STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

-TANK TO IN TRACT

	APPLICATION FOR AUTHORIZATION TO INJECT
I.	PURPOSE: Secondary Recovery XXX_ Pressure Maintenance Disposal Storag Application qualifies for administrative approval? Yes XXX_ No
II.	OPERATOR: Caza Operating, LLC
	ADDRESS: 200 N. Loraine, Suite 1550, Midland, Texas 79701
	CONTACT PARTY: <u>Richard Wright</u> PHONE: <u>432-682-7424</u>
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 schemation of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including: Oil Conservation Division
	 Proposed average and maximum daily rate and volume of fluids to be injected; Exhibit No. <u>extension</u> Whether the system is open or closed;
	 Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, It is find in the second and the second
	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 dept 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 dat 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 an belief.
	NAME:

E-MAIL ADDRESS: <u>ralbro@cazapetro.com</u> 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:

1B

DATE: 10/6/2014

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

SIGNATURE:

In

Side 2

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.

2.0

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

DATE: 6/17/2014

Forehand Ranch 27 State # 4 INDEX REFERENCE PAGE NO.: 1

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

<u>PARAGRAPH(S)</u>: 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

<u>DISTNICT I</u> IG23 N FTDCt Dr., Hotbas, NM 88240 Phome (373) N3.6161 File (373) 1976-0720 <u>DISTRICT II</u> 811 S Fine Sr., Anesu, NM 88210 Physe. (375) T48-(382 Fax. (375) 146-0726) <u>DISTRICT III</u> 1000 Rite Brazos Read. Ariac, NM 87410 Phome (363) 374-6178 Fax. (365) 124-6170 <u>DISTRICT III</u> 1200 S K. Prince, Dr., Sarta Fe, NM 87515 Physe. (350) 476-3400 Fax. (355) 475-465

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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 (, 201) Submit one copy to appropriate District Office

DAMENDED REPORT

A	'E Number			Pool Code			Pool Nam	¢	
Property C	ude	<u>_</u>		FOR	We	li Number 4			
OGRIDI	in .			CAZA		Elevation 3147'			
					Surface Locali	ពេ			
JL or fet No	Section	Township	Range	Let Idn	Feet from the	North/South line	Feet from the	East/West line	County
н	27	23-S	27-E		1980	NORTH	660	EAST	EDDY
				Bottom Hole	Location If Diffe	rent From Surface		·	
D. or let No	Section	Township	Range	Lot Ido	Feel from the	North/South line	Feet from the	East/West line	County
Dedicated Arres	101010	lnii Co	msolidation C	ode Ordi	at Nu	<u> </u>			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTEL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

		OPERATOR CERTIFICATION I benchy corrify that the information bench is two and complete to the bort of my innovelage and ballet, and that the organization other owers a muching interest or milested means listeness in the land accluding the proposed bostons back forction or has a right to drill the well at this location presents as a constant the to roter of such transmal we working interest, or to a volcatory profiling agreement or a construction; youring order bencinform entered by the division.
	S	Signature Date
 		Printed Name F-mail Address
GEODETIC COORDINATES		SURVEYOR CERTIFICATION I hereby cartify that the well location eleven on this plat was photod from Gald mater of actual acress carts by
SURFACE LOCATION Y=464819.6 N X=550118.1 E	.	and or watter any supervision, and that the since is suc and correct to the best of any ballet. MARCH 13, 2014
 LAT.= 32.277802" N LONG.= 104.171168" W		Date of Survey Signature & Sall of Protections Surveyor.
		Bars & ZOM AUTIN
		Certificare Kumber Cert G. Blatton 12641 Redate 3. Edator 3239 ACK

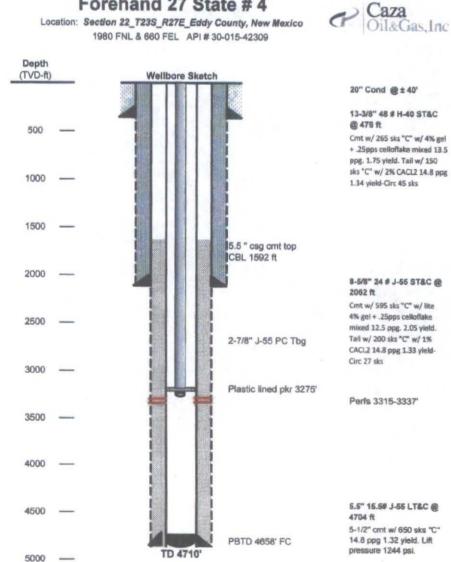
Side 1	INJECTION WELL DATA SH	HEET .		
OPERATOR: Caza Operating, LLC				<u></u>
WELL NAME & NUMBER: Forehand F	Ranch 27 St # 4			- <u></u>
WELL LOCATION: <u>1980 FNL & 660 FE</u> FOOTAGE LOCA		27 SECTION	23 S TOWNSHIP	27 E RANGE
<u>WELLBORE SCHEMATIC</u>		<u>WELL C</u> Surface	CONSTRUCTION DA1	<u>74</u>
	Hole Size: <u>17-1</u>	/2"	Casing Síze: <u>13-3</u>	3/8" <u>48</u> #H-40
	Cemented with:	415 "C" sx.	or <u>665</u>	ît³
	Top of Cement:	Surface	Method Determined	t: _Visual
		Intermedia	ate Casing	
	Hole Size: <u>12-1</u>	/4"	Casing Size: 8-5	/8" 24 lb J-55_
	Cemented with: _	795 "C" sx.	or <u>1486</u>	ft ³
	Top of Cement:	Surface	Method Determined	l: Visual
		Productio	n Casing	
	Hole Size: <u>7-7/8</u>		Casing Size: <u>5-1/</u>	2
	Cemented with:	650sx.	or <u>858</u>	ft ³
	Top of Cement:	<u>1592 ft</u>	Method Determined	<u>_CBL</u>
	Total Depth: 471	0		
		<u>Injection</u>	Interval	
		<u>3315_fee</u>	t to <u>3337 feet</u>	

(Perforated or Open Hole; indicate which)

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Forehand 27 State # 4 Location: Section 22_T23S_R27E_Eddy County, New Mexico

EXHIBIT III. A.

INJECTION WELL DATA SHEET

Туј	be of Packer: Arrow Set 1X plastic lined
Pac	ker Setting Depth: 3275 ft
Oth	er Type of Tubing/Casing Scal (if applicable):
	Additional Data
۱.	Is this a new well drilled for injection? <u>X</u> 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. <u>Not Perforated in</u>
	different interval
5.	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: <u>Underlying Potential in Brushy Canyon and Bone Springs</u>
	injection zone in uns area. Underlying Potential in Drusny Canyon and Bone Springs

Side 2

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MABORS COMPLETION & PRODUCTION SERVICES CO.

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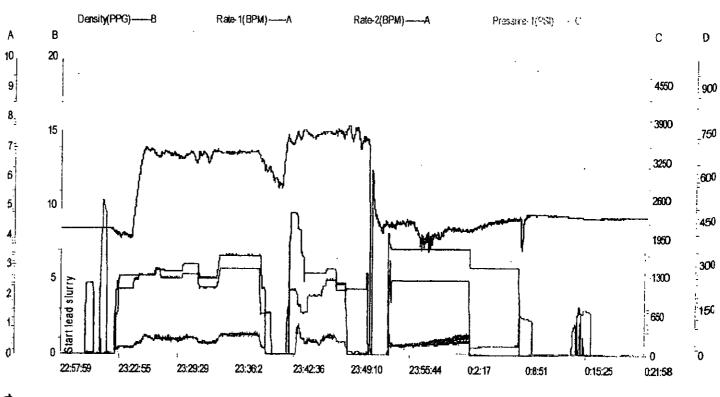
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CEMENT TREATMENT REPORT

Customer:	ć	AZA OIL & GAS		Date: 1	5/12/2014	Involce #:		Serv. S	UDV:	AMERONIC	RAIG	
Lease	FOR	EHAND	Wei	li Neme:	FORE	HAND 27 5	ATE 4 DELA		County:	EØ		
District:	MC	LAND	Rig:	50	DVERIEGN	Tv	e of Job;		13 3/8 SURFACE.			
Ph	4g3	1	Casing H	ardware					rry Properties			
		-				Sacks of Cement		Siurry Tield CuFt			Mix Water B54s	
	Materials	Furnished by	Nabors									
Spacer.						[[
LEAD	CLASS C	+4%Senionite+2	***CaCl2+.25	opeSuperFiel	(8	265	13,5	1.74	9.1	82	58	
							1				<u> </u>	
TAIL		CLASS C	=2%CaCl2			150	14.5	1.34	6.33	36	23	
							1					
SIZE	HOLE * EXCESS	DEPTH			IG - CASIN					LLAR DEP		
	T EXCESS		SIZE	WGT		DEPTH	GRADE	Į	SHOE	FLOAT	STAGE	
17 1/2	AST CASING	476	13.36	48 T RET / LIN	CSG	479 5295	J-55 DEPTH	700	43 CONN	436 WÉLL	1 Ei 180	
SIZE	WT 1	DEPTH 1	BRAND		DEPTH	TOP		SIZE	THREAD	TYPE	WGT	
+							<u> </u>	13.3/8	BRD	9	WAT/MU	
DISPL VC		DISPL P		CAL PSI				ING PRES		PRESSURE	XIM	
VOLUME	MOU	TYPE	WGT	BMP PLUG		<u> </u>	RATED	WORKING	RATED 1730	WORKING		
68	68L	H2O	8.34 Bbis	NA Éluid	Time Lef	Vour I	1700	<u></u>	e Left Loc	1384	89	
Time	Rate	Pressure	Pumped	Type	Time Len		2000		rived Yard			
2000	0	0	0 0	NA			orides 500.	<u> </u>		L		
2010	0	0	0	NA	Hazard As							
2020	0	0	0	NA	Spot Equip	ment, Rig	Jp					
0000	0	0	0	NA	Safety Me		·					
0010	0	0	0	NA	Rig up Ric				<u> </u>			
0C21	0		0	H20	Test Lines		<u> </u>			····=·		
0023	{		10 82	H20 CM ⁻	Spacer	5000 méir	hed @ 13.5				· · · ·	
0040	+		36	CM-			ed 60 14 8pt					
0051	0	0	0	NA		, Release		<u> </u>				
0054			58	H20	Dispalcen	ent						
0104			10	H20	Slow rate		• · · · · ·					
0109	0		<u>68</u>	H2O NA	Land Plug							
0114	0		· · · · · · · · · · · · · · · · · · ·	NA	Check Fio Safety Me							
0135	1 0	ō		NA NA	Rig down		· · · · · · · · · · · · · · · · · · ·	_· ···				
0200	U	0	0	NA	Depart							
			_									
				<u> </u>	<u> </u>		<u> </u>					
<u> </u>	_ _			ł								
			······································	<u> </u>	Cemeni R	eturned 14	bbls=45 sac	ks				
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				1						-		
Bumped Plug	Finael £i∩	Floats Held	PS/Lef. on	Cettienii to			0	•				
	Pressille		Casing	Surface	J							
NA	140	NA	0	14 180	hs.			Dervice	Supervisor			

EXHIBIT III. A.



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

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EXHIBIT III. A.

Chart

NABORS COMPLETION & PRODUCTION SERVICES CO.

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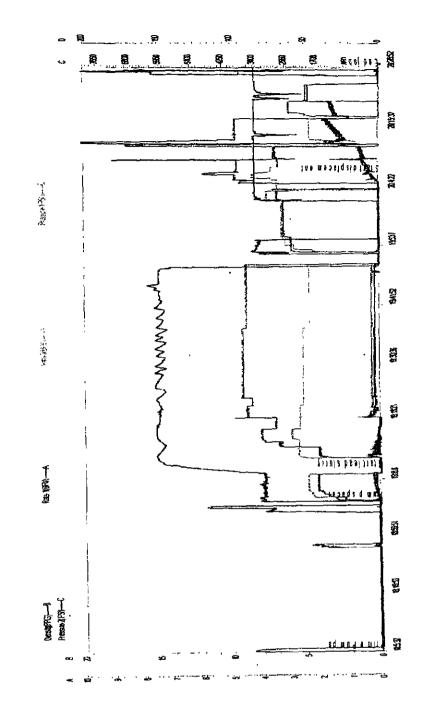
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CEMENT TREATMENT REPORT

Customer:		CÁŻA		Date:	6/23/2014	invoice #:	#REFI	Serv. S	upv: C	ARLOS A PA	LOMO
Lease	FOR	EHAND 27	We	Il Name;	FOREHAND	27 STATE CO	M 4 DELAW	ARE	County: EDDY		
District:	M	DLAND	Rig:		SOVEREIGN	 Ty:	e of Job:		5 1/2 LON	G STRING	
P	lugs		Casi	ng Hardwa	Physical Slurry Properties						
	5 1/2				<u> </u>	Sacks of	Sturry Wr	Siurry Yield CuFi	1		Mix Water
_	_					Cement	PPG	CuFi	Water GPS	Sturry Bbis	6346
		Materials Fu	mished by S	Superior							
Spacer:											
EAD:										0	0
		_				<u> </u>		ļ			
TAIL		C + .:	25 PPS SUPE	R FLAKE		650	14 B	1.32	6.28	152.8098	97,19047
	<u> </u>						ļ	ļ			
								<u> </u>			
SIZE	HOLE SIZE % EXCESS DEPTH SIZE			T WGT	UBING - CASING -	DRILL PIPE	GRADE			FLOAT	THS STAGE
7 7/8	0	4719	5.5	15.5	CSG	4707.38	1-55	∤ •	44.5	4662.88	- OTAGE
	LAST CASI				/ LINER PKR		DEPTH	TOP			FWID
SIZE	W	DEPTH	BRAND		DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WOT
_						· _		5 1/2	8 RD	WBM	9
	/OLUME	DISPL		CAL PSI			MAX TUE	SING PRES		PRESSURE	MIX
117	BBLS	WATER	8.43	1563					4810	3848	97.190
Time	Rate	Pressure	Bbis	Fluid Time Left Yard 15:30			e Left Loc		230		
	├── -		Pumped	Туре	ype Time Antved Loc 18:15 Time Antved Yard 0:0 ALL TIMES CENTRAL					.00	
1445		<u> </u>		<u> </u>	PRE CONVOY ME					······	
1815				ļ	ON LOCATION						
1645	<u> </u>		<u> </u>		TEST WATER PH-	7 CHI <150	0 Sc 200				
1900				<u> </u>	PUMP TEST	·, •. ·- · · · ·		<u> </u>			
1910					HAZARD ASSESM	ENT		· · · · · · ·			
1955	2	70	2	WATER	LOAD LINES						
2001		4200			PRESSURE TEST						
2004	5	129	20		SPACER AHEAD						
2008			·	SLURRY	BATCH UP SLURF	<u> γγ</u>				_	
2012	6	337	152	SLURRY	TAIL SLURRY @ 1		ERIFIED W	ITH MUD S	CALES		
2049					SHUTDOWN/DRO	PPLUG					<u> </u>
2052	7	255	100		DISPLACEMENT						
2118	3	1244	11	WATER	SLOW RATE		· -,				
2120		2010		ļ	BUMP PLUG						
2125	<u> </u>	·	ļ		FLOAT HELD 1/2						
2130	<u> </u>		<u> </u>		JOB COMPLETE N	VCPS RELE	ASED			-	
			<u> </u>	1	THANK YOU FRO	MCARLOS	AND CREV	v			
			1		NO CEMENT CIRC						
			Į	l				\sim			
				r	-	2	,).	\square		
Bumped Phug	Final Lft Pressure	Floats Heid	PSILeft on Cesing	Cement to Surface	1	ł.		1		~_>	
4	1380	YES	0	0 Bb							

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Darsich Maintaroukensienen sike onhanderen daar daar opaanktiokonnes sooroofiloshkom opaasiosi onerkinse oorarnur 200

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Well name.

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Forehand 27 State # 4

Operator: Caza Operating, LLC String type: Surface Casing

Design para Collagae	meters:			Minimum	design facti <u>Collepse:</u>	ola:	Environme H2S conside			No	
Mud weight:			8.50	ppg	DF	1,125	Surface temp	penature:		75.00	۰F
Design is base	ed on evacu	ated pipe.					Bottom hole	temperature	r.	78	۴F
•							Temperature	gradient:		0.65	*F/100ft
							Minimum se	ction length:		50	ñ
					Burst;		Minimum Of	ft:		12.250	in 🛛
					DF	1.10	Cement top:			Surface	
Burst											
Max anticipate	ed surface										
pressure:			238.70	psi							
Internal gradio	ent:		0.12	psi/ft	Tension:		Non-directio	nal string.			
Calculated Bi	HP		292.70	DBI	8 Rd STC:	1,80	(J)				
					8 Rd LTC:	1.60	(J)				
No backup m	ud specified				Buttress:	1.60	(J)				
					Premium:	1.50	(J)				
					Body yield:	1.60	(B)	Re subseq	uent strings	:	
							Next setting	depth:	2,050	ft	
				Tension at	based on buoy	ed weight.	Next mud w	sight:	10.000	PPG	
				Neutral pt:	394,02	ft.	Next setting	BHP:	1,065	psi	
							Fracture กับ	d wt:	11.500	664	
•							Fracture dep	otin:	500	ft	
							Injection pre	ssure	299	psi '	
								n ta			
Run	Segment		Nominal		End	True Vert		Drift			
Søg	Longth	Size	Weight	Grade	Finish	Depth	Depth	Diameter			
	(ft)	(in)	(Ibs/it)			(ft)	(ft)	(in)			
t	450	13.375	48.00	H-40	ST&C	450	450	12,59			
Run	Collapse	Collapse	Collapse	Burst	Burat	Burst	Tension	Tension	Tension		
Seq	Lond	Strength	Design	Load	Strength	Design	Load	Strength	Design		
	(psi)	(psi)	Factor	(pai)	(psi)	Factor	(kips)	(kips)	Factor		
t	199	740	3.724	293	1730	5.91	18.9	322	17.03 J		
							Date:		February 20		
		R.Wright							Midland, Tex	B \$	
Remarks:								nind for soling			

Cotapse is based on a vertical depth of 450 ft, a mud weight of 8.5 ppg. The casing is considered to be evacuated for cotapse purposes. Cotapse strength is based on the Westcott, Dunlop & Kemier method of blaxiel correction for tension.

Burst strength is not adjusted for tension.

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

EXHIBIT III. A.

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Well name.

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Forehand 27 State # 4

Operator: Caza Operating, LLC

String type Intermediate Casing

Design parameters: Collapse		Minimum	design fact	tors:	Environm			
Mud weight:			Collapse:		H2S consid		No	
Mua weight:	10.00	p pg	DF	1.125	Surface terr	iperature;	75.00	٩F
Design is based on evacuated pipe.					BHT		88	•F
•					Temp Grad	ent	0.65	*F/100ft
					Min Sec Ler	ngth	450	ft
			Burst;					
Buset			DF	1.00	Cement top	:	Surface	
Burst Max enticipated surface								
pressure:	978.68	psi						
pressue.	370.00	hai						
Internal gradient:	0.12	osi/ft	Tension:		Non-directio	nal string.		
Calculated BHP	1,224.88	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 subseq	uent string	5:
					Next setting		4,000	ft
			based on buo				6.500	ppg
		Neutral pt:	1.742.30	ft	Next setting	BHP:	1,766	psi
					Fracture mu	d wt:	11.500	PPg
•					Fracture de	pth:	2,050	ft .
					Injection pre	153UT0	1,225	psi
Run Segment	Nominal		End	True Vert	Measured	Drift		
Seq Length Size	Weight	Grade	Finish	Depth	Depth	Diameter		
(ft) (in)	(lbs/ft)	_		(ft)	(ft)	(in)		
1 2050 8.625	24.00	J-55	ST&C	2050	2050	7.972		
Run Collapse Collapse	Coliapse	Burst	Burst	Burst	Tension	Tension	Tension	
Seq Load Strength	Design	Load	Strength	Design	Load	Strength	Design	
(psi) (psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor	
1 1065 1370	1.286	1225	2950	2.41	41.8	244	5.84 J	
					Oate:		February 2	•
R.Wright						N	Aidland, Tex	38

Remarks;

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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 & Kemier method of blaxial correction for tension.

Burst strength is not adjusted for tension.

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

Well name

Forehand 27 State # 4

Operator: Caza Operating, LLC

String type: Production Csg: Frac

Design parameters:		design facto	rs :	Environment				
Collapse Mud weight:	12.40	<u>Collapse;</u> ppg	DF	1.200	H2S considered? Surface temperature:	No 75.00	۴F	
mpa wegni.	12.40	PP8	D /	1.200	Surface temperature.	10.00	•	
Design is based on evacuated pipe.					Boitom hole temperature:	110	۴F	
					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	psl						
Internal gradient:	0.00	psi/ft	Tension:		Non-directional string.			
Calculated BHP	3,027.53	•	8 Rd STC:	1.80	{J}			
			8 RoLTC:	1.60	(L)			
No backup mud specified.			Buttress:	1.60	(J)			
			Premium:	1.50	(J)			
			Body yield:	1.60	(8)			

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

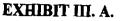
Run	Segment		Nominal		End	True Vert	Measured	Drift	
Seq	Length (ft)	Size (in)	Weight (ibs/ft)	Grade	Fintsh	Depth (ft)	Oepth (ft)	Diameter (in)	
1	4700	5.5	15.50	J-55	LT&C	4700	4700	4.825	
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension Strength	Tension Design
Seq	Load (psi)	Strength (psi)	Design Factor	Load (psl)	Strength (psi)	Design Factor	Load (kips)	(kips)	Factor
1	3028	4040	1.334	2930	4810	1.64	59.2 Date:	217	3.67 J July 24,2014
		Richard L. V	Vright				0000.		Midland, Texas

Remarks:

Colleges is based on a vertical depth of 4700 ft, a mud weight of 12.4 ppg. The casing is considered to be avacuated for collapse purposes. Collepse strength is based on the Westcott, Duniop & Kemler method of blaxial correction for tension.

Burst strength is not adjusted for tension.

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



		<i>,</i>
		CAZA PETROLEUM APPLICATION
		FOR WELL APPROVAL
DATE:	6/17/2014	Forehand Ranch 27 State # 4 INDEX REFERENCE PAGE NO.:2
		MATION AND EXHIBITS PERTAINING TO FIC PARAGRAPHS OF OCD FORM C - 108
	PARAG	GRAPH(S): V.
	EXHIBIT:	V. A LEASE MAP
	EXHIBIT:	V. B GEOLOGICAL MAPS
	EXHIBIT:	
	EXHIBIT:	·
	EXHIBIT:	

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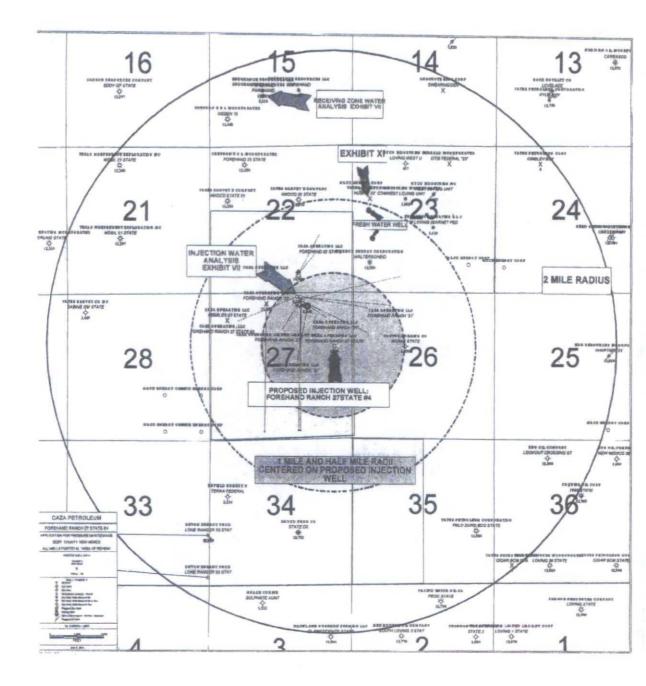
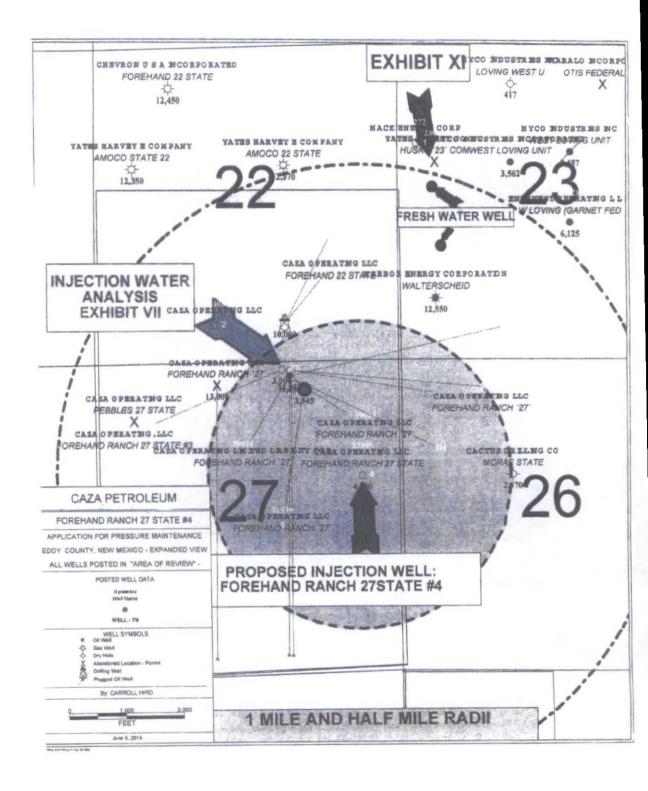


EXHIBIT V. B.

16



		CAZA PETROLEUM APPLICATION
		FOR WELL APPROVAL
×		Forehand Ranch 27 State # 4
DATE:	6/17/2014	INDEX REFERENCE PAGE NO.: 3
		RMATION AND EXHIBITS PERTAINING TO
	SPECI	FIC PARAGRAPHS OF OCD FORM C - 108
	PARAC	<u>SRAPH(S)</u> : VI.
	EXHIBIT:	VI WELL DATA WITHIN AREA OF REVIEW
	EXHIBIT:	

	1	APPLICATION FOR CONVERSION	IN TO INJECTION
	EXHIBIT VI This	WELL; CAZA FOREHAND RAN	
	· · · · · ·	SEC 27, T235-R27E; EDDY C	
NFO. CATEGORY	form applies to paragraph VI	MEXICO	
	ALL WELLS WITHIN .5	MILE RADIUS OF PROPOSED SWD WE	LL ("AREA OF REVIEW" AS DEFINED
		ONSERVATION DIVISION)	
Date:	8/13/2014	OCD FORM C-108	
	CAZA FOREHAND RANCH 27 STATE	CAZA FOREHAND RANCH 27	
	#4 - PROPOSED SALT WATER	STATE COM #1H	CAZA FOREHAND RANCH 27
	DISPOSAL	STATE COM #IM	State # 5
API	30-015-423090000	30015398440000	30-015-415300000
	Salt water injection	Bone Spring Horizontal	Completed in Cherry Canyon sand
TYPE WELL: (para. i)			
LOCATION	1980' FNL & 650' FEL ; Sec. 27, T235-	252' FNL & 1900 FEL: SEC 27,	500' FNL & 1650' FEL; SEC 27, T2
	R27E; EDDY CO., NEW MEXICO	T23-5 _ R27-E; EDDY CO,	S_ R27-E; EDDY Co. NEW MEXICO
		NEW MEXICO	
WELL TOTAL DEPTH	4105' MD TVD	9450' / 11925' MD	3545' MD TVD
CONSTRUCTION:	VERTICAL WELL	Pilot Hole / Horizontal	VERTICAL WELL
		40' 5 3/4 YDS	1
Surface Pipe	13 3/8" 450' 415 SX CMT	20 " CMT	20" 40'
Fresh Water Protection		·	· · · · · · · · · · · · · · · · · · ·
	8 5/8" 2050' 616 SX CMT	430' 450 SX	8 5/8" 488' 106 SX CM
		13.375 CMT	
Intermed Casing	1 - N/A	9,625 " 2077' 712 SX	N/A
Casing	N/A	7" 7596'	N/A
		6537' - 11925'	
	1	4.5" 280 SX CMT 245	
	4000' 465 SX	4.5 260 SX CMT 245 sx to surface	3545' 805 SX
Casing/Liner	S 1/2" CMT		5 1/2" CMT
Tubing	N/A	N/A	
Plug Back Pilot Hole	N/A	6757' 1450 Ssx cmt 7750' - 11798'	<u>N/A</u> 3350 - 3370'
Perforated interval	Reposed 3315-37	//50 - 11/98	3350-3370
Well Active/Inactive		Active	ACTIVE
Spud date:	6/12/2014	9/26/2012	10/29/2013
Completion Date:	WO Application Approval	12/19/2012	10/25/2015
competion bare.		·	
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 perfid:	Proposed 3315-37	N/A	3350-70' MD
			· · · · · · · · · · · · · · · · · · ·
Well Bore Diagram (Para, III:B. Vil)	N/A	N/A	N/A
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EXHIBIT VI.

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		FOR WELL APPROVAL
		Forehand Ranch 27 State # 4
DATE:	6/17/2014	INDEX REFERENCE PAGE NO.: 4
	INFOR	MATION AND EXHIBITS PERTAINING TO
	SPECI	FIC PARAGRAPHS OF OCD FORM C - 108
	PARAG	SRAPH(S): VII.
	EXHIBIT:	VII DAILY INJECTION RATES
	EXHIBIT:	VII INJECTION WATER ANAYLSIS (2nd Bone Spring)
	EXHIBIT:	VII RECEIVING ZONE WATER ANALYSIS
	EXHIBIT:	
	EXHIBIT:	

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

INJECTION

	WATER ANA			
P.O. BOX 98 ICLAND, TX. 79702	Martin Water Labo	ratories, Inc.		709 W. INDIAN
IONE (432) 660-4521	RESULT OF WATER	ANALYBER		NEDLAND, TEXAS FAX (422) 682-8
		LABORATORY NO.		0213-263
Richard Wright		BAMPLE RECEIVED		2-13-13
200 N. Lorraine, Suite 1550, Mic	land, TX 79701	RESULTS REPORTED		2-19-13
MPANY Caza Operating	t	LEASE Fo	rehand Ranch	7
ELD OR POOL				
CTION BLOCK SURVEY	COUNTY	Eddy 8TA	rg	NM .
DURCE OF BAMPLE AND DATE TAKE NO. 1 Submitted water sample				
	C - 600011 A-12-13.			
NO.2		<u> </u>	<u> </u>	
NO. 3	· · · · · · · · · · · · · · · · · · ·			
NO. 4	2-4 0 0			
EMARKS:	2nd Bore Spring			
····	CHEMICAL AND PHYSIC NO. 1		NO. 1	
Operative Country at 90%.	<u></u>	NO. 2	n0. J	NO. 4
pH When Bacopies			·	- <u> </u>
phi vmen Nepatelo	6.10			1
Bicarbanete as HCO,		-	-	
Supervision es CaCO ₂				
Underssturgelon as CaCO				
Total Hardness as CaCO,	32,000			
Magnatium as Mg	1,215			+
	70.212			
Betlatte as SD,	300			
Chieride as C1	130,640			
RDA e8 Fe				
Bañum as Ba		·	<u> </u>	
Turbidity, Elisaria	<u> </u>	<u>~</u>	_	<u> </u>
Total Solida, Calquiated	213.313		······································	
Temperature .T.				+
Carpon Dioxide, Calculated				
Sitzenved Oxygen,				
Hydrogen Builide	0.0			
Resistivity, annulum at 77 * F Secondad Cli	0.053			
Fittable Solite at mgR		· +	L	
Volume Fizerid, M				
Volume Filtered, Mi				
Volame Filtenid, M				
Volume Figured, M				
	Reaction Reported As All			
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EXHIBIT VII.

RECEIVING ZONE

	WATER AN	ALYSIS			
P.O. BOX 98 MIDLAND, TX, 79702 MONE (432) 583-4521		Martin Water Laboratories, Inc.		709 W, INDIA6 Midland, Texas Fax (422) 482-4	
	RESULT OF WAT		04	13-275	
ro: Richard Wright		LABORATORY NO.		11-13	
200 N. Lorraino, Suita 1550.	Midland, TX 79701	. BAMPLE RECEIVED REBULTS REPORTED		22-13	
,					
COMPANY Caza Petroleum HELD OR POOL Unit K_1880 F	SL & 1980 FWL T238, R27	E LEASE	ndumnce Foreha	nd # 2	
SECTION -15 BLOCK SU	IVEY COUNTY	Eddy st	TE New Mexico	·	
SOURCE OF BAMPLE AND DATE 1	TAKEN:			· · · · · · · · · · · · · · · · · · ·	
NO. 1 Submitted water sa	mple - taklen 4-6-13 from Fe	rehand #2 (Section 5). Delaware Wata	r Sample	
ND.2					
NO.3					
NO.4					
REMARK®			·····		
	CHENICAL AND PHY	NO. 2	NO. 3	160.4	
Spacific Gravity at 40* #.	1.125		<u> </u>		
shi When Sampied			1		
all When Received	7.9				
. Bicarbanata sa HCO ₁		2	ļ		
Supersituration da CatOb,					
Undersaturation as CaOO			÷		
Total Hardness as DaCO. Caldum as Ca	45.50		+		
Magnestum as Mg	3.03		<u> </u>	·	
Socium and/or Potasetum	54,01				
. Sullate as 80,	46		t	1	
Citionde as Ci	115.02		<u> </u>		
frait da Fe		2			
Berlum as Be		2	l		
Turnidity, Electric				<u> </u>	
Color sa Pt Total Balkta, Galculasad					
Tancasture 4	186,06	•	+···	·	
Carbon Dicaide, Calculated			+		
Ofstatived Grygen,					
Hydrogan Buttlde	······		_		
Registivity, etcherate at 77 P.	0.06	2	ļ		
Suspended 01	······	<u> </u>	<u>}</u>	<u> </u>	
Filtrable Solids as mort			+		
Volume Filteres, mi			<u> </u>	<u>├</u>	
<u></u>			<u> </u>		
			1		
· · · · · · · · · · · · · · · · · · ·	Results Reported As	Milligrams Plan Liter	<u> </u>		
Additional Determinations And Remarks	The undersign	ed certifies the above	to be true and con	ect to the bes	
of his knowledge and belief.					
				···· · · · · · · · · · · · · · · · · ·	
<u></u>	· · · · · · · · · · · · · · · · · · ·		······		
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EXHIBIT VII.



Martin Water Laboratories, Inc.

Analysts & Consultants since 1953 Bacterial & Chemical Analysis

TO:	Laboratory Services	U	BORATORY NO.	0114-97			
ADDRESS:	2609 W. Marland, Hobbs, NM 8	38240 s/	AMPLE RECEIVED:	1/6/2014	6/2014		
COMPANY:	Laboratory Services		ESULTS REPORTED:				
LEASE:	CAZA	·c	OUNTY, STATE:				
FORMATION:	ON;		ELD OR POOL:				
		DESCRIPTION OF SA	MPLES		· · ·		
No. 1	Submitted water sample - taken						
No. 2	Submitted water sample - taken						
No. 3	Submitted water sample - taken	-3-14 from Mudsh	ide Slim 5 Fed #	¥[-		
No. 4	Physical Properties (milligrams per liter)			<u> </u>	N- 4		
Specific Grav		No. 1	No. 2	No. 3	No. 4		
pH When Sai		1.1485	1.1382	1.1415			
pH When Re	والمسابية المراجع ومرودية المراجع المسابق المسابق والمسابق المسابق المستعد المستعد والمسابق المستعد والمسابق المسابق	6.30	6.40	6.30			
Bicarbonate		49	61				
Total Unidae	ess, as CáCO3	3.7,500	51,000	36,000	······································		
Calcium, as C		13,400	17,000				
Magnesium,		972	2,066				
	for Potassium	75,094	55,264		<u></u>		
Sulfate, as SC		469	868		· ·		
Chloride; as	CI I	142,000	120,700				
Iron, as Fe		296	40				
Barium, as Bi	ai		C	0			
•	ا ۱			1			
Total Solids,	Calculated	231,984	195,958	227,917			
10(0100/100)		201,704	00000	227,211			
	· · · · · · · · · · · · · · · · · · ·	t t t t t t t t t t t t t t					
Hydrogen Su		0.00	0.00				
Resistivity; o	hms/m @ 77°F.	0.052	0.059	0.053			
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By: Crieg Ogeten, DAS.

(432) 683-4521 * 709 W. Indiana, Midland, Texas 79701 * (fax) 682-8819 Remit to Address: P.O. Box 98, Midland, Texas 79702 Email: martinwaterlabs@nts-online.net

		CAZA PETROLEUM APPLICATION FOR WELL APPROVAL
DATE:	6/17/2014	Forehand Ranch 27 State # 4 INDEX REFERENCE PAGE NO.:5
		RMATION AND EXHIBITS PERTAINING TO FIC PARAGRAPHS OF OCD FORM C - 108
	PARAC	<u>GRAPH(S)</u> : VIII.
	EXHIBIT:	VIII TYPE LOG
	EXHIBIT:	VIII FRESH WATER AQUIFERS
	EXHIBIT:	
	EXHIBIT:	
	EXHIBIT:	
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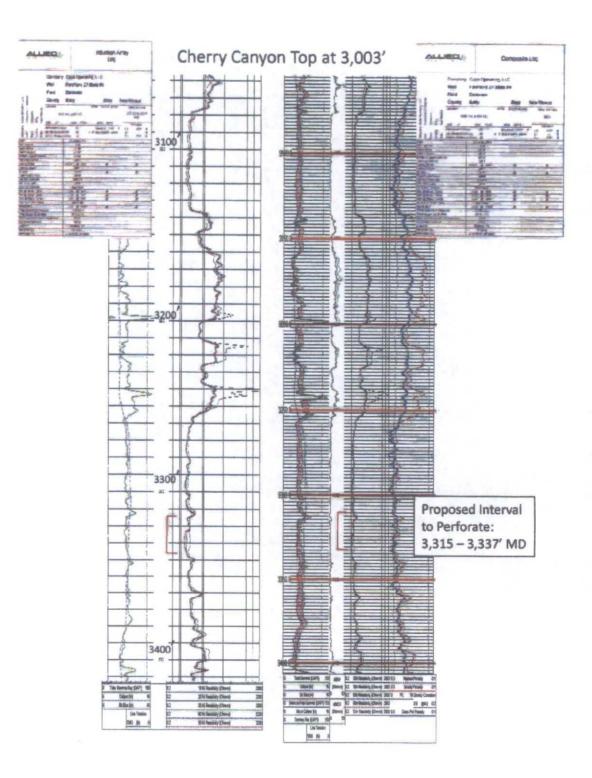


EXHIBIT VIII.

16

FRESH WATER AQUIFERS Forehand Ranch 27 State #4

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

These thicknesses were obtained from:

7

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 Battle Phillips Memorial Edition, The University of Texas at Austin, Bureau of Economic Geology, 1976

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



	CAZA PETROLEUM APPLICATION FOR WELL APPROVAL
DATE:	Forehand Ranch 27 State # 46/17/2014INDEX 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:

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June 17, 2014

Re: Application for Authorization to Inject (Form C-108) Caza-Porehand 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 + 72/281 363-4442 + Fac: 281 363-4444 + CaraPerro.com

EXHIBIT IX.

CAZA PETROLEUM APPLICATION FOR WELL APPROVAL

DATE: 6/17/2014

Forehand Ranch 27 State # 4 INDEX REFERENCE PAGE NO.: 7

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

<u>PARAGRAPH(S)</u>: X.

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

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		CAZA PETROLEUM APPLICATION FOR WELL APPROVAL
DATE:	6/17/2014	Forehand Ranch 27 State # 4 INDEX REFERENCE PAGE NO.: 8
	_	MATION AND EXHIBITS PERTAINING TO FIC PARAGRAPHS OF OCD FORM C - 108
	PARAG	SRAPH(S): XI.
	EXHIBIT:	XI FRESH WATER SAMPLE
	EXHIBIT:	

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P.C. BOX 58 NIDLAND, TX. 79702 PHCNE (422) 833-451	Martin Water Labo		709 W. NDUNA MCLAND, 15XA8 7976 Day (473) 183.0010		
- Incluse friends and the seconds a	RESULT OF WATE	R ANALYSES	• •	FAX (452) 682-6819	
		LABORATORY NO.		0413-393	
TO: Richard Wright	SAMO FROCEIVED		·	4-22-13	
200 N. Lorraine, Suite 1550, Mic	fland, TX 79701	RESULTS REPORTE	04-2	4-22-13	
COMPANY CAZE Operating					
FIELD OR POOL		LEASE			
BECTION BLOCK BURVEY	COUNTY				
BOURCE OF SAMPLE AND DATE TAKE		51.	AIG	······	
	0-13 and labeled "Domestic "	Water Well - from fit	ucet at pump outlet (E	Eddy, NM)	
NO. 2					
	drinking water as recomm	ended by the Texes	Dept. of Health.		
NO.4					
REMARKS:					
	CHEMICAL AND PHYS	CAL PROPERTIES NO. 2	NO.3	NØ 4	
Boucific Gravity at 60° 7.	NO. 1 1.0028	NO. 2	- NO. 3	NO. 4	
pti When Gemplet			4		
ph When Received	7.10	<u> </u>	+		
Ekerbenste as HCD.	185			·	
Superintutation as CaCO,					
Undersaturation as CaCO,					
Total Hardress as CaCO.	1,140				
Guiclum an Ca	332				
Megnesium as Mg	75				
Bodium and/or Passalum	139	-			
Sutiste as 80,	730		300		
Chipride es Ci	376		0.3		
tion as Fe Boilem at Bo			<u>. u.</u>		
Turbidity, Electric	* *		-t	<u> </u>	
Color as Pt			1		
Tatel Solida, Calculated	1,838		1,000		
Temperature _1P.			1	· · · · · · · · · · · · · · · · · · ·	
Curbon Districte, Calculated			1 .		
Dissolved Oxygen,					
Hydrogen Sutlide	0.0				
Resistivity, orientern at 77 * P.	3.760				
Surpended QA	·····	<u> </u>	· · · ·		
'Fitrabie Solids es mgil		1		<u> </u>	
Vokane Filtered, mi	<u>*** } ÷</u>		<u> </u>		
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<u> </u>					
	Regula Asported As M	Risersme Per Leer		.	
Additions Determinations And Reports of his knowledge and belief.	The undersigne	d certifies the abov	e to be true and con	rect to the best	
		<u> </u>	·····		
· · · · · · · · · · · · · · · · · · ·					
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Form No. 8		·	(bic		
cc: Fred Wright			Greg Ogden, B.S.		

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EXHIBIT XI.

			TROLEUM AP			
DATE:	6/17/2014			anch 27 State # 4 ERENCE PAGE NO.:9		
			ID EXHIBITS PERT APHS OF OCD FO			
	PARAGRAPH(S):		XII			
	EXHIBIT:	XII SIGNED	D AFFIRMATION ST	ATEMENT	<u></u>	
	EXHIBIT:					
	EXHIBIT:					
	EXHIBIT:					
	EXHIBIT:					



June 17, 2014

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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

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NOTICE LIST

Surface Owner

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

Offset Operators/Working Interest Owners

Caza Operating, LLC Suite 200 10077 Grogan's Mill Road The Woodlands, Texas 77380 S/2 Section 22 and All Section 27

Merit Management Partners IV, L.P. Suite 500 13727 Noel Road Dallas, Texas 75240

The Allar Company P.O. Box 1567 Graham, Texas 76450

Chevron U.S.A. 1400 Smith Street Houston, Texas 77002 SW/4 Section 23

W/2 Section 26

SE/4 Section 27