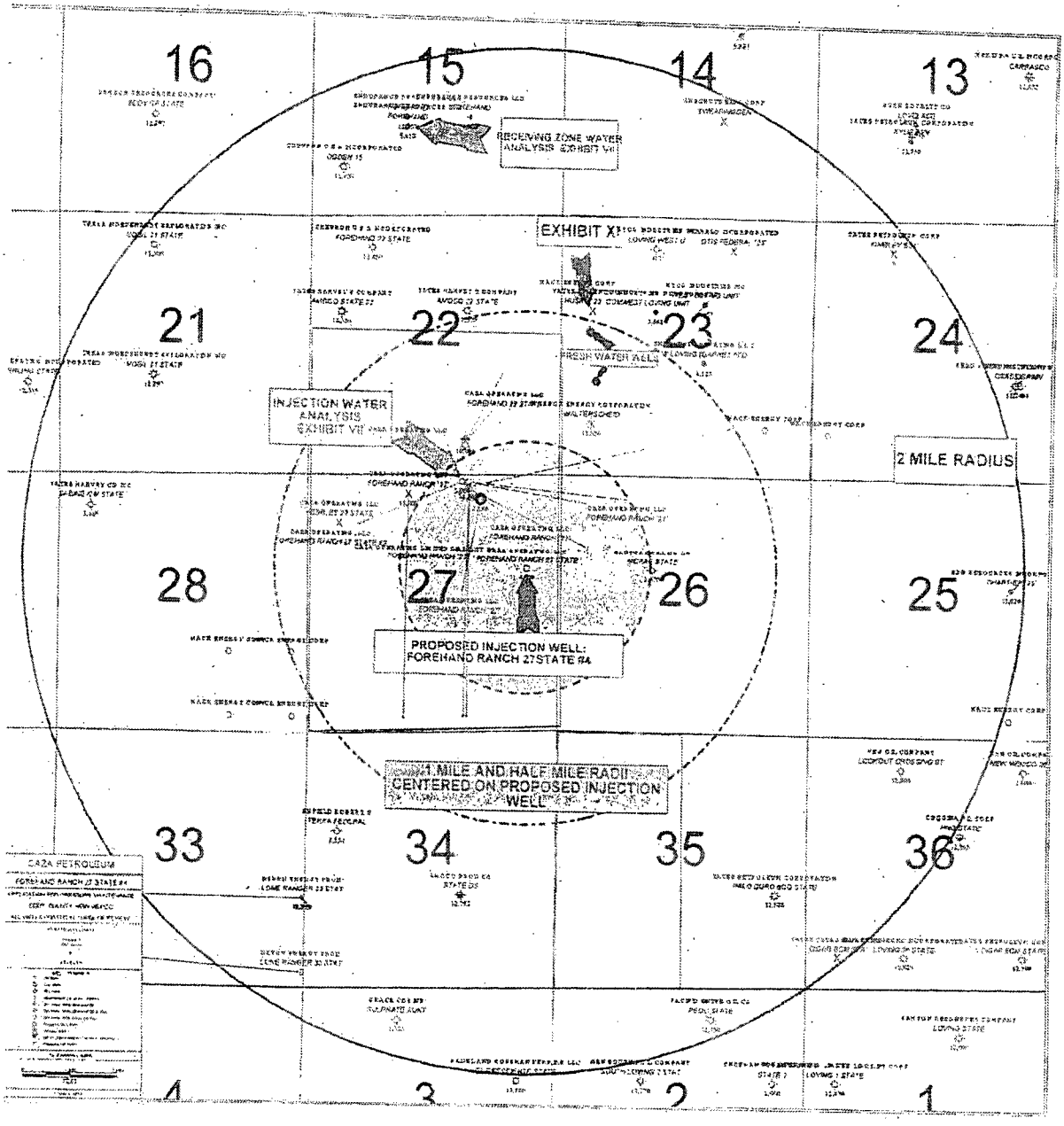


EXHIBIT V. A.


16
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36
RECEIVING ZONE WATER ANALYSIS EXHIBIT VI
EXHIBIT X
FRESH WATER WELL
INJECTION WATER ANALYSIS EXHIBIT VII
2 MILE RADIUS
PROPOSED INJECTION WELL: FOREHAND RANCH 27STATE #4
1 MILE AND HALF MILE RADII CENTERED ON PROPOSED INJECTION WELL
CAZA PETROLEUM
FOREHAND RANCH 27 STATE #4

EXHIBIT V. B.

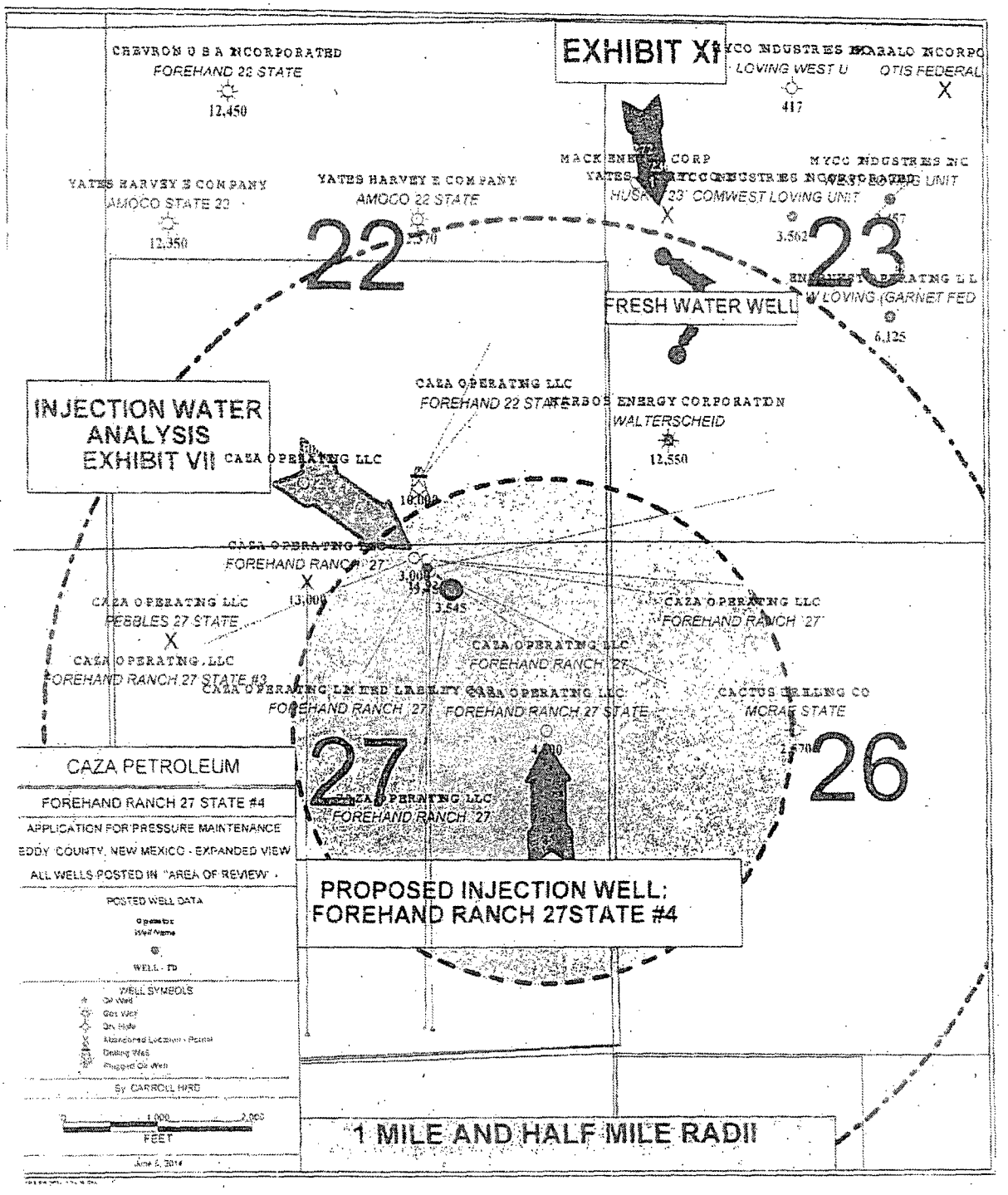
EXHIBIT XI
INJECTION WATER ANALYSIS EXHIBIT VII
FRESH WATER WELL
PROPOSED INJECTION WELL: FOREHAND RANCH 27STATE #4
1 MILE AND HALF MILE RADII
CAZA PETROLEUM
FOREHAND RANCH 27 STATE #4
APPLICATION FOR PRESSURE MAINTENANCE
EDDY COUNTY, NEW MEXICO - EXPANDED VIEW
ALL WELLS POSTED IN "AREA OF REVIEW"
POSTED WELL DATA
WELL - TD
WELL SYMBOLS
Oil Well
Gas Well
Dry Hole
Abandoned Location - Permit
Drilling Well
Plugged Oil Well
By CARROLL HIRD
FEET
June 6, 2014
22
23
26
27
CHEVRON U S A INCORPORATED
FOREHAND 22 STATE
12,450
YATES HARVEY E COMPANY
AMOCO STATE 22
12,350
YATES HARVEY E COMPANY
AMOCO 22 STATE
MYCO INDUSTRIES INC
LOVING WEST U
417
OTIS FEDERAL
MYCO INDUSTRIES INC
3,562
CAZA OPERATING LLC
FOREHAND 22 STATE
CAZA OPERATING LLC
FOREHAND RANCH 27
13,000
CAZA OPERATING LLC
PEBBLES 27 STATE
CAZA OPERATING LLC
FOREHAND RANCH 27 STATE #3
CAZA OPERATING LLC
FOREHAND RANCH 27
CAZA OPERATING LLC
FOREHAND RANCH 27
CAZA OPERATING LLC
FOREHAND RANCH 27
CACTUS DRILLING CO
MCRAE STATE
CAZA OPERATING LLC
FOREHAND RANCH 27
ARBOS ENERGY CORPORATION
WALTERSCHEID
12,550
3,545
6,125

EXHIBIT V. B.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 3

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): VI.

EXHIBIT: VI. - WELL DATA WITHIN AREA OF REVIEW

EXHIBIT:

EXHIBIT:

EXHIBIT:

EXHIBIT:

INFO. CATEGORY	EXHIBIT VI This form applies to paragraph VI	APPLICATION FOR CONVERSION TO INJECTION WELL; CAZA FOREHAND RANCH 27 STATE #4; SEC 27, T23S-R27E; EDDY COUNTY, NEW MEXICO	
Date:	8/13/2014	*ALL WELLS WITHIN .5 MILE RADIUS OF PROPOSED SWD WELL ("AREA OF REVIEW" AS DEFINED BY NEW MEXICO OIL CONSERVATION DIVISION)* EXHIBTS ARE REFERENCED TO PARAGRAPHS IN OCD FORM C-108	
	CAZA FOREHAND RANCH 27 STATE #4 - PROPOSED SALT WATER DISPOSAL	CAZA FOREHAND RANCH 27 STATE COM #1H	CAZA FOREHAND RANCH 27 State # 5
API	30-015-423090000	30015398440000	30-015-415300000
TYPE WELL: (para. i)	Salt water injection	Bone Spring Horizontal	Completed in Cherry Canyon sand
LOCATION:	1980' FNL & 660' FEL ; Sec. 27, T23S-R27E; EDDY CO., NEW MEXICO	252' FNL & 1900 FEL; SEC 27, T23-S _ R27-E; EDDY CO, NEW MEXICO	500' FNL & 1650' FEL; SEC 27, T23-S_R27-E; EDDY Co. NEW MEXICO
WELL TOTAL DEPTH:	4105' MD TVD	9450' / 11925' MD	3545' MD TVD
CONSTRUCTION:	VERTICAL WELL	Pilot Hole / Horizontal	VERTICAL WELL
Surface Pipe - Fresh Water Protection	13 3/8" 450' 415 SX CMT	20 " 40' 5 3/4 YDS CMT	20" 40'
	8 5/8" 2050' 616 SX CMT	13.375 " 430' 450 SX CMT	8 5/8" 488' 106 SX CMT
Intermed Casing	N/A	9.625 " 2077' 712 SX	N/A
Casing	N/A	7" 7596'	N/A
Casing/Liner	5 1/2" 4000' 465 SX CMT	4.5 " 6537' - 11925' 280 SX CMT. 245 sx to surface	5 1/2" 3545' 805 SX CMT
Tubing	N/A	N/A	
Plug Back Pilot Hole	N/A	6757' 1450 Ssx cmt.	N/A
Perforated interval	Proposed 3315-37'	7750' - 11798'	3350 - 3370'
COMPLETION HIST.:			
Well Active/Inactive	ACTIVE	Active	ACTIVE
Spud date:	6/12/2014	9/26/2012	10/29/2013
Completion Date:	WO Application Approval	12/19/2012	
Interval perforated:	Proposed - Cherry Canyon	2nd Bone Spring	Cherry Canyon
MD TVD Horizontal	N/A	7408' TVD	
TD HORIZ Well (MD)	N/A	11925' MD	
Plugging Date:	N/A	N/A	
PROPOSED SPUD DATE	N/A	N/A	
Interval perf'd:	Proposed 3315-37'	N/A	3350-70' MD
Well Bore Diagram (Para. III & VII)	N/A	N/A	N/A

EXHIBIT VI.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 4

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): VII.

EXHIBIT: VII. - DAILY INJECTION RATES

EXHIBIT: VII. - INJECTION WATER ANAYLSIS (2nd Bone Spring)

EXHIBIT: VII. - RECEIVING ZONE WATER ANALYSIS

EXHIBIT:

EXHIBIT:

INJECTION RATES, VOLUMES AND PRESSURES

1. Maximum 2 BFPM with total rate of 2,880 BFPD.
   Average rate: 1.5 BFPM with total rate of 2,160 BFPD.

2. System is closed.

3. 663 psi maximum pressure and 350 psi average based on 0.2 psi/ft x footage to top perforation (3,315').

EXHIBIT VII.

INJECTION
WATER ANALYSIS

P.O. BOX 98
MIDLAND, TX. 79702
PHONE (432) 683-4521

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819

RESULT OF WATER ANALYSES

LABORATORY NO. 0213-263
SAMPLE RECEIVED 2-13-13
RESULTS REPORTED 2-19-13

TO: Richard Wright
200 N. Lorraine, Suite 1550, Midland, TX 79701

COMPANY Cazu Operating LEASE Forehand Ranch 27
FIELD OR POOL
SECTION BLOCK SURVEY COUNTY Eddy STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Submitted water sample - taken 2-12-13.
NO. 2
NO. 3
NO. 4
REMARKS: 2nd Bone Springs

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1331			
pH When Sampled				
pH When Received	6.10			
Bicarbonate as HCO3	146			
Supersaturation as CaCO3				
Undersaturation as CaCO3				
Total Hardness as CaCO3	32,000			
Calcium as Ca	10,800			
Magnesium as Mg	1,215			
Sodium and/or Potassium	70,212			
Sulfate as SO4	300			
Chloride as Cl	130,640			
Iron as Fe	47			
Barium as Ba	0			
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	210,313			
Temperature, °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen				
Hydrogen Sulfide	0.0			
Resistivity, ohm-m at 77° F.	0.055			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By
Greg Ogden, B.S.

EXHIBIT VII.

RECEIVING ZONE
WATER ANALYSIS

P.O. BOX 98
MIDLAND, TX. 79702
PHONE (432) 683-4521

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-6819

RESULT OF WATER ANALYSES

TO: Richard Wright
200 N. Lorraine, Suite 1550, Midland, TX 79701

LABORATORY NO. 0413-275
SAMPLE RECEIVED 4-11-13
RESULTS REPORTED 4-22-13

COMPANY Caza Petroleum LEASE Endurance Forehand # 2
FIELD OR POOL Unit K 1880 FSL & 1980 FWL,T23S, R27E
SECTION 15 BLOCK ____ SURVEY ____ COUNTY Eddy STATE New Mexico
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Submitted water sample - taklen 4-6-13 from Forehand #2 (Section 5). Delaware Water Sample
NO. 2
NO. 3
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1250			
pH When Sampled				
pH When Received	7.90			
Bicarbonate as HCO_3	329			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	45,500			
Calcium as Ca	13,200			
Magnesium as Mg	2,038			
Sodium and/or Potassium	54,017			
Sulfate as SO_4	460			
Chloride as Cl	115,020			
Iron as Fe	2			
Barium as Ba	0			
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	186,064			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen				
Hydrogen Sulfide	11			
Resistivity, ohm-m at 77° F.	0.060			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By _____
Greg Ogden, B.S.

LATHAM PRINTING CO. - 333-1768

EXHIBIT VII.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 5

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): VIII.

EXHIBIT: VIII. - TYPE LOG

EXHIBIT: VIII. - FRESH WATER AQUIFERS

EXHIBIT:

EXHIBIT:

EXHIBIT:

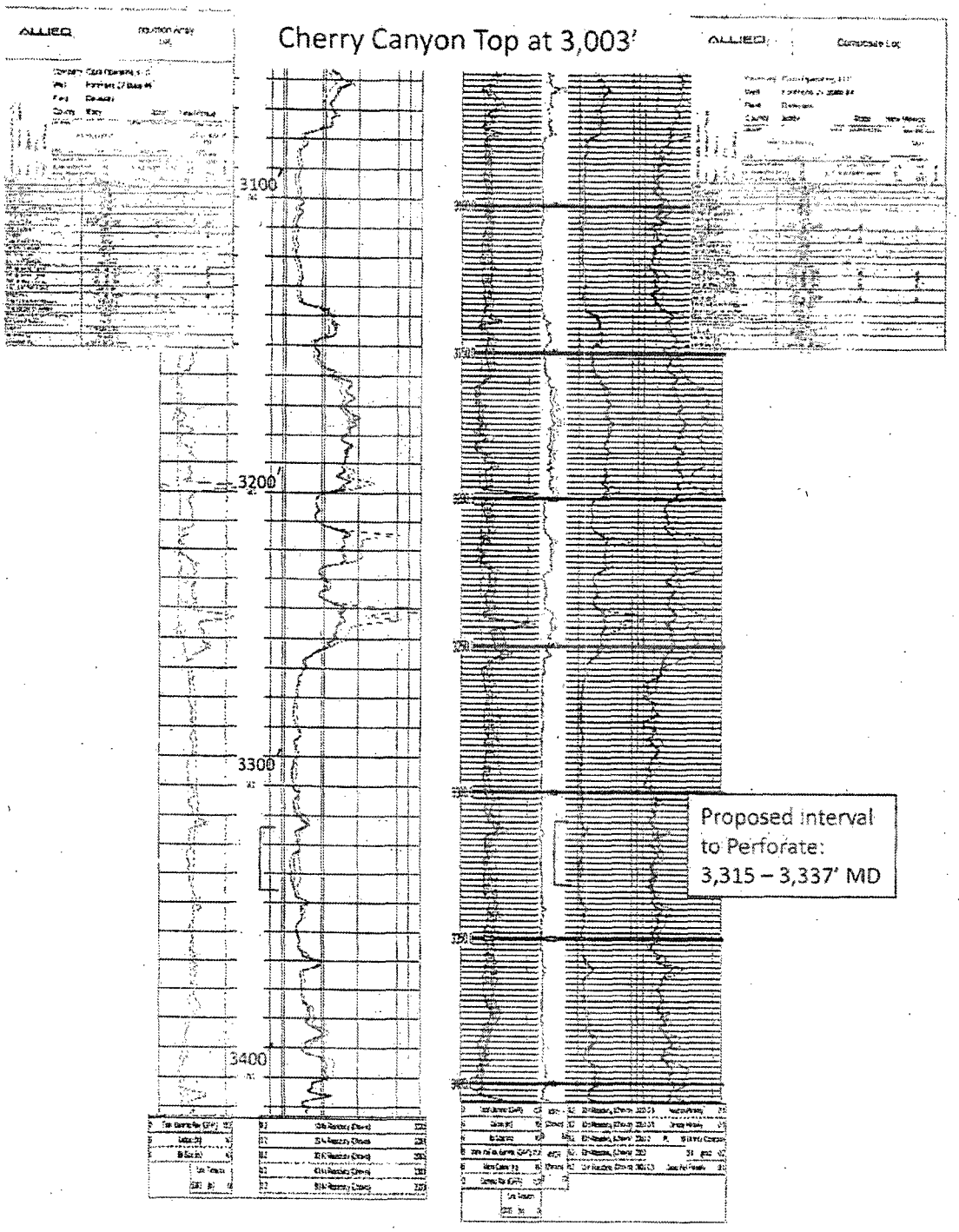

EXHIBIT VIII.

FRESH WATER AQUIFERS
Forehand Ranch 27 State #4

	Top of Formation	Bottom of Formation	Formation Thickness
Quaternary alluvium	0	300	up to 300
Upper Rustler	300	525	up to 225
Lower Rustler	525	760	up to 235
Castile or Salado	760		

These thicknesses were obtained from:
Geology and Ground-Water Resources of Eddy County, New Mexico, G.E. Hendrickson and R.S. Jones, Ground-Water Report 3, New Mexico Bureau of Mines and Mineral Resources, 1952

For the Caza Ridge site, the formation depths are:

	Top of Formation	Bottom of Formation	Formation Thickness
Quaternary alluvium	0	10	10
Dockum Group	10	310	up to 300
Dewey Lake Redbeds	310	560	up to 250
Rustler	560	730	up to 170
Salado	730		

These thicknesses were obtained from:
Geologic Atlas of Texas, Hobbs Sheet, William Battie Phillips Memorial Edition, The University of Texas at Austin, Bureau of Economic Geology, 1976

David Hamilton
RT Hicks Consultants
Office: 505-266-5004

EXHIBIT VIII.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 6

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): IX.

EXHIBIT: IX. - STIMULATION PROGRAM

EXHIBIT:

EXHIBIT:

EXHIBIT:

EXHIBIT:

Caza Petroleum

June 17, 2014

Re: Application for Authorization to Inject (Form C-108)
Caza-Forehand Ranch 27 State #4
Section 27, T23S-R27E
Eddy County, New Mexico

The completion of the Caza-Forehand Ranch 27 #4 well will consist of plastic lined tubing and associated plastic lined packer followed by a well stimulation, as necessary, with a solution of 15% HCl acid followed by fracture stimulation.

Caza Petroleum, Inc.

Richard L. Wright
Operations, Manager

Caza Petroleum, Inc. • 10077 Grogan's Mill Road, Suite 200 • The Woodlands, TX 77380 • Tel 281 363-4442 • Fax 281 363-4454 • CazaPetro.com

EXHIBIT IX.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 7

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): X.

EXHIBIT: X. - LOGGING DATA Will be filed @ OCD

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 8

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): XI.

EXHIBIT: XI. - FRESH WATER SAMPLE

EXHIBIT:

EXHIBIT:

EXHIBIT:

EXHIBIT:

P.O. BOX 98
MIDLAND, TX 79702
PHONE (432) 683-4521

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819

RESULT OF WATER ANALYSES

LABORATORY NO. 0413-393
SAMPLE RECEIVED 4-22-13
RESULTS REPORTED 4-22-13

TO: Richard Wright
200 N. Lorraine, Suite 1550, Midland, TX 79701

COMPANY Caza Operating LEASE

FIELD OR POOL

SECTION BLOCK SURVEY COUNTY STATE

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Water sample - taken 4-20-13 and labeled "Domestic Water Well - from faucet at pump outlet (Eddy, NM)

NO. 2

NO. 3 Maximum contents for drinking water as recommended by the Texas Dept. of Health.

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0028			
pH When Sampled				
pH When Received	7.10			
Bicarbonate as HCO_3	185			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	1,140			
Calcium as Ca	332			
Magnesium as Mg	75			
Sodium and/or Potassium	139			
Sulfate as SO_4	730		300	
Chloride as Cl	376		300	
Iron as Fe	0.15		0.3	
Barium as Ba	0			
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	1,838		1,000	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen				
Hydrogen Sulfide	0.0			
Resistivity, ohm/m at 77° F.	3.760			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

By Greg Ogden, B.S.

cc: Fred Wright

LATHAM PRINTING CO. - 339-7292

EXHIBIT XI.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 9

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): XII.

EXHIBIT: XII. - SIGNED AFFIRMATION STATEMENT

EXHIBIT:

EXHIBIT:

EXHIBIT:

EXHIBIT:

Caza

June 17, 2014

Re: Application for Authorization to Inject (Form C-108)
Caza-Forehand Ranch 27 State #4
Section 27, T23S-R27E
Eddy County, New Mexico

All available geologic and engineering sources of data were reviewed. There is no apparent connectivity between proposed injection intervals and any existing sources of drinking water.

Caza Petroleum, Inc.

Carroll R. Hird
Consulting Geologist

EXHIBIT XII.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

Forehand Ranch 27 State # 4

DATE: 6/17/2014

INDEX REFERENCE PAGE NO.: 10

INFORMATION AND EXHIBITS PERTAINING TO SPECIFIC PARAGRAPHS OF OCD FORM C - 108

PARAGRAPH(S): XIII.

EXHIBIT: XIII. - NOTICE LETTER

EXHIBIT: XIII. - LIST OF RECIPIENTS BY TRACT

EXHIBIT: XIII. - AFFIDAVIT OF PUBLICATION

EXHIBIT:

EXHIBIT:

PROPOSED ADVERTISEMENT

Case No. 15235 *:*

Application of Caza Operating, LLC for a lease pressure maintenance project in the Delaware formation, Eddy County, New Mexico. Applicant seeks approval to institute a lease pressure maintenance project in State Lease VB-1139 by the injection of produced water into the upper Delaware formation at the approximate depths of 3315-3337 feet subsurface in the Forehand Ranch 27 State Well No. 4, located 1980 feet from the north line and 660 feet from the east line (the SE/4NE/4) of Section 27, Township 23 South, Range 27 East, NMPM, Eddy County, New Mexico. The expected maximum injection rate is 2880 BWPD, and the maximum injection pressure is 663 psi. State Lease VB-1139 covers the N/2 and SW/4 of Section 27, Township 23 South, Range 27 East, N.M.P.M., Eddy County, New Mexico, and is centered approximately 4 miles west-southwest of Loving, New Mexico.