

DATE IN 8/30/08	SUSPENSE	ENGINEER WJD	LOGGED IN	TYPE DUX 252	APP NO. UNIT 0829565711
--------------------	----------	-----------------	-----------	--------------------	----------------------------

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] OPERATOR/Applicant Name: Crema Resources LLC OGRD: 220420
 (If one well) Lease/Well Name: _____
 Well API No. 30- _____

East Hobbs SA UNIT # 409
R-11980-A

[2] 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

[3] 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
U.S. Bureau of Land Management
 [E] ☐ Notification and/or Concurrent Approval by SLO
Commissioner of Public Lands, State Land Office
 [F] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [G] ☐ Waivers are Attached

[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.

Print or Type Name	Signature	Title	Date
		e-mail Address	



OPERATOR:
OGRID:

ARENA RESOURCES INC.
220420

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery ☒ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? ☒ Yes _____ No
- II. OPERATOR: _____ Arena Resources Inc. _____
ADDRESS: _____ 6555 S. Lewis Avenue, Tulsa, Ok, 74136 _____
CONTACT PARTY: _____ Ricardo González _____ PHONE: (918) - 281-6687
- 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 _____ No
If yes, give the Division order number authorizing the project: _____ R-11980-A _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of 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: _____ TITLE: _____
- SIGNATURE: _____ DATE: _____
- E-MAIL ADDRESS: _____
- * 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.

Side 1

INJECTION WELL DATA SHEET

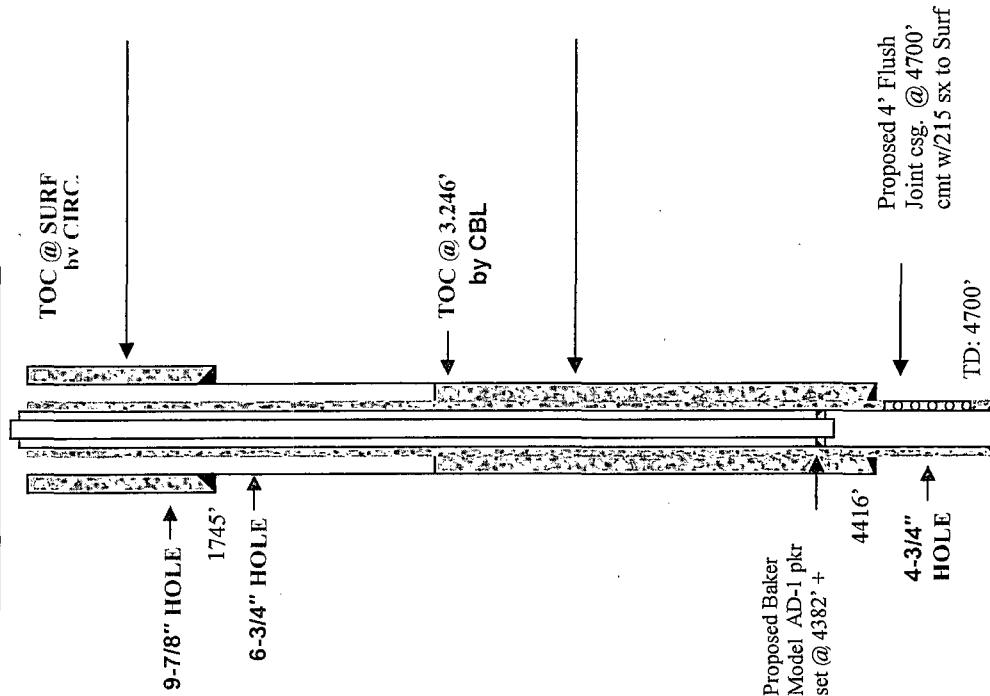
OPERATOR: Arena Resources Inc.

WELL NAME & NUMBER: East Hobbs San Andres Unit, Well # 409

WELL LOCATION: 1980 FSL & 660 FEL I 30 18S 39E

FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 9-7/8" Casing Size: 7-5/8" ft³
 Cemented with: 800 sx. or Method Determined: circulated
 Top of Cement: surface

Intermediate Casing

Hole Size: Casing Size: ft³
 Cemented with: sx. or Method Determined:
 Top of Cement:

Production Casing

Hole Size: 6-3/4" Casing Size: 5 1/2" ft³
 Cemented with: 200 sx. or Method Determined: CBL
 Top of Cement: 3246'
 Total Depth: 4471'

Injection Interval

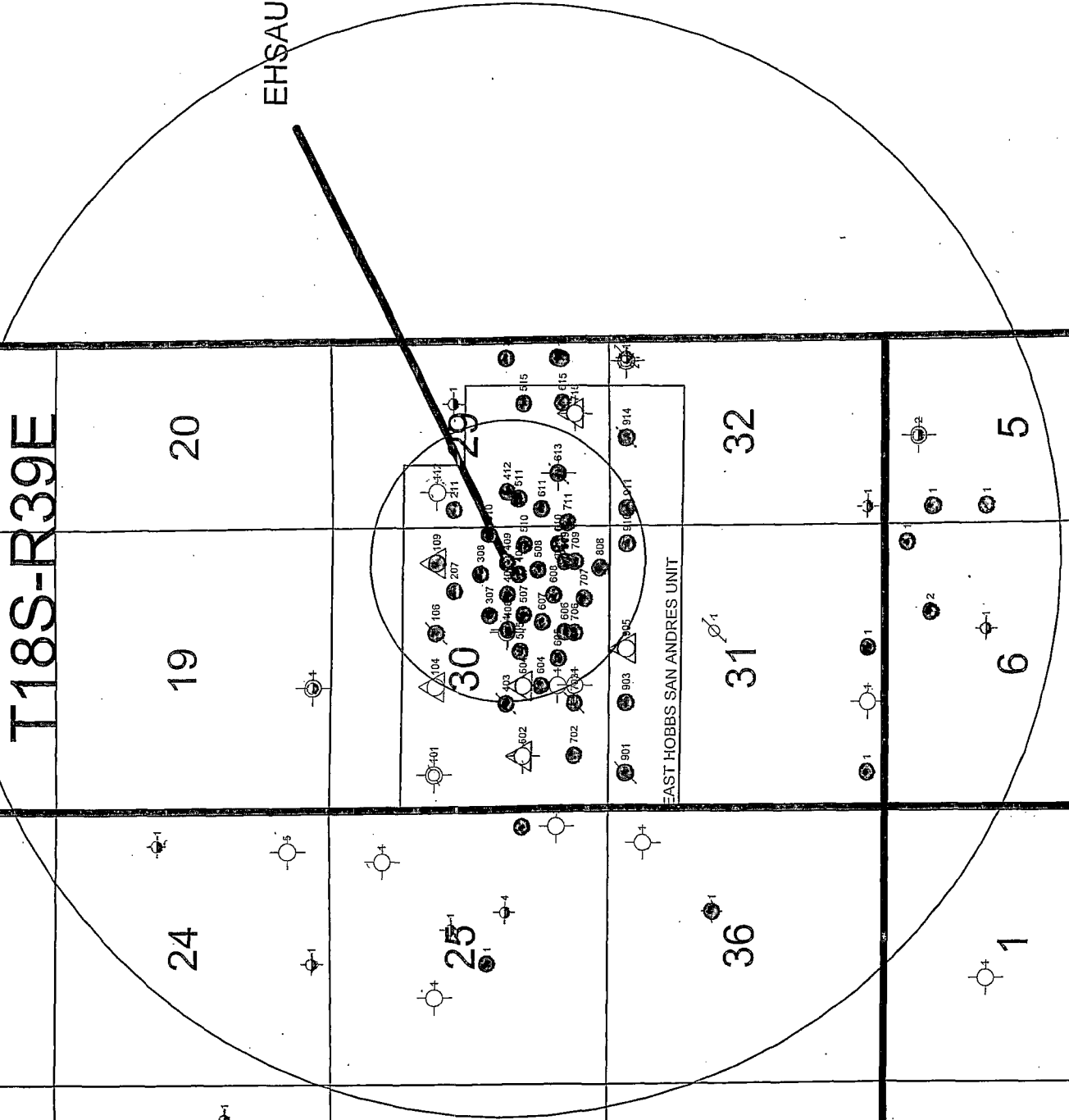
4472' feet to 4672'

(Perforated or Open Hole; indicate which)

14 13 18 NEW MEXICO/TEXAS BORDER

T18S-R39E

EHS AU 409



ARENA RESOURCES INC. - TABULATION OF DATA ON WELLS IN REVIEW AREA - APPLICATION FOR AUTHORIZATION TO INJECT

WELL	#	API	STATUS	UNIT	SEC	TWP	RNG	SPUD DATE	TD	PBTD	Hole		Surface Casing		Cement sx CI C	TOC	Mid	Intermediate Casing		Surface Casing		Hole Size	Hole Size in.	Depth	sx CI C	TOC	Method	Hole Size	Hole Size in.	Depth	sx CI C	TOC	Mid	Upper Perf	Lower Perf	Reservoir
											Size	Casing Depth	Size in.	Depth				Size	Depth	Size	Depth															
EHSAU	104	07950	SWD	F	30	18S	39E	5/6/1953	4475		12.5	8.625	1895	900	Surf	Circ						7	5.5	4474	1200	Surf	Calc	4462	4474	San Andres						
EHSAU	106	07955	P&A	G	30	18S	39E	5/8/1953	4470	4468	12.5	9.625	1907	1400	Surf	Circ						7	7.625	4470	450	Surf	Calc	4452	4462	San Andres						
EHSAU	109	07954	NJ	H	30	18S	39E	4/12/1953	4470	4439	12.5	9.625	1910	1400	Surf	Circ						7.625	7	4470	400	Surf	Calc	4444	4612	San Andres						
EHSAU	112	07946	D&A	E	29	18S	39E	6/26/1953	4464		12.5	9.625	1909	1250	Surf	Circ						7	7	4460	625	Surf	Calc									
EHSAU	207	37814	OIL	H	30	18S	39E	8/12/2006	4613	4607	12.25	8.625	1860	700	Surf	Circ						5.5	5.5	4613	950	Surf	Circ	4496	4599	San Andres						
EHSAU	211	07942	OIL	E	29	18S	39E	11/5/1953	4462		9.825	9.625	1735	800	Surf	Circ						5.5	5.5	4442	200	Surf	Calc	4442	4462	San Andres						
EHSAU	307	07956	OIL	J	30	18S	39E	7/1/1953	4445		11	8.625	1818	720	Surf	Circ						5.5	5.5	4390	500	Surf	Calc	4423	4445	San Andres						
EHSAU	308	36896	OIL	I	30	18S	39E	11/1/2004	4615	4610	12.25	8.625	1920	920	Surf	Circ						5.5	5.5	4615	890	Surf	Circ	4454	4600	San Andres						
EHSAU	310	36833	OIL	I	30	18S	39E	9/18/2004	4655	4650	12.25	8.625	1921	920	Surf	Circ						5.5	5.5	4655	1180	Surf	Circ	4500	4598	San Andres						
EHSAU	403	07951	P&A	K	30	18S	39E	8/3/1953	4479	4466	11	8.625	1898	900	Surf	Circ						5.5	5.5	4478	1200	Surf	Calc	4450	4476	San Andres						
EHSAU	406	24338	OIL	K	30	18S	39E	12/30/1972	10230	4600	17	13.375	344	375	Surf	Circ						9.625	3.150	3150	150	Surf	Calc	2839	Calc							
EHSAU	407	37815	OIL	I	30	18S	39E	7/15/2006	4610	4565	12.25	8.625	1861	700	Surf	Circ						5.5	5.5	4610	1000	Surf	Circ	4434	4590	San Andres						
EHSAU	408	34578	OIL	I	30	18S	39E	6/6/1999	4615	4610	12.25	8.625	1920	575	Surf	Circ						5.5	5.5	4615	585	Surf	Circ	4446	4601	San Andres						
EHSAU	412	07944	OIL	L	29	18S	39E	9/5/1953	4686		11	8.625	496	550	Surf	Circ						5.5	5.5	4419	1650	Surf	Circ	4419	4698	San Andres						
EHSAU	504	34610	OIL	K	30	18S	39E	5/28/1999	4625	4622	12.25	8.625	1918	825	Surf	Circ						5.5	5.5	4625	585	Surf	Circ	4531	4614	San Andres						
EHSAU	505	36832	OIL	J	30	18S	39E	10/18/2004	4615	4610	12.25	8.625	1907	920	Surf	Circ						5.5	5.5	4615	1010	Surf	Circ	4489	4592	San Andres						
EHSAU	507	34513	OIL	J	30	18S	39E	10/13/1998	4623	4618	12.25	8.625	1830	930	Surf	Circ						5.5	5.5	4615	485	Surf	Circ	4456	4610	San Andres						
EHSAU	508	37528	OIL	I	30	18S	39E	11/12/2005	4610	4605	12.25	8.625	1855	900	Surf	Circ						5.5	5.5	4610	1100	Surf	Circ	4435	4581	San Andres						
EHSAU	510	34787	OIL	I	30	18S	39E	12/26/1999	4627	4623	12.25	8.625	1911	825	Surf	Circ						5.5	5.5	4627	585	Surf	Calc	4603.5	4609	San Andres						
EHSAU	511	37816	OIL	L	29	18S	39E	6/30/2006	4610		12.25	8.625	1861	900	Surf	Circ						5.5	5.5	4610	950	Surf	Circ	4444	4576	San Andres						
EHSAU	604	34012	OIL	N	30	18S	39E	6/28/1997	4722	4583	12.25	8.625	1860	725	Surf	Circ						5.5	5.5	4716	615	Surf	Calc	4480	4614	San Andres						
EHSAU	605	37817	OIL	I	30	18S	39E	7/24/2006	4610	4604	12.25	8.625	1864	500	Surf	Circ						5.5	5.5	4610	1000	Surf	Circ	4442	4600	San Andres						
EHSAU	606	34612	OIL	O	30	18S	39E	5/20/1999	4615	4610	12.25	8.625	1925	825	Surf	Circ						5.5	5.5	4615	485	Surf	Circ	4499	4603	San Andres						
EHSAU	607	37818	OIL	O	30	18S	39E	8/12/2006	4610	4605	12.25	8.625	1864	500	Surf	Circ						5.5	5.5	4610	950	Surf	Circ	4437	4566	San Andres						
EHSAU	608	36831	OIL	P	30	18S	39E	10/6/2004	4620	4617	12.25	8.625	1825	920	Surf	Circ						5.5	5.5	4620	1180	Surf	Circ	4508	4602	San Andres						
EHSAU	609	34996	OIL	P	30	18S	39E	4/26/2000	4626	4612	12.25	8.625	1910	845	Surf	Circ						5.5	5.5	4623	485	Surf	Circ	4576	4607	San Andres						
EHSAU	610	29057	OIL	P	30	18S	39E	12/10/1984	8000	4770	12.25	9.625	1876	800	Surf	Circ						7	1890	875	Surf	Calc										
EHSAU	611	34013	OIL	M	29	18S	39E	6/17/1997	4710	4666	12.25	8.625	1920	775	Surf	Circ																				
EHSAU	613	07945	P&A	M	29	18S	39E	7/4/1953	4471	4419	12.25	8.625	502	500	Surf	Circ						5.5	5.5	4421	1150	Surf	Calc	4421	4471	San Andres						
EHSAU	707	36895	OIL	O	30	18S	39E	11/12/2004	4616	4614	12.25	8.625	1918	820	Surf	Circ						5.5	5.5	4616	1065	Surf	Calc	4515	4612	San Andres						
EHSAU	711	36893	OIL	M	29	18S	39E	11/29/2004	4620	4618	12.25	8.625	1930	920	Surf	Circ						5.5	5.5	4620	1120	Surf	Circ	4456	4614	San Andres						
EHSAU	808	37527	OIL	P	30	18S	39E	11/3/2005	4615	4610	12.25	8.625	1873	350	Surf	Circ						5.5	5.5	4615	1066	Surf	Circ	4452	4564	San Andres						
LANEY	004	24800	P&A	P	30	18S	39E	8/14/1974	3831	3825	12.25	8.625	1921	250	Surf	Circ						4.5	4.5	3827	250	Surf	Circ	3784	3798	Seven Rivers						
VERSEN	1	23420	D&A	J	30	18S	39E	12/22/1972	7512		17.5	12.75	360	225	Surf	Circ																				

All depths are in feet, and date format is mm/dd/yyyy
All API numbers in this table begin with 30-025

See DIAGRAM

OK

WELLBORE SCHEMATIC

☐ Proposed

☒ Actual

Well Name & No.:

D. F. FERGASON #2 (44320 #106)

Operator: MARTINDALE CORP.

Location:

UNIT G, SEC. 30, T-18-S, R-39-E

County:

LEA

State: NM

API #:

30-025-07955

GR Elev:

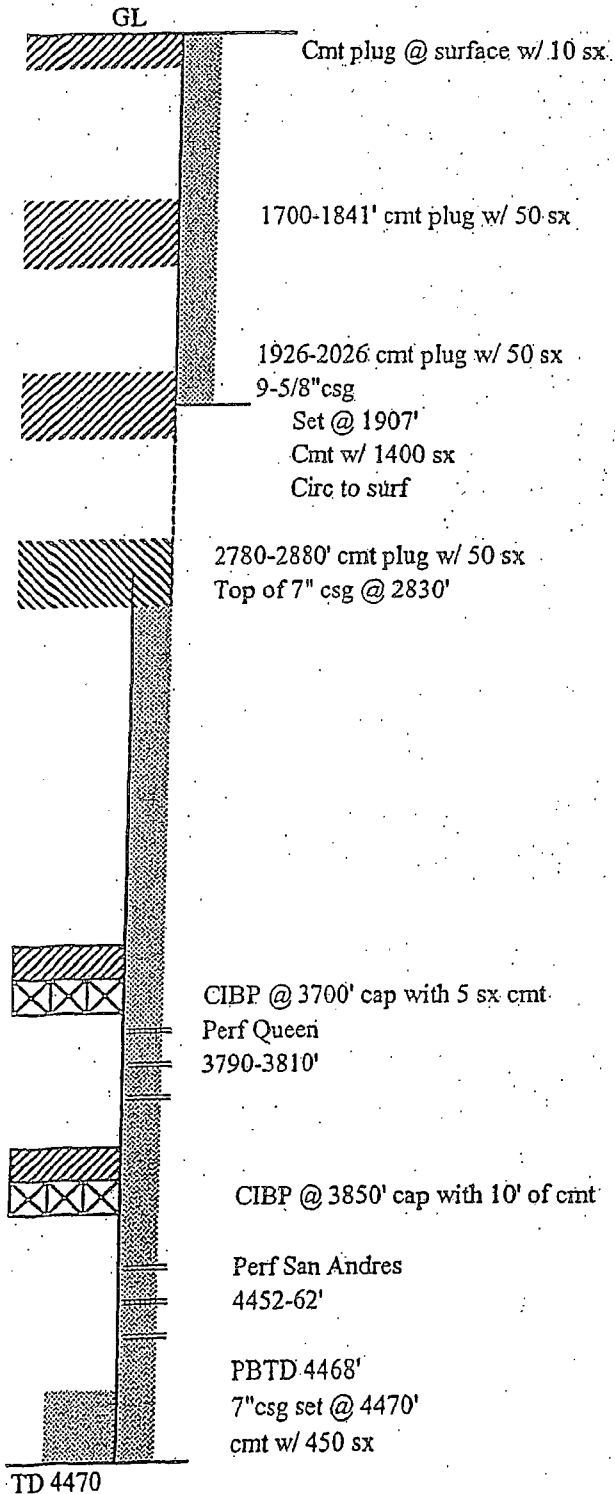
3613'

+ KB of

ft =

0

ft KB Elevation



WELL HISTORY:

Spud 5/18/1953

Rig Rlse. P&A'd well 6/22/74

Plugging Information is from State Reports.

VI.

WELLBORE SCHEMATIC

☐ Proposed

☒ Actual

Well Name & No.:

BROWNING #1 (GUSAU #112)

Operator: PHILLIPS PETROLEUM CO.

Location:

1980' FNL, 660' FWL, SEC. 29, T-18-S, R-39-E

County:

LEA

State: NM

API #:

30-025-07946

GR Elev:

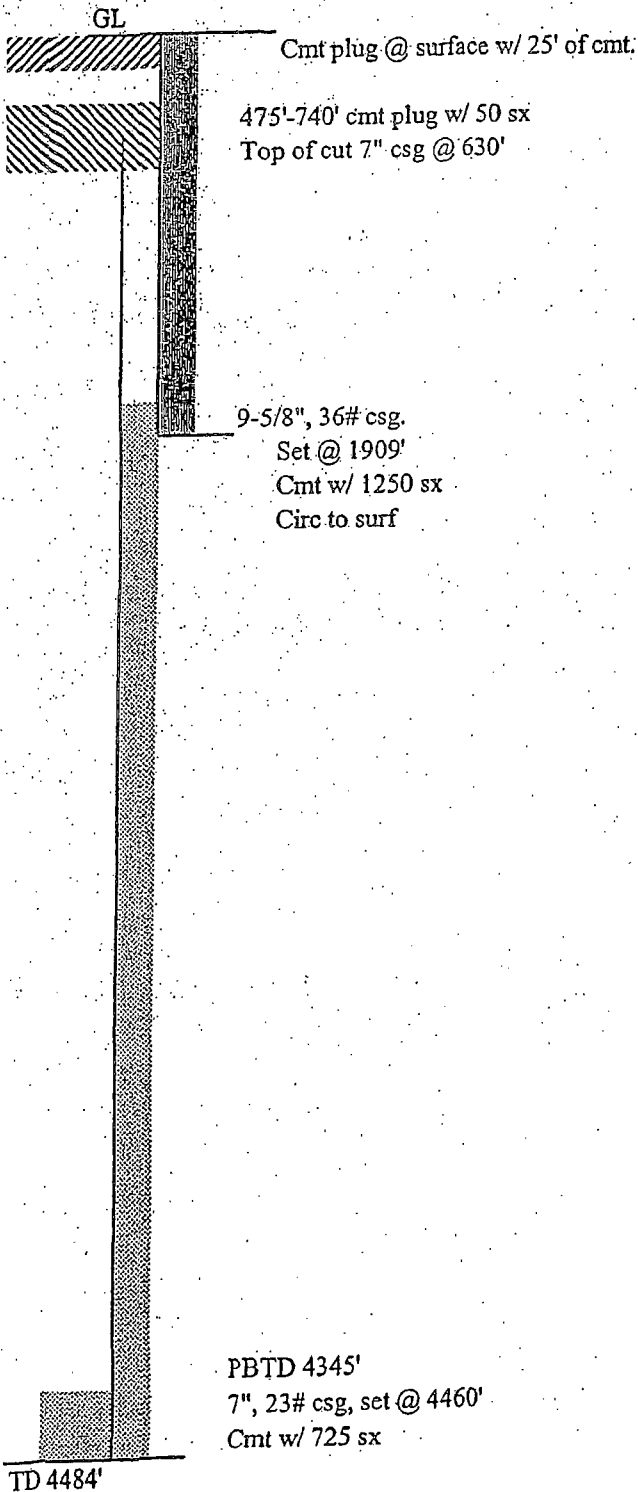
3605'

+ KB of

ft =

0

ft KB Elevation



WELL HISTORY:

Spud 6/26/53

Rig Rlse. P&A'd well 9/13/53

Plugging Information is from State Reports.

WELLBORE SCHEMATIC

☐ Proposed

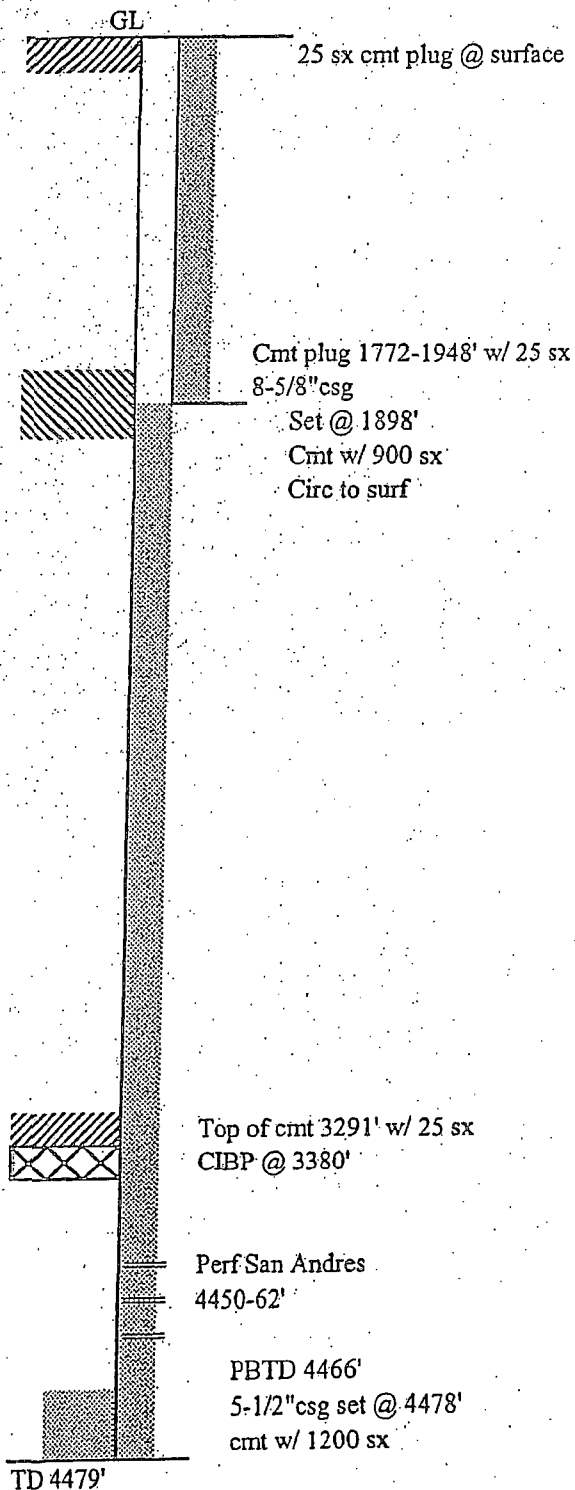
☒ Actual

Well Name & No.: SAMUEL E. CAIN #2 (EN3 AU #403) Operator: EXXON CORPORATION

Location: UNIT K, SEC. 30, T-18-S, R-39-E

County: LEA State: NM API #: 30-025-07951

GR Elev: 3616' + KB of ft = 0 ft KB Elevation



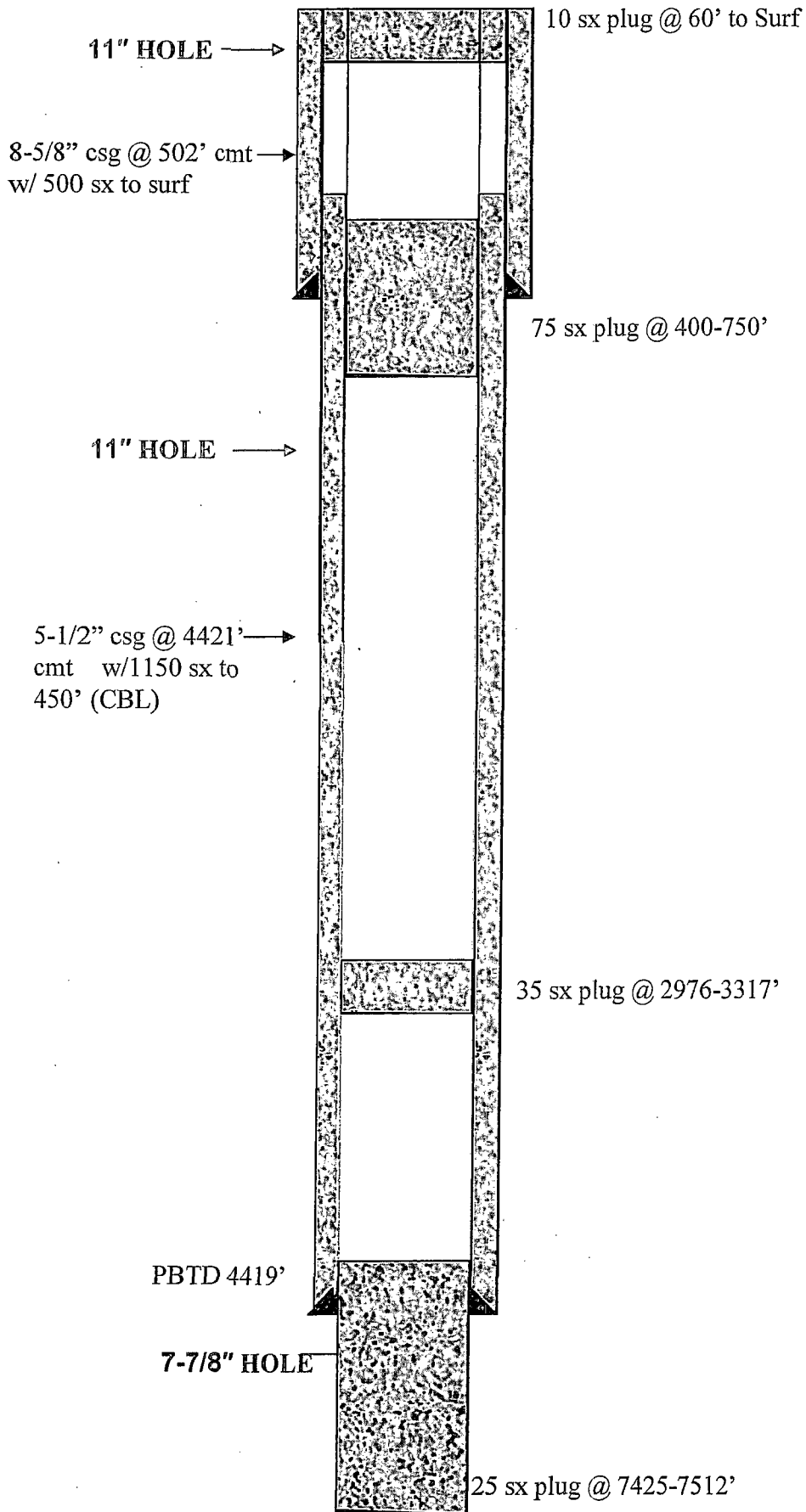
WELL HISTORY:

Spud 8/3/1953

Rig Rlse. P&A'd well 11/3/85

Plugging Information is from State Reports.

V1.



EHSAU # 613

990 FSL, 990 FWL, Section 29,
T18S R39E, Lea County, NM

API NO. 30-025-07945
ELEVATION: 3597' DF

Prepared by: RGH 7/25/08

V1.

Elevation: 3615.5' KB (10.5' above GL)

75 sx cmt plug surf.-250', perf'd @ 250'

ARENA RESOURCES, INC.

ORIGINAL OPERATOR: Sam Viersen

SPUDDED: 8/14/74

IPP: 360 BOPD, 215 MCFPD & 0 BWPD (9/10/74)

LANEY #4

560' FSL, 2000' FEL, SEC. 30, TWP 18S, Rge
39E, Lea County, N.M.

API NO.: 30-025-24800

12-1/4" HOLE

8-5/8", 32# csg @ 361'

Cmt'd w/250 sx to surf.

7-7/8" HOLE

TOC @ 3034'

5 sx cmt plug in 4-1/2" csg 292'-366' & 15 sx cmt plug
366'-411', perf'd @ 411'

50 sx cmt plug 1650'-1800', perf'd @ 1800'

TREATMENT HISTORY:

8/74: Well kicked @ 3820' after drlg Seven Rivers & inc MW from 10.2 ppg to 15 ppg. WL was from 14-16 cc for remainder of hole (2 days) - Seven Rivers was likely damaged by high MW. Set 4-1/2" csg. Perf'd Seven Rivers 3784'-3794' w/2 SPF (21 holes). Would not flow - SIIP 800 psig after 5 days. Swbd & well kicked off flwg +/- 4 BOPH. Acidized w/1,000 gals 15% MCA & 21 BS @ 2 BPM & 2700 psig. ISIP 2200 psig, 5 min. SIP 500 psig, 15 min. SIP vac. Swbd all LW back & rec 3 BO per hour, swabbing. Ran elec line CCL to check TD & found fill @ 3789'. Waited for pulling unit - 5 day SIIP 300 psig. Pulled tbg. Ran 3-3/4" bit & CO fill to 3815'. Pulled bit. Re-perf'd Seven Rivers 3788'-98' w/2 SPF (20 holes). RIH w/pkr. Swbd dry. Re-acidized w/1,000 gals 15% MCA & 20 BS @ 3 BPM & 2800 psig. ISIP 2200 psig, 5 min. SIP 1900 psig, 15 min. SIP 600 psig, 20 min. SIP 450 psig. Swbd LW & well kicked off flwg. F. 1531 BO in 130 hrs (11.8 BOPH) w/FTP 350-200 psig. Ran 72-hr PBU - indicated BHP 940 psig after 72 hrs, but was still building (several changes in slope on BHP plot, indicating damage and/or layered reservoir). Put back on prod. flwg 156 BOPD, 215 MCFPD & 0 BWPD on 9/64" ck w/FTP 200 psig.

12/74: P. 21 BOPD, 48 MCFPD & 0 BWPD.

11/75: P. 4 BOPD, 12 MCFPD & 0 BWPD.

10/76: P. 3 BOPD, 2 MCFPD & 0 BWPD.

10/85: P. 1 BOPD, gas TSTM & 0 BWPD.

4/02: LD rods, pump & tbg. Ran 3-3/4" bit to 3647'. Set CIBP @ 3600'. Loaded 4-1/2" csg w/pkr fluid & pmpd into apparent csg leak @ 0.25 BPM & 450 psig. Circ hole w/mud & spotted 25 sx cmt on CIBP @ 3600'. Perf'd 4-1/2" csg @ 1800' & sqz'd 50 sx 1650'-1800' to 1100 psig. Perf'd 4-1/2" csg @ 411' & sqz'd 50 sx 260'-411'. Spotted 10 sx surf plug 60'-surf. Had wtr flow out 4-1/2" x 8-5/8" csg annulus. DO cmt surf-60' & 260'-366'. Tstd 4-1/2" csg to 500 psig & leaked. Perf'd 4-1/2" csg @ 361' & could not pump into csg. Perf'd 4-1/2" csg @ 250'. Spotted 5 sx cmt plug 366'-292'. Cmt sqz'd 75 sx 250'-surf. Well is P&A.

4-1/2", 10.5# csg @ 3827'

Cmt'd w/200 sx to orig. TOC 3034'

PBTD: 3817'

TD: 3831'

CIBP @ 3600' w/25 sx cmt on top 3230'-3600'

Seven Rivers perms 3784' - 3798', 4 SPF

PREPARED BY: BKL 5/29/03

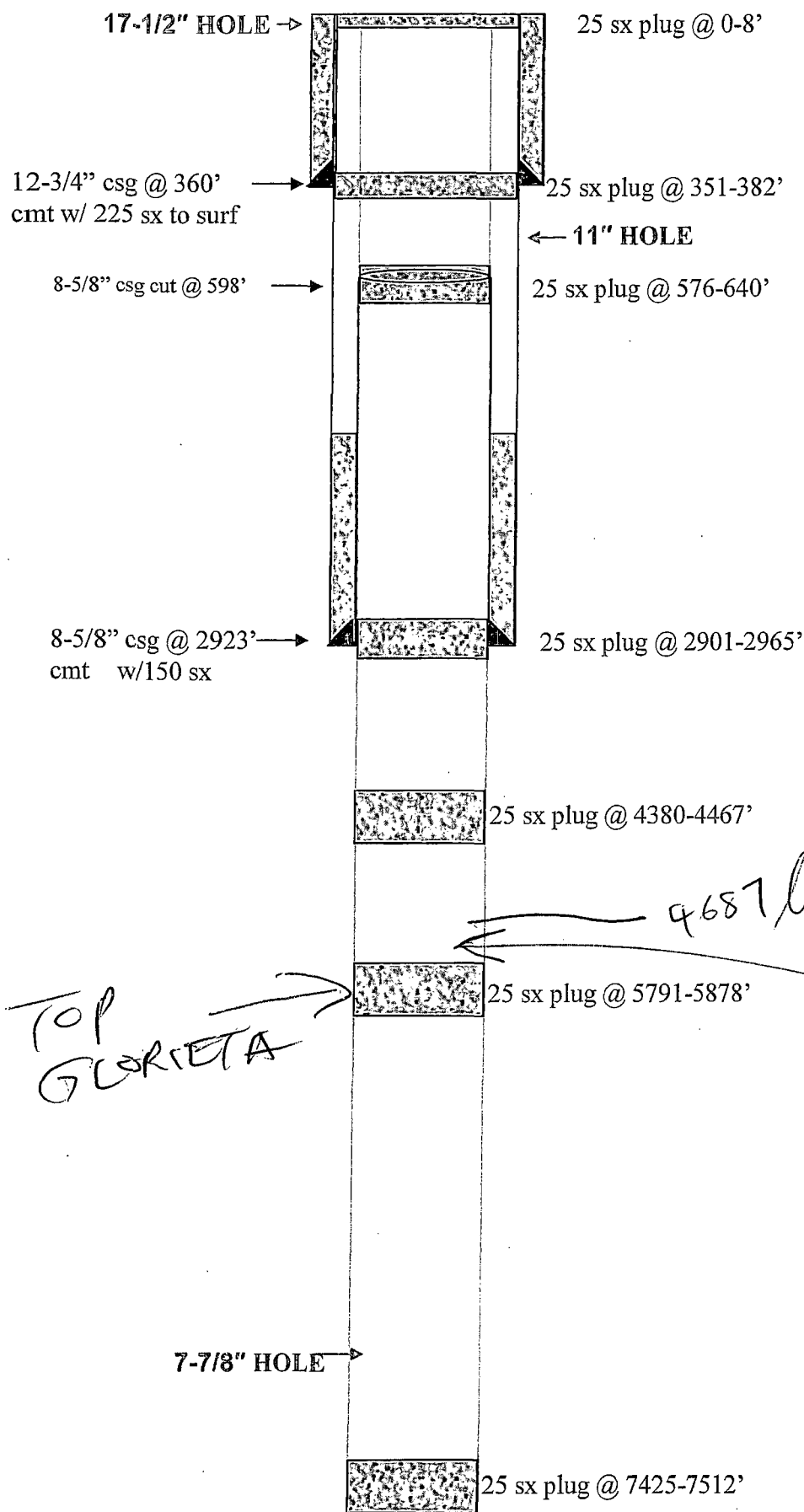
VI.



VIERSEN # 1

1980 FSL, 1980 FEL, Section 30,
T18S R39E, Lea County, NM

API NO. 30-025-23420
ELEVATION: 3617 KB



TOP
GLORIETA

4687' bottom of
UNITIZED interval

Lower SA.

TD: 7512'

Prepared by: RGH 7/25/08

Elevation: 3619' KB (13' above GL)

ORIGINAL OPERATOR: Aurora Gasoline Co.

SPUDDED: 7/19/53

IPP: 432 BOPD

9-7/8" HOLE →
7-5/8", 26# csg @ 1745'
Cmt'd w/800 sx to surf.

6-3/4" HOLE →

TOC @ 3,246' by CBL →

TREATMENT HISTORY:

1/99 Tagged btm w/tbg @ 4463'. Ran bit to btm. Ran csg inspection log 4410'-500'. Csg looked good w/one pit in shoe jt @ 4384'. Set RBP @ 4400', loaded csg w/80 bbls 2% KCl wtr & tstd to 500 psig for 15 min. OK. Est. BHP 370 psig based on 20.2 BF in csg prior to loading hole. Ran CBL log & found TOC @ 3246'. POH w/RBP. RIH w/4-3/4" bit & bailer. CO 8" of carbonate scale fill to TD 4471'. POH w/bit. Ran GR/CNL log, found TD 4471' & located 5-1/2" csg shoe @ 4416'. RIH w/pkr, spotted 1.5 bbls 20% NEFE HCl acid in OH, let soak 1 hr, spotted another 1.5 bbls 20% NEFE HCl acid in OH, let soak another 1 hr, then pumped remainder of 500 gals 20% NEFE HCl acid @ 1.5-2 BPM & 14-26 psig (ISIP vac). Swbd w/initial FL 3800' FS (est. BHP 305 psig). Put well back on pump.

8/01 Well was permitted for deepening to 4700' - there is no record of the work being done in the well file.

5-1/2", 14# csg @ 4416'

Cmt'd w/200 sx, TOC @ 3246' by CBL

TD: 4471'

ARENA RESOURCES, INC.

LANEY REESE #1

(EHS AU # 409)

SEC. 30, TWP 18S, Rge 39E, Lea County, N.M.

API NO.: 30-025-07947

TUBING RECORD:

144- 2-3/8", unanchored w/SN @ 4441' 4433
SN + PERF SUB + 30' BOPMA
BOT @ 4467.28

ROD STRING RECORD:

2625' of 3/4" API grade D, 1500' of 5/8" API grade D & 300' of 3/4" API grade D

PUMP RECORD:

2" x 1-1/2" x 16' ✓

1" x 20' GA

2' 3/4" 176-3/4 (TYPE 7B NEW)
12' 3/4" SUBS

PUMPING UNIT:

Lufkin C114-173-54 w/15 HP elec mtr,

14.31 x 53" SPM as of 6/20/03

NOTE: Well had good hydrocarbon show in the Seven Rivers 3930'-40' & the well blew out w/gas @ 3970'.

San Andres open hole 4416' - 4471' (P1 zone)

PREPARED BY: BKL 5/29/03

REVISED 8/04
PWT

Tag @ 4476

Arena Resources Inc
East Hobbs San Andres Unit
Application for Authorization to Inject
NMOCD Form C-108

VII. Proposed Injection Operations

- | | | |
|----|--------------------------------|--|
| 1) | Injection Rate: | Average: 1200 BWPD
Maximum: 2000 BWPD |
| 2) | Injection System: | Closed |
| 3) | Injection pressure (wellhead): | Average: 600 psig
Maximum: 890 psig
This is the standard 0.2 psig/ft of depth to the uppermost perforation. |
| 4) | Injection Fluid: | Water from the San Andres formation within the East Hobbs San Andres Unit. Water Analyzes for two producing wells, Carrie O Davis #2 (now EHSAU #412) and Ralph Lowe State #2 (now EHSAU #911) are included. |

VIII. Geological Data

A. Injection Zones

- | | | |
|----|--------------|--|
| 1) | Name: | San Andres Formation |
| 2) | Description: | Injection will be into the San Andres formation within the field. The San Andres is a fine to coarsely crystalline dolostones, dolomatized grainstones, and dolomitic sandstones. The formation ranges in depth from 4440' to 4700'. The total net pay in the productive area ranges from 119 to 164 feet. Average porosity is 16.2% with an aveage permeability of 11.8 md. |

B) Fresh Water Sources

The State Engineer's Office reports fresh water production from the Ogallala formation. The bottom depth of ground water is reported to be 200 feet in Section 29, 95 feet in Section 30, 110 feet in Section 31, and 70 feet in Section 32 of T18S, R39E. There are 50 permitted water wells in the area of review (see the attached table). There are no fresh water sources under the proposed injection interval.

IX. Proposed Stimulation Program

The proposed waterflood program consists of converting well EHSAU #409 into an injector. By deepening this well to 4700' and perforating the well in the San Andres formation with a small acid job stimulation. The proposed acid job will consist of about 3,000 gallons of 15% hydrochloric acid with appropriate diversion to effectively stimulate all zones. The stimulation job may differ from the one proposed here, depending on the outcome from drilling and logging as determined by the engineer in charge.

X. Logging and Test Data

Log data for EHSAU #409 has been included in this application. Copies of original logs have been sent to Hobbs for scanning into the OCD. IP Tests for this well show 432 BOPD based on 216 BO in 12 hrs thru 1" ch on 2" at 4455'. Grav: 35.7, GOR not recorded, TP 0, CP Plr at 4250'. A GOR Test has been included.

XI. Fresh Water Analysis

Attached is a fresh water analysis for two of the active water wells in this area. The well labeled P. Goode was permitted for irrigation by Coyote Farms (L04053) in Section 31. The well labeled CO Davis was permitted for domestic use by Lee Robertson (L11116) in Section 29.

XII. Disposal Well Statement

This section does not apply to this application since no disposal wells are being proposed.

XIII. Proof of Notice

A copy of this application has been furnished to all surface owners within the area of review.

Other Considerations:

Reservoir Pressure:

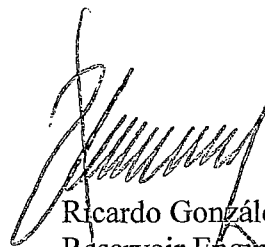
Reservoir pressure will be approximately 2820 psi at 4472' based on 890 psi injection pressure. Formation fracture pressure at this depth is approximately 3130 psi. Further analysis has been made to ensure reservoir pressure stays below fracture pressure at all injection rates for all depths.

July 31, 2008

EHSAU # 406, Justification for Conversion Statement

Converting the oil well East Hobbs Sand Andres Unit (EHSAU) # 409 into a water injection well will result in substantial additional secondary recovery of oil and gas in the unit. Close spacing between the injector and its neighboring offset wells will ensure that no oil or gas waste occurs.

Well EHSAU # 406 has a cumulative production of 526.2 MBO and 509.9 MMCF, with remaining OIP of 7.9 MBO and 32.5 MMCF based on extrapolation of production at current production time.



Ricardo González
Reservoir Engineer
Arena Resources Inc.
6555 S. Lewis Avenue
Tulsa, OK 74136

Rate/Time Graph

Project: C:\Program Files\IHS Energy\PowerTools v8.0\EastHobbsUnitSEC.mdb

Date: 7/28/2008

Time: 12:12 PM

Lease Name: EAST HOBBS SAN ANDRES UNIT (409)

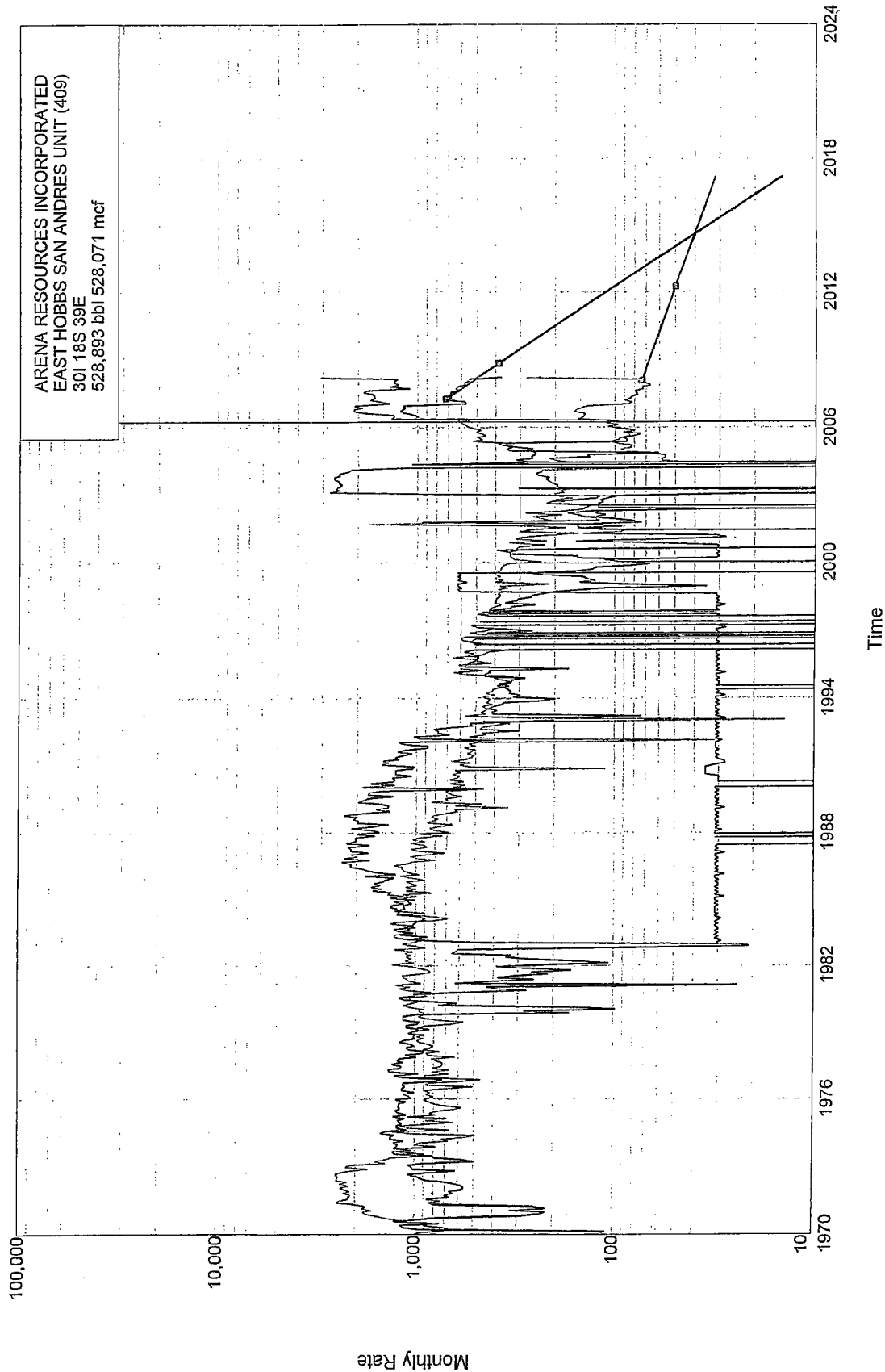
County, ST: LEA, NM

Location: 301 18S 39E

Operator: ARENA RESOURCES INCORPORATED

Field Name: HOBBS EAST

EAST HOBBS SAN ANDRES UNIT - HOBBS EAST



Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : HILLIN-SIMON

Date : 12-13-1988

Location: RALPH LOWE #2 (on 12-06-1988)

Sample 1

Specific Gravity:

1.013

Total Dissolved Solids:

17814

pH:

7.28

IONIC STRENGTH:

0.337

CATIONS:

		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca ⁺²)	36.0	720
Magnesium	(Mg ⁺²)	22.0	267
Sodium	(Na ⁺¹)	230	5290
Iron (total)	(Fe ⁺²)	0.315	8.80
Barium	(Ba ⁺²)	0.003	0.200

ANIONS:

Bicarbonate	(HCO ₃ ⁻¹)	33.4	2040
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	37.5	1800
Chloride	(Cl ⁻¹)	217	7700

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>	<u>Calcium</u>	<u>Calcium</u>
	<u>Carbonate</u>	<u>Sulfate</u>
86°F 30°C	1.1	-17

VII.
4.

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : HILLIN-SIMON

Date : 12-13-1988

Location: C. O. DAVIS #2 (on 12-06-1988)

Specific Gravity:

Total Dissolved Solids:

pH:

IONIC STRENGTH:

Sample 1

1.013

17970

6.65

0.348

CATIONS:

		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca ⁺²)	52.0	1040
Magnesium	(Mg ⁺²)	22.0	267
Sodium	(Na ⁺¹)	212	4870
Iron (total)	(Fe ⁺²)	3.69	103
Barium	(Ba ⁺²)	0.003	0.200

ANIONS:

Bicarbonate	(HCO ₃ ⁻¹)	41.2	2510
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	47.4	2280
Chloride	(Cl ⁻¹)	197	7000

SCALING INDEX (positive value indicates scale)

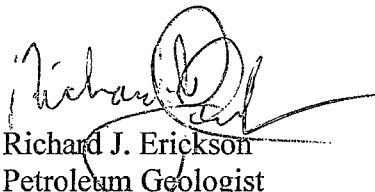
<u>Temperature</u>	<u>Calcium</u> <u>Carbonate</u>	<u>Calcium</u> <u>Sulfate</u>
86°F 30°C	0.68	-4.6

VIII.

July 31, 2008

Statement on Faults and Open Conduits

There is no evidence of open conduits such as non-sealing faults, vertical fractures, uncemented or unacceptable cement jobs on casing for the wells under the area of review (AOR) that could cause the injection fluid (water from the San Andres Formation) on the proposed injection well (EHSAU #409) to go into any formation other than the proposed formation for this permit (San Andres formation) in the East Hobbs San Andres Unit.



Richard J. Erickson
Petroleum Geologist
Arena Resources Inc.
6555 South Lewis Avenue
Tulsa, OK 74136

WATER WELL DATA REPORT AS OF FEBRUARY 12, 2002

	Use	Owner	Well Number	Twp	Rng	Sec	Qtr	Qtr	Qtr	Qtr	Start Date	Finish Date	Depth (ft.) Well Water
1	DOM	MARTIN HUGHES	L 04096 APPRO EXP	18S	39E	29	NE						
2	DOM	WILLIAM TUCKER	L 04771 APPRO	18S	39E	29	NW	NE	NW	12/15/1961	12/16/1961	120	65
3	DOM	LEE ROBERSON	L 11116	18S	39E	29	NW	NE	NW	8/21/2000	8/21/2000	240	200
4	PRO	ANADARKO PROD CO.	L 08365	18S	39E	29	NW	SE		3/11/1981	3/12/1981	150	84
5	IRR	LEE ROBERSON	L 03430 S	18S	39E	29	NW	SW	NE				
6	PRO	KEATING DRILLING CO.	L 01217 APPRO	18S	39E	29	SE	SE	NE	9/9/1951	9/11/1951	120	
7	DOM	D. D. JONES	L 06512	18S	39E	30	NE	NE		9/12/1969	9/14/1969	170	70
8	DOM	TERRY CAWLEY	L 09289	18S	39E	30	NE	NE	NW	8/5/1983	8/5/1983	150	60
9	DOM	LEROY N. BOX	L 09912	18S	39E	30	NE	NE		4/27/1987	4/27/1987	155	95
10	DOM	ADAN RODRIQUEZ	L 09948	18S	39E	30	NE	NE		9/3/1987	9/3/1987	150	88
11	DOM	TURNER J C JR	L 10389	18S	39E	30	NE	NE	NW	5/13/1994	5/14/1994	180	87
12	DOM	ROB L. HOLDRIDGE	L 05183 EXP	18S	39E	30	NE	NW	NE				
13	DOM	CARLTON C. WADE	L 05187 EXP	18S	39E	30	NE	NW					
14	DOM	CARLTON C. MR. WADE	L 05448 EXP	18S	39E	30	NE	NW					
15	DOM	ROB L. HOLDRIDGE	L 10538	18S	39E	30	NE	NW	NW	2/5/1996	2/16/1996	200	
16	PRO	THE TEXAS COMPANY	L 02173 APPRO	18S	39E	30	NE	SE					
17	DOM	JIMMY D. ROBERTS	L 08039	18S	39E	30	NE	SE		3/21/1979	3/28/1979	150	50
18	DOM	JERRY D. SMITH	L 08040	18S	39E	30	NE	SE		5/14/1979	5/18/1979	150	85
19	DOM	ROB L. HOLDRIDGE	L 07231 CLW	18S	39E	30	NE	SW	NE	8/25/2001	8/25/2001	195	
20	DOM	THOMAS G. PIERCE	L 08294	18S	39E	30	NE	SW	NE	7/1/1980	7/3/1980	150	90
21	DOM	MICHAEL W. HOLDRIDGE	L 08550	18S	39E	30	NE	SW		10/29/1981	10/31/1981	150	82
22	DOM	GARNICE LAND	L 05197	18S	39E	30	NE			8/26/1963	8/28/1963	100	70
23	DOM	JACK ROBERTS	L 05924	18S	39E	30	NE			11/26/1989	11/26/1989	150	85
24	DOM	ADAN B. RODRIQUEZ	L 07492	18S	39E	30	NE			1/23/1980	1/24/1980	150	82
25	PRO	HUMBLE OIL & REFINING CO.	L 02204 APPRO	18S	39E	30	NW	SE	NW	5/3/1953	5/4/1953	123	65
26	EXP	RICE ENGINEERING COMPANY	L 07671 EXPL 1 & 2	18S	39E	30	NW	SE	NE	3/30/1977	3/31/1977	150	
27	PRO	CACTUS DRILLING COMPANY	L 06633 (E)	18S	39E	30	SE	NW	SW				
28	DOM	DARRELL G. BINGHAM	L 04054 REPAR	18S	39E	31	NE	NW	NW	9/9/1980	9/12/1980	148	105
29	PRO	DAVIDSON DRILLING CO.	L 01333	18S	39E	31	NE	SW		1/1/1952	1/2/1952	123	55
30	DOM	OLLIE T. FORE	L 02439 APPRO	18S	39E	31	NW	NE	SW	1/1/1953	1/3/1953	135	60
31	DOM	L. W. GASSAWAY	L 06605 EXP	18S	39E	31	NW	NW	NW				
32	DOM	TERRY L. OWEN	L 10006	18S	39E	31	NW			7/6/1988	7/18/1988	120	79
33	IRR	COYOTYE FARMS, LLC	L 04053	18S	39E	31	SE	SW	NE			160	
34	DOM	JOHN KING	L 08982	18S	39E	31	SW	NE	SE				
35	DOM	GUILLERMO VILLALOBOS	L 09160	18S	39E	31	SW	NE	NE	4/17/1983	4/18/1983	151	73
36	DOM	ROBERT CUNNINGHAM	L 08698	18S	39E	31	SW	SE		3/12/1982	3/18/1982	150	100
37	PRO	INC. PRIMARY FUELS	L 09999	18S	39E	31	SW	SE		5/6/1988	5/10/1988	164	110
38	DOM	GEORGE A. MANN	L 06891 EXP	18S	39E	31	SW	SW	SE				
39	DOM	RAUL C. GONZALEZ	L 08565	18S	39E	31	SW	SW	NE	10/27/1981	10/30/1981	140	95
40	DOM	MARGARITA ROBLES	L 10973	18S	39E	31	SW	SW	NW	8/13/1999	8/13/1999	158	103
41	DOM	EARL MANNING	L 06713 EXP	18S	39E	31	SW						
42	DOM	BETTY FOLLIS	L 06714 EXP	18S	39E	31	SW						
43	DOM	JACK SICKLER	L 08862 EXP 1 & 2	18S	39E	31	SW						
44	DOM	PAULINO G. QUIROZ	L 09453 EXP	18S	39E	31	SW						
45	DOM	RAMIREZ ARTURO	L 10331	18S	39E	31	SW						
46	DOM	PAULINO G. QUIROZ	L 10692	18S	39E	31	SW						
47	PRO	SHARPE DRILLING CO.	L 01325 APPRO	18S	39E	32	NE	NE	NE	12/18/1952	12/19/1952	115	40
48	PRO	STONE DRILLING CO.	L 02302 APPRO	18S	39E	32	NW	NW	NE			86	30
49	STK	GARY M. SCHUBERT	L 10144	18S	39E	32	SW	NE		9/5/1990	9/5/1990	150	70
50	DOM	SCHUBERT GARY	L 10298	18S	39E	32	SW	SW	SW	11/20/1992	11/20/1992	180	68

Above Information Obtained from: NM State Engineer's Office - Water Administration Technical Engineering Resource System

Submit 2 copies to Appropriate District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator Fossil Fuels Inc.		Pool Hobbs San Andres East		County Lea									
Address PO Box 479, Dallas, TX 75221-0479		TYPE OF TEST - (X)		Completion ☐ Special ☒									
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.
		U	S	T						R	WATER BBL.S.	GRAY. OIL	
Laney Reese	1	I	30	18	39	4/10/91	--	--	24	2	23	51	2217

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Rule 301, Rule 1116 & appropriate pool rules.)

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Signature

Dana Pearce, Production Secretary
Printed name and title

04/15/91

Date

214/969-5555

Telephone No.

X1,


**CARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENERQUEST RESOURCES L.L.C.
ATTN: CHRIS RENAUD
P.O. BOX 11150
MIDLAND, TX 79702
FAX TO: (915) 687-4804

Receiving Date: 02/21/02
Reporting Date: 02/22/02
Project Number: NOT GIVEN
Project Name: FRESH WATER SAMPLES
Project Location: PEARL GOODE & C.O. DAVIS

Sampling Date: 02/21/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (mS/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		02/22/02	02/21/02	02/21/02	02/21/02	02/21/02	02/21/02
H6533-1	P. GOODE	50	83	22	2.82	1022	155
H6533-2	C.O. DAVIS	111	194	62	6.29	2395	200
Quality Control		NR	55	49	5.27	1489	NR
True Value QC		NR	50	50	5.00	1413	NR
% Accuracy		NR	110	97.2	105	105	NR
Relative Percent Difference		NR	0	6.0	0	0.3	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
----------	-------------	-----------	------	-------	-------

	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	02/21/02	02/21/02	02/21/02	02/21/02	02/21/02	02/22/02
H6533-1	124	77	0	190	7.24	465
H6533-2	384	239	0	244	7.35	1472
Quality Control	1020	52.66	NR	948	7.11	NR
True Value QC	1000	50.00	NR	1000	7.00	NR
% Accuracy	102	105	NR	94.8	102	NR
Relative Percent Difference	5.0	0.6	NR	0.4	1.6	5.1

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
----------	-------------	-------	-------	-------	-------	-------

Amy Hill
Chemist

2-22-02
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

H6533

AFFIDAVIT OF NOTIFICATION
East Hobbs Unit, Lea County, NM
Application to Inject

STATE OF OKLAHOMA)
)
COUNTY OF TULSA)

I, Thomas W. Wahl ("Affiant"), serving in the capacity of Vice President of Land for Arena Resources, Inc., of lawful age, being first duly sworn on oath, states that I am familiar with the East Hobbs Unit in Lea County, New Mexico operated by Arena and the notification requirement in the pending application which reads in part:

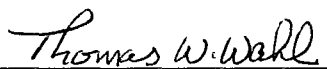
"All applicants must furnish proof that a copy of the application has been furnished, by registered or certified mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location."

✓ Affiant further states that the surface of the land on which the well is to be located is owned by Arena Resources, Inc. with such ownership covering the NE/4 SE/4 Section 30-18S-39E, Lea Co. NM as confirmed by the attached Assessment Information from the Lea. County Assessor's Office.

Affiant further states that all leasehold operations within one-half mile of the well location are those of Arena Resources, Inc. with no outside operated leases within this radius.

Affiant further states that based on these facts the notification requirement as quoted above should be deemed as satisfied.

On this Twenty-first day of August, 2008, Affiant further saith not.



Thomas W. Wahl
Certified Petroleum Landman #3085

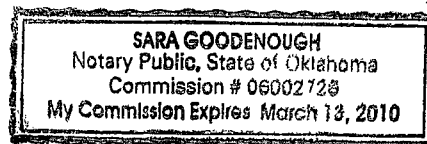
STATE OF OKLAHOMA)
)
COUNTY OF TULSA)

Before me the undersigned, a Notary Public, within and for said County and State, on this 21st day of August, 2008, personally appeared Thomas W. Wahl, to me personally known to be the identical person who executed the foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have set my hand and seal the day and year last above written.

My commission expires 3/13/2010

Sara Goodenough
Notary Public



RECEIVED

2008 AUG 33 PM 2 52

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

PUBLISHER

of the Hobbs News-Sun, a news-
paper published at Hobbs, New
Mexico, do solemnly swear that
the clipping attached hereto was
published in the regular and entire
issue of said paper, and not a sup-
plement thereof for a period

of 1 issue(s).
Beginning with the issue dated
August 26, 2008

and ending with the issue dated
August 26, 2008

Kathi Bearden

PUBLISHER

Sworn and subscribed to before

me this 26th day of
August 2008

[Signature]
Notary Public.

My Commission expires
February 07, 2009
(Seal)



OFFICIAL SEAL
DORA MONTZ
NOTARY PUBLIC
STATE OF NEW MEXICO

My Commission Expires: _____

LEGAL
AUGUST 26, 2008

1) Applicant
Arena Resources, Inc.
6555 S. Lewis
Tulsa, OK 74136
918-281-6650
Contact: Ricardo Gonzalez

2) Intended purpose of the injection well and well locations:
The wells will be equipped as produced water injection
wells for the purpose of enhanced oil recovery.

The well and Legal Location:
East Hobbs San Andrews Unit #409
Unit Letter I
1980' From South Line 660' From East Line
Sec. 30 T18S R39E
Lea County, NM

3) Formation Name and Depth with expected maximum in-
jection rates and pressures:
Formation: San Andres
Depth: 4471
Maximum Injection Rate: 2000BWPD
Maximum Injection Pressure: 890psig

4) 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.
#24343

This newspaper is duly qualified to
publish legal notices or advertise-
ments within the meaning of
Section 3, Chapter 167, Laws of
1937, and payment of fees for said
publication has been made.

02107163 00015822
ARENA RESOURCES, INC.
2130 W. BENDER BLVD.
HOBBS, NM 88240-9203

JUL-19-2004 14:02 FROM: CROWQUEST 13TH FLOOR (432)682-3168

TO: 19187477620

P.2/2

JUL 16 04 01:16P

UTOR

915 682 1458

P.2

Unpublished
1425 N. French Dr., Hobbs, NM
88240

State of New Mexico
Energy, Minerals and Natural Resources

Form C-104A
Permit 961

Oil Conservation Division

1220 S. St Francis Dr.
Santa Fe, NM 87505

Change of Operator

Previous Operator Information

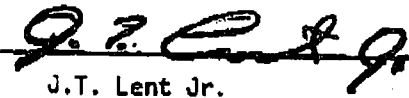
OORID: 161620
Name: CROWQUEST RESOURCES, LLC
Address: PO Box 11130
Address:
City, State, Zip: Midland, TX 79702

New Operator Information

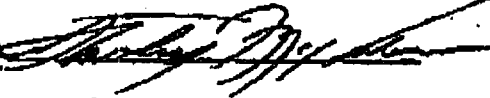
Effective Date: 05/01/2004
OORID: 228420
Name: ARENA RESOURCES, INC.
Address: 4920 S. Lewis
Address: Suite 107
City, State, Zip: Tulsa, OK 74105

I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information on this form and the certified list of wells is true to the best of my knowledge and belief.

Previous Operator

Signature: 
Printed Name: J.T. Lent Jr.
Title: Vice President Operations
Date: 7/19/2004 Phone: (432)685-3116

New Operator

Signature: 
Printed Name: Stanley McCabe
Title: Chairman
Date: 7/16/04 Phone: (918) 747-6060

NMOCD Approval

Electronic Signature: Chris Williams, District I

Date: July 20, 2004

<http://www.emnrd.state.nm.us/ocd/permitting/C104AForm.aspx?PermitID=961&District=...> 7/16/2004

Injection Permit Checklist (7/8/08)

Case _____ R- _____ SWD ~~WEX~~ ~~PMX~~ 252 IP# _____ Permit Date 10/21/08 UIC Qtr _____
 # Wells _____ Well Name: East Hobbs SA UNIT #409
 API Num: (30-) 025-07947 Spud Date: old New/Old: 0 (UIC primacy March 7, 1982)
 Footages 1980 FSL/660 FEL Unit I Sec 30 Tsp 185 Rge 39E County LEA
 Operator: Clerna Resources, INC. Contact Ricardo Gonzalez
 OGRID: 220420 RULE 40 Compliance (Wells) 2/293 (Finan Assur) OK
 Operator Address: 6555 SOUTH LEWIS AVENUE, TULSA, OK 74136
 Current Status of Well: Problem

Planned Work to Well: Deepen Run Liner Planned Tubing Size/Depth:

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing ☒ Surface	<u>9 7/8 7 5/8</u>	<u>1,745</u>	<u>800</u>	<u>CIRC</u>
Existing ☐ Intermediate				
Existing ☒ Long String	<u>6 3/4 5 1/2</u>	<u>4416</u>	<u>200</u>	<u>3246 CBL</u>

DV Tool _____ Liner 4" RTG 4700' Open Hole _____ Total Depth 4471' PBTB 451' HOLE
 Well File Reviewed ☒ EXISTING

Diagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: NONE

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)			
Above (Name and Top)			
Injection.....			
Interval TOP:	<u>4472</u>	<u>SA</u>	
Injection.....			
Interval BOTTOM:	<u>4672</u>	<u>SA</u>	
Below (Name and Top)			

A-11980-A
Core 13041/42
894 PSI Max. WHIP
NO Open Hole (Y/N)
NO Deviated Hole?

Sensitive Areas: Capitan Reef Cliff House Salt Depths 2030
Potash Area (R-111-P) Potash Locs Noticed?
 Fresh Water: Depths: 0-200' Wells(Y/N) yes Analysis Included (Y/N): ☒ Affirmative Statement OK
 Salt Water: Injection Water Types: _____ Analysis?
 Injection Interval.....Water Analysis: _____ Hydrocarbon Potential _____

Notice: Newspaper(Y/N) ☒ Surface Owner Clerna Resources Mineral Owner(s) _____
 RULE 701B(2) Affected Parties: NONE

Area of Review: Adequate Map (Y/N) _____ and Well List (Y/N) _____
 Active Wells 28 Num Repairs 0 Producing in Injection Interval in AOR yes - waterflood
 P&A Wells 6 Num Repairs 0 All Wellbore Diagrams Included? yes
 Questions to be Answered: Seal E-log after deepening

Required Work on This Well: _____ Request Sent _____ Reply: _____
 AOR Repairs Needed: _____ Request Sent _____ Reply: _____
 _____ Request Sent _____ Reply: _____

East Hobbs SA UNIT
32300

will be new

4472
8944