

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]  
 [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD
- Check One Only for [B] or [C]  
 [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR
- [D] Other: Specify \_\_\_\_\_
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or  Does Not Apply  
 [A]  Working, Royalty or Overriding Royalty Interest Owners  
 [B]  Offset Operators, Leaseholders or Surface Owner  
 [C]  Application is One Which Requires Published Legal Notice  
 [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,  
 [F]  Waivers are Attached

30-025-03151

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[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate and complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

David Plaisance		Vice President Exploration & Production	4/22/2005
Print or Type Name	Signature	Title	Date
		dplaisance@paladinenergy.com	
		e-mail Address	

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_  Yes \_\_\_\_\_ No
- II. OPERATOR: \_\_\_\_\_ Paladin Energy Corp. \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ 10290 Monroe Dr., Dallas Texas 75229 \_\_\_\_\_  
CONTACT PARTY: \_\_\_\_\_ David Plaisance \_\_\_\_\_ PHONE: \_\_\_\_\_ 214-654-0132 ext 3 \_\_\_\_\_
- 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: \_\_\_\_\_
- 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. **5,000 gallons of 15% HCL acid if needed.**
- \*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: \_\_\_\_\_ David Plaisance \_\_\_\_\_ TITLE: \_\_\_\_\_ V.P. Exploration & Production \_\_\_\_\_  
SIGNATURE: \_\_\_\_\_ David Plaisance \_\_\_\_\_ DATE: \_\_\_\_\_ 4/22/05 \_\_\_\_\_
- E-MAIL ADDRESS: \_\_\_\_\_ dplaisance@paladinenergy.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: \_\_\_\_\_

### 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.

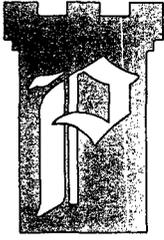
Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (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.**

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**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.



**PALADIN ENERGY CORP.**

April 22, 2005

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

RE: Application for Authorization to Inject  
South Vacuum Unit 351 SWD  
Sec 35, 18S, 35E  
Lea County, New Mexico  
API # 025-30-03150

Dear Sir/Madam,

Please find enclosed Form C-108, Application for Authorization to Inject, and all related attachments for the purpose of obtaining a permit to inject produced waters from the South Vacuum Field.

If additional information is required, please call David Plaisance or Ann Westberry at (214) 654-0132. Thank you.

Sincerely  
Paladin Energy Corp.

David Plaisance  
V.P. Exploration & Production

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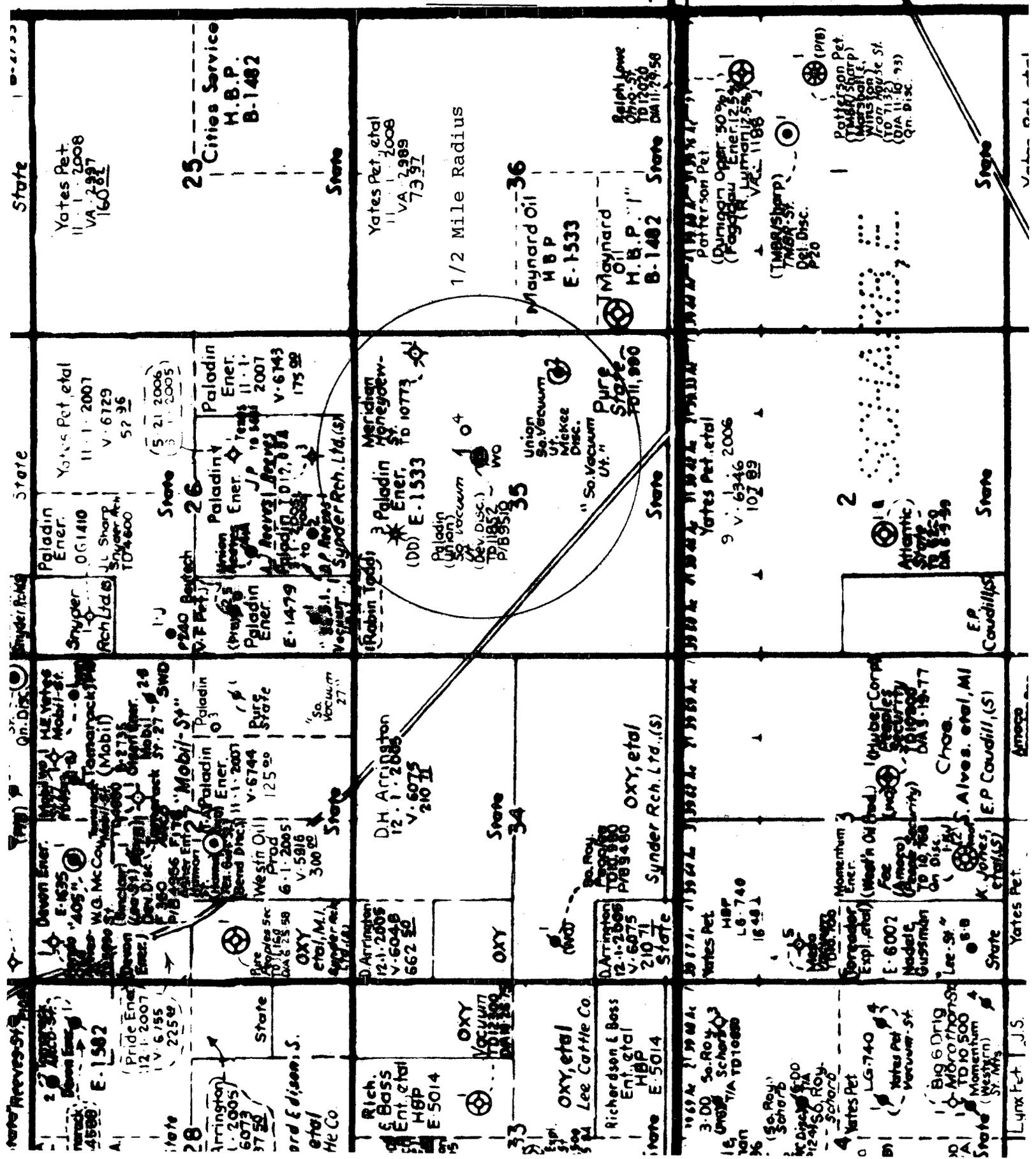




EXHIBIT V

To Hobbs

To Hobbs



State

State

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INJECTION WELL DATA SHEET

PALADIN ENERGY CORP.

OPERATOR:

South Vacuum Unit 35-1

WELL NAME & NUMBER:

1980 FNL, 1980 FEL, Sec 35, T18S, R35E

WELL LOCATION:

FOOTAGE LOCATION

UNIT LETTER

SECTION

TOWNSHIP

RANGE

WELLBORE SCHEMATIC

\*see attached schematic

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 15"

Casing Size: 11-3/4"

Cemented with: 350 sx.

or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface

Method Determined: Circulated

Intermediate Casing

Hole Size: 11"

Casing Size: 8-5/8"

Cemented with: 500 sx.

or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 1100'

Method Determined: Calculated

Production Casing

Hole Size: 7-7/8"

Casing Size: 5-1/2"

Cemented with: 340 sx.

or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 8846'

Method Determined: Bond Log

Total Depth: 11,846'

Injection Interval

Perforations: 11,643-680' Open Hole 11,836-12,100'  
(Perforated or Open Hole: indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" Lining Material: Plastic Coating

Type of Packer: Lockset Type - Plastic Coated

Packer Setting Depth: 11,525' (+,-)

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

Additional Data

- 1. Is this a new well drilled for injection? \_\_\_\_\_ Yes  No \_\_\_\_\_  
 If no, for what purpose was the well originally drilled? Devonian Producer

\_\_\_\_\_

2. Name of the Injection Formation: Devonian

3. Name of Field or Pool (if applicable): South Vacuum field

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. \_\_\_\_\_

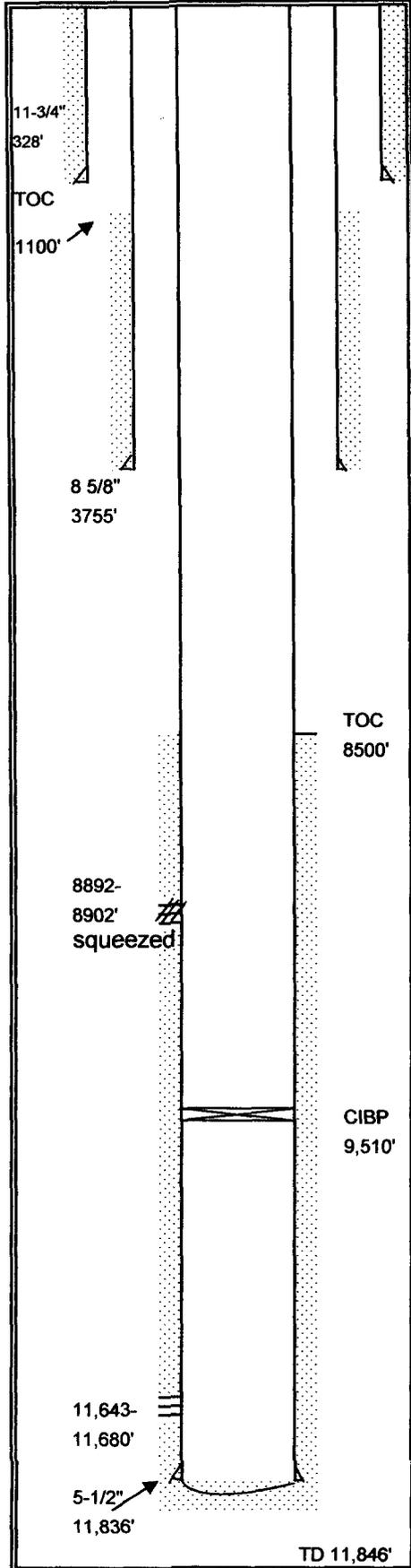
Bone Springs, 8892-8902', Squeezed with 100 sacks

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: \_\_\_\_\_

Vacuum, Mckee South - 13,500-14,800'

\_\_\_\_\_  
\_\_\_\_\_

Wellbore Schematic  
Present Completion



Lease: S. Vacuum Unit Well: 351 SWD API # 30-025-03150  
 Operator: Paladin Energy Corp.  
 Field: South Vacuum County: Lea State New Mexico  
 Section 35 Township 18-s Range 35-E  
 Elev. GL \_\_\_\_\_ Elev. DF 3869' Elev. KB \_\_\_\_\_  
 Spudded 9/8/1957 Completed 1/16/1958

Surface Casing	11-3/4"	42#	Grade _____
	Set @	328'	Hole Size <u>15"</u>
	TOC	surf.	Sacks <u>350</u>
Intermediate Casing	8-5/8"	32#	Grade _____
	Set @	3755	Hole Size <u>11"</u>
	TOC	1100'	Sacks <u>500</u>
Production Casing	5-1/2"	17#	Grade _____
	Set @	11,846'	Hole Size <u>7-7/8"</u>
	TOC	8846'	Sacks <u>340</u>
	(Bond Log)		

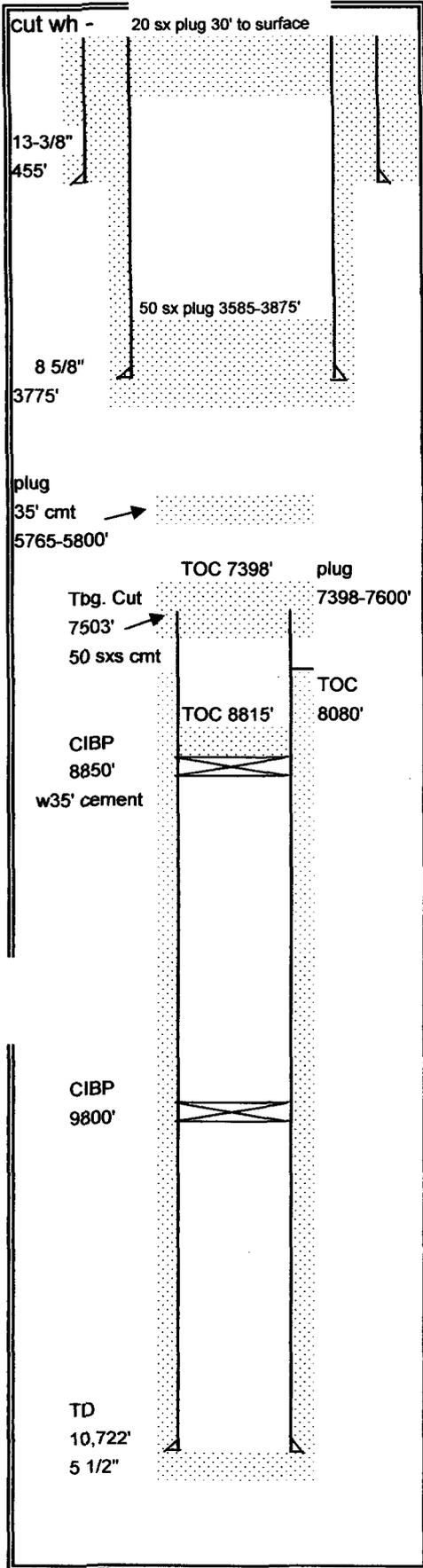
Liner Record	Grade _____
	Top @ _____ Bottom @ _____
	Screen _____ Hole Size _____
	TOC _____ Sacks _____

Tubing Detail	Grade/Trd. _____
	Pkr. Set @ _____ EOT _____
	Nipples _____
	Anchors _____ Rods _____

Perforation Record	Devonian - <u>11,643-680'</u>
	Bone Springs - <u>8,892-902'</u>
	_____
	_____
	_____
	_____
	_____
	_____

Prepared By: David Plaisance  
 Present Completion 4/1/2005 Date: \_\_\_\_\_

# WELLBORE SCHEMATIC



**Lease:** Honeydew 35 State      **Well:** 1      **API #** 30-025-30003  
**Operator:** State BTD  
**Field:** S. Vacuum      **County:** Lea      **State** New Mexico  
**Section** 35      **Township** 18-S      **Range** 35-E  
**Elev. GL** 3866'      **Elev. DF** \_\_\_\_\_      **Elev. KB** \_\_\_\_\_  
**Spudded** 10/12/1987      **Completed** 11/9/1987

Surface Casing	13-3/8"      48#      Grade _____
	Set @ 455'      Hole Size 17 1/2"
	TOC Surface      Sacks 475
Intermediate Casing	8 5/8"      32#/Ft.      Grade _____
	Set @ 3775'      Hole Size 12-1/4"
	TOC Surface      Sacks 1,500

Production Casing	5 1/2" OD      17#/Ft.      Grade _____
	Set @ 10,722'      Hole Size 7 7/8"
	TOC 8,080'      Sacks 600
*Temp Survey	

Liner Record	" OD      #/Ft.      Grade _____
	Top @ _____      Bottom @ _____
	Screen _____      Hole Size _____
	TOC _____      Sacks _____

Tubing Detail	Grade/Trd. _____
	TAC Set @ _____      EOT _____
	Nipples _____
Anchors _____      Rods _____	

**Perforation Record**      No perforations - dry hole

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**P&A Record**      CIBP @9800'

\_\_\_\_\_      CIBP @ 8850", dump bailed 35', TOC 8815"

\_\_\_\_\_      50 sxs 7398-7600'

\_\_\_\_\_      50 sxs 3585-3875'

\_\_\_\_\_      10 sxs 0 to surface

\_\_\_\_\_      Cut off Wellhead-install dry hole marker

**Comments:**      Well P&A'd 9/30/88

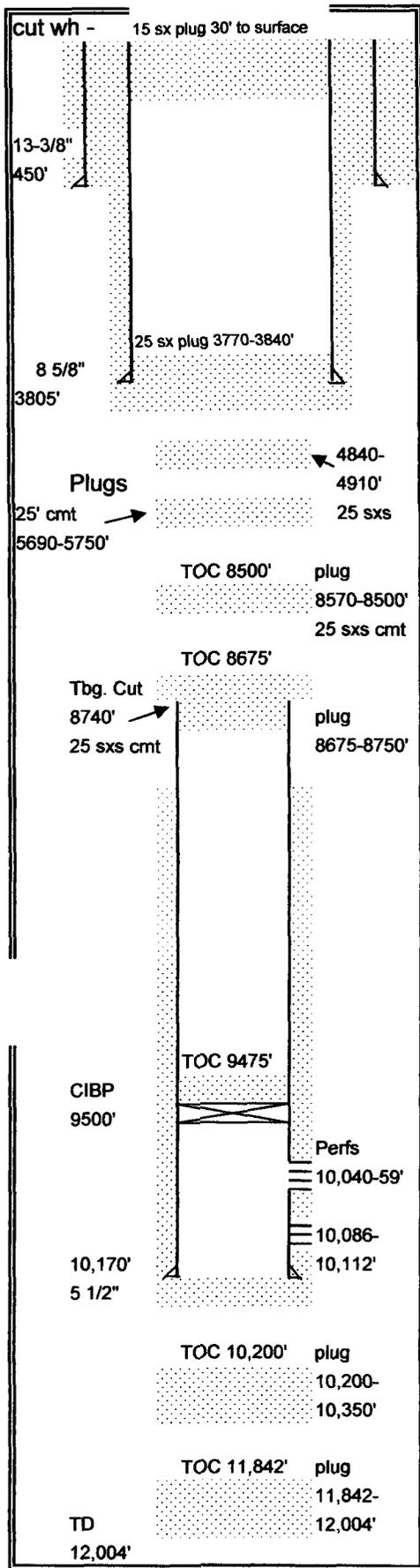
\_\_\_\_\_      dry hole marker 9/30/88

**PRESENT COMPLETION**

**Date:** \_\_\_\_\_

**Prepared By:** \_\_\_\_\_

# WELLBORE SCHEMATIC



**Lease:** Reeves A      **Well:** 3-26      **API #** 30-025-03136  
**Operator:** State BTD  
**Field:** S. Vacuum      **County:** Lea      **State** New Mexico  
**Section** 26      **Township** 18-S      **Range** 35-E  
**Elev. GL** 3866'      **Elev. DF** \_\_\_\_\_      **Elev. KB** \_\_\_\_\_  
**Spudded** \_\_\_\_\_      **Completed** 8/1/1960

<b>Surface Casing</b>	13-3/8"	48#	Grade	_____
	Set @	455'	Hole Size	17 1/2
	TOC	Surface	Sacks	475
<b>Intermediate Casing</b>	8 5/8"	32#/Ft.	Grade	_____
	Set @	3805'	Hole Size	12-1/4"
	TOC	Surface	Sacks	1,500
<b>Production Casing</b>	5 1/2" OD	17#/Ft.	Grade	_____
	Set @	10,170'	Hole Size	7 7/8"
	TOC	_____	Sacks	115
<b>Liner Record</b>	" OD	#/Ft.	Grade	_____
	Top @	_____	Bottom @	_____
	Screen	_____	Hole Size	_____
	TOC	_____	Sacks	_____
<b>Tubing Detail</b>			Grade/Trd.	_____
	TAC Set @	_____	EOT	_____
	Nipples	_____		_____
	Anchors	_____	Rods	_____
<b>Perforation Record</b>	10,046-59'			_____
	10,086-112'			_____
	Drilled to a total depth of 12,004'			_____
	45 sxs open hole 11,842-12,004'			_____
<b>P&amp;A Record</b>	45 sxs open hole 12,200-10350'			_____
	CIBP @ 9,475' w25' of cmt'			_____
	25 sxs 7398-7600'			_____
	50 sxs 8675-875"			_____
	25 sxs 8570-8500'			_____
	25 sxs 5690-5750'			_____
	25 sxs 4840-4910'			_____
	25 sxsx 3770-3840'			_____
	15 sxs surface to 30'			_____
<b>Comments:</b>	Well P&A'd 2/7/62			_____
	dry hole marker 2/7/62			_____

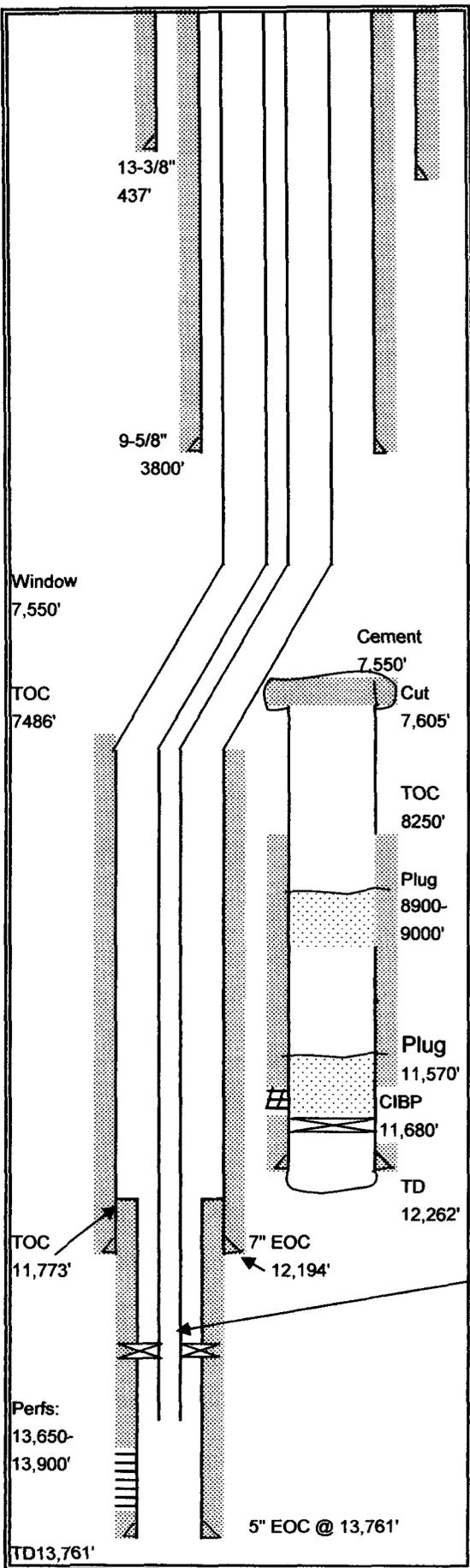
PRESENT COMPLETION

Date: \_\_\_\_\_

Prepared By: \_\_\_\_\_

Wellbore Schematic

Lease: South Vacuum Unit Well: 35-3 API # 30-025-03152  
 Operator: PALADIN Energy Corp.  
 Field: South Vacuum County: Lea State New Mexico  
 Section 35 Township 18-S Range 35-E  
 Elev. GL 3870' Elev. DF \_\_\_\_\_ Elev. KB \_\_\_\_\_  
 Spudded \_\_\_\_\_ Completed \_\_\_\_\_



Surface Casing	13-3/8"	48#	Grade _____
	Set @	437'	Hole Size <u>17-1/2"</u>
	TOC	surf.	Sacks <u>450</u>
Intermediate Casing	9-5/8"	40#	Grade _____
	Set @	3800'	Hole Size <u>12-1/4"</u>
	TOC	Surface	Sacks <u>1,300</u>
Production Casing	7"	26 & 29#	Grade <u>N-80</u>
	Set @	12,194'	Hole Size <u>8-3/4"</u>
	TOC	7,486'	Sacks <u>715</u>
Liner Record	5"	18#	Grade _____
	Top @	11,773'	Bottom @ <u>13,761'</u>
	Screen		Hole Size <u>6-1/8"</u>
	TOC	11,773'	Sacks <u>250</u>
Tubing Detail	2-3/8" & 2-7/8"		Grade/Trd. _____
	Pkr. Set @	13,414'	EOT _____
	Nipples X -	13,432'	
	Anchors		Rods _____
Perforation Record	Original Hole Perfs - Devonian - 11,592-616' squeezed		
	Proposed Perfs - Mckee - 13,650-13,900' (selected)		
Completion	Perfs: 13,506-09', 13,522-25', 13,556-59', 13,591-94', 13,627-30'		
	2-3/8" P 110 tubing to 11,494'		
	2-7/8" P110 & N-80 tubing from 11,494' to surface		
	5" Arrow set Retrievable Packer @13,414'		
	Otis X Nipple (1.85" profile) @ 13,432'		

**PPRESENT COMPLETION 7/30/2004**

Paladin Energy Corp.

RE: API #30-025-03150  
Application for Authority to Inject  
Water into the **South Vacuum Unit 351 SWD**,  
Sec 35, 18S, 35E  
Lea County, New Mexico

## VII. Summary of Proposed Operations

Average Daily Rate of Injection	<u>8,000 Barrels per Day</u>
Maximum Daily Rate of Injection	<u>10,000 Barrels per Day</u>
Type of System	<u>Closed</u>
Average Injection Pressure	<u>Vacuum to 1000 psi</u>
Maximum Injection Pressure	<u>2,000 psi</u>
Sources of Injection Fluid	<u>Devonian and Mckee Produced Water</u>
Name of Injection Formation	<u>Devonian</u>
Injection Interval	<u>11,643-680, 11,836-12,100'</u>
Analysis of disposal zone formation water	<u>(see Attached Analysis)</u>



April 13, 2005

Mickey Horn  
Paladin Energy  
Midland, Texas

Mickey,  
Attached are the analyses from the waters you submitted last week from the following Paladin wells:

S.V. 35 #3  
S.V. 27 #3  
S.V. 2-26  
S.V. 1-26  
State Lee J #1  
Reeves 2-26

Also attached is a compatibility test from the Reeve's 2-26 and the S.V. 27-3. Based on the visual examination of the mixed waters, and the calculated scaling tendencies, these two waters are very compatible.

Should you have further questions, please do not hesitate to call.

Thank You,

A handwritten signature in cursive script that reads "James Shrauner".

James Shrauner

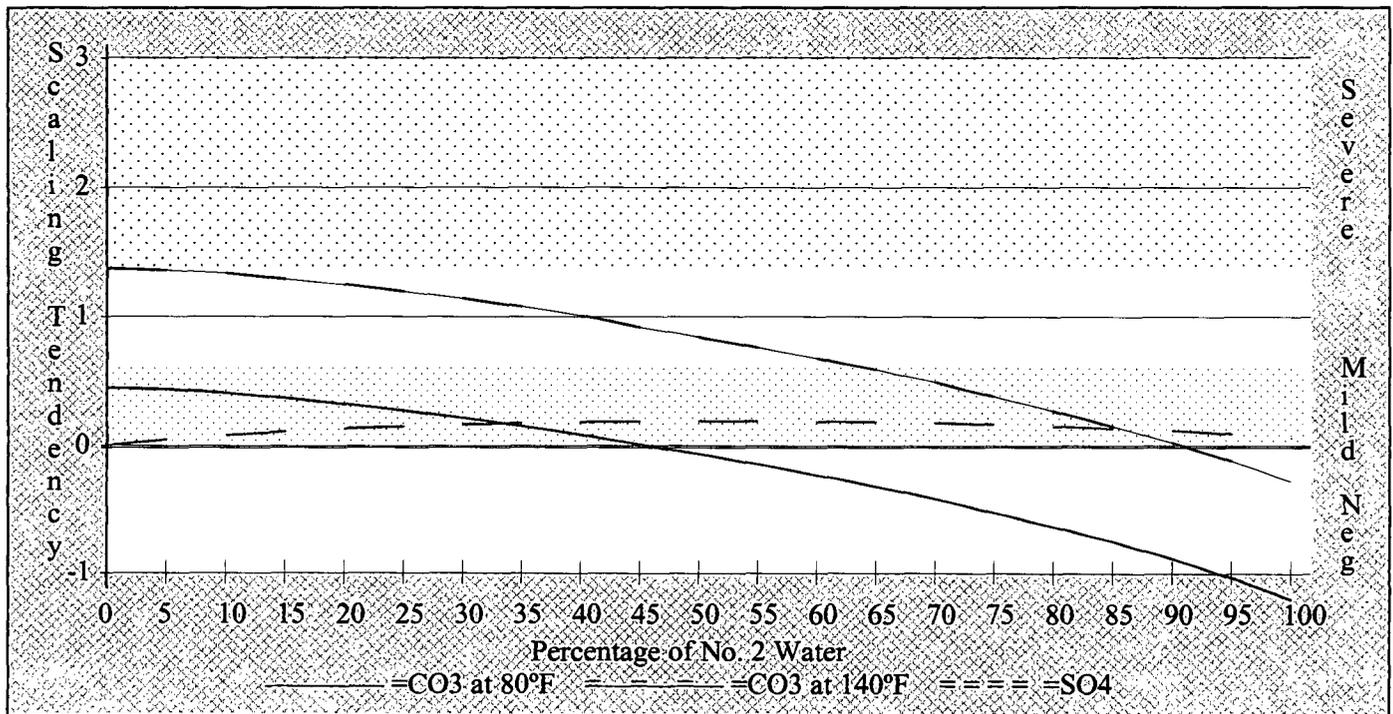
# Comparison Between Two Waters

**Requested by: JAMES SHRAUNER**

**Sample No. 1**  
PALADIN  
REEVES 2-26  
4/05/05

**Sample No. 2**  
PALADIN  
SV 27-3  
4/05/05

Percent of #1 & #2	pH	TDS	SpGr	CaCO3 Saturation		Calcium Sulfate Scaling Potential
				@80°F.	@140°F.	
100 - 00	7.200	50,090	1.033	0.445	1.375	Nil
95 - 05	7.125	50,192	1.033	0.434	1.364	Marginal
90 - 10	7.050	50,293	1.033	0.408	1.338	Marginal
85 - 15	6.975	50,395	1.033	0.367	1.292	Mild
80 - 20	6.900	50,497	1.033	0.323	1.248	Mild
75 - 25	6.825	50,599	1.033	0.272	1.197	Mild
70 - 30	6.750	50,700	1.033	0.215	1.140	Mild
65 - 35	6.675	50,802	1.033	0.153	1.078	Mild
60 - 40	6.600	50,904	1.033	0.086	1.011	Mild
55 - 45	6.525	51,006	1.033	0.009	0.919	Mild
50 - 50	6.450	51,108	1.033	-0.067	0.843	Mild
45 - 55	6.375	51,209	1.033	-0.147	0.763	Mild
40 - 60	6.300	51,311	1.033	-0.232	0.678	Mild
35 - 65	6.225	51,413	1.033	-0.322	0.588	Mild
30 - 70	6.150	51,515	1.033	-0.417	0.493	Mild
25 - 75	6.075	51,616	1.033	-0.528	0.382	Mild
20 - 80	6.000	51,718	1.033	-0.637	0.273	Mild
15 - 85	5.925	51,820	1.033	-0.755	0.155	Mild
10 - 90	5.850	51,921	1.033	-0.884	0.026	Mild
05 - 95	5.775	52,023	1.033	-1.030	-0.120	Marginal
00 - 100	5.700	52,125	1.033	-1.199	-0.279	Marginal



--

**Schlumberger**

Hobbs District Laboratory

Company: Paladin  
 Lease & Well: Fresh Water Well  
 County, State: \_\_\_\_\_  
 Formation: \_\_\_\_\_  
 BHT (F): \_\_\_\_\_

Report No.: \_\_\_\_\_  
 Service Point: HNM LAB  
 Prepared by: B.Henderson  
 Prepared for: \_\_\_\_\_  
 Date: 4/21/2005

Specific gravity: 1.000 @ 67.2 degrees F      ph 7.00

**Anions**

	Factor	ml	Sample	mg/l	Factor	me/l	Ionic Strength		(ppm)
							(mg/l)	(me/l)	
Chlorides	3545	0.50	10	177	0.0282	5.00	0.0025	0.0025	177
Sulfates		200.0	25	0	0.0208	0.00	0.0000	0.0000	0
Carbonates	492	0.0	10	0	0.0333	0.00	0.0000	0.0000	0
Bicarbonates	1000	2.80	10	280	0.0164	4.59	0.0022	0.0023	280

**Cations**

	Factor	ml	Sample	mg/l	Factor	me/l	Ionic Strength		(ppm)
							(mg/l)	(me/l)	
Calcium	401	3.1	10	124.31	0.0499	6.20	0.0062	0.0062	124
Magnesium	243	1.00	10	24.3	0.0823	2.00	0.0020	0.0020	24
Iron		0	10	0	0.0358	0.00	0.0000	0.0000	0
Sodium	0	0	0	32	0.0435	1.39	0.0007	0.0007	32

Total Dissolved Solids: 637.7563      19.18  
 Total Ionic Strength: 0.0136      0.0137

**Calcium Carbonate Deposition**

Stiff-Davis Equation:  $\text{Stability Index(SI)} = \text{pH} - \text{pCa} - \text{pAlk} - \text{K}$

pH= 7.00  
 pCa= 2.50  
 pAlk= 2.63  
 K= 1.31

Total Ion Equivalent NaCl Concentration= 451.4408 ppm

SI= 0.56

The Stiff-Davis equation predicts this water does have a tendency toward calcium carbonate deposition.

**Calcium Sulfate Deposition**

CaSO4 Solubility:  $S = 1000 (\text{SQRT}(X^{**2} + 4*K) - X)$

Total Ionic Strength= 0.0136  
 Solubility Constant, K= 0.00290  
 X= 0.0031

S= 104.64 me/l

Laboratory analysis shows that this water contains 0.00 me/l, therefore the tendency towards calcium sulfate deposition does not exist.



# WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **PALADIN**  
 Lease : **SV**  
 Well No.: **35-4**  
 Location: **HEATER**  
 Attention:

Date Sampled : **4/01/05**  
 Date Analyzed: **05-April-2005**  
 Lab ID Number: **Apr0505.005- 1**  
 Salesperson : **J. SHRAUNER**  
 Requested By :  
 File Name : **C:\ANALYSES\DATA\Apr0505.005**

## ANALYSIS

- 1. Ph **5.700**
- 2. Specific Gravity 60/60 F. **1.173**
- 3. CACO3 Saturation Index **0.969**  
     @ 80F  
     @ 140F **2.809**

### Dissolved Gasses

- 4. Hydrogen Sulfide **0**
- 5. Carbon Dioxide **700**
- 6. Dissolved Oxygen **Not Determined**

### Cations

7. Calcium (Ca++)	<b>20,842</b>	/ 20.1 =	<b>1,036.92</b>
8. Magnesium (Mg++)	<b>1,216</b>	/ 12.2 =	<b>99.67</b>
9. Sodium (Na+) (Calculated)	<b>75,687</b>	/ 23.0 =	<b>3,290.74</b>
10. Barium (Ba++)	<b>10</b>	/ 68.7 =	<b>0.15</b>

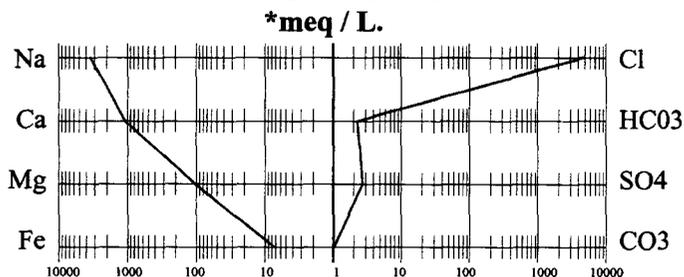
### Anions

11. Hydroxyl (OH+)	<b>0</b>	/ 17.0 =	<b>0.00</b>
12. Carbonate (CO3=)	<b>0</b>	/ 30.0 =	<b>0.00</b>
13. Bicarbonate (HCO3-)	<b>134</b>	/ 61.1 =	<b>2.19</b>
14. Sulfate (SO4=)	<b>126</b>	/ 48.8 =	<b>2.58</b>
15. Chloride (Cl-)	<b>156,965</b>	/ 35.5 =	<b>4,421.55</b>
16. Total Dissolved Solids	<b>254,980</b>		
17. Total Iron (Fe)	<b>128</b>	/ 18.2 =	<b>7.03</b>
18. Total Hardness as CaCO3	<b>57,051</b>		
19. Resistivity @ 75 F. (Calculated)	<b>0.001</b>	Ohm · meters	

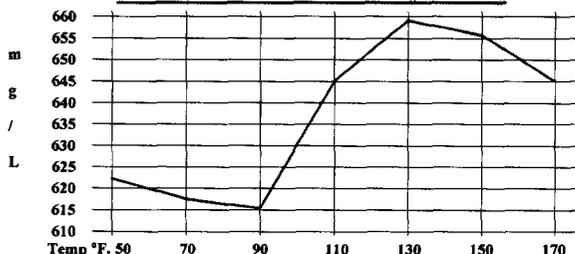
### PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Ca(HCO3)2	<b>81.04</b>		2.19	178
CaSO4	<b>68.07</b>		2.44	166
CaCl2	<b>55.50</b>		1,032.29	57,292
Mg(HCO3)2	<b>73.17</b>		0.00	0
MgSO4	<b>60.19</b>		0.00	0
MgCl2	<b>47.62</b>		99.67	4,746
NaHCO3	<b>84.00</b>		0.00	0
NaSO4	<b>71.03</b>		0.00	0
NaCl	<b>58.46</b>		3,289.59	192,310

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile





# WATER ANALYSIS REPORT

**SAMPLE**

Oil Co. : **PALADIN**  
 Lease : **STATE LEA 'J'**  
 Well No.: **# 1**  
 Location: **WELLHEAD**  
 Attention:

Date Sampled : **4/01/05**  
 Date Analyzed: **05-April-2005**  
 Lab ID Number: **Apr05056.000001E-03- 1**  
 Salesperson : **J. SHRAUNER**  
 Requested By :  
 File Name : **C:\ANALYSES\DATA\Apr05056.000001E-03**

**ANALYSIS**

- 1. Ph **7.100**
- 2. Specific Gravity 60/60 F. **1.033**
- 3. CACO3 Saturation Index **0.403**  
     @ 80F  
     @140F **1.333**

**Dissolved Gasses**

- 4. Hydrogen Sulfide **0**
- 5. Carbon Dioxide **50**
- 6. Dissolved Oxygen **Not Determined**

**Cations**

7. Calcium (Ca++)	<b>2,485</b>	/ 20.1 =	<b>123.63</b>
8. Magnesium (Mg++)	<b>559</b>	/ 12.2 =	<b>45.82</b>
9. Sodium (Na+) (Calculated)	<b>16,487</b>	/ 23.0 =	<b>716.83</b>
10. Barium (Ba++)	<b>0</b>	/ 68.7 =	<b>0.00</b>

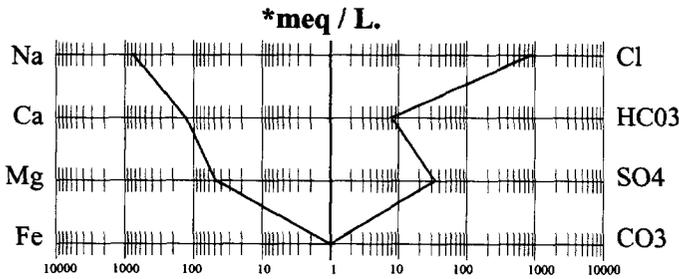
**Anions**

11. Hydroxyl (OH+)	<b>0</b>	/ 17.0 =	<b>0.00</b>
12. Carbonate (CO3=)	<b>0</b>	/ 30.0 =	<b>0.00</b>
13. Bicarbonate (HCO3-)	<b>464</b>	/ 61.1 =	<b>7.59</b>
14. Sulfate (SO4=)	<b>1,611</b>	/ 48.8 =	<b>33.01</b>
15. Chloride (Cl-)	<b>29,993</b>	/ 35.5 =	<b>844.87</b>
16. Total Dissolved Solids	<b>51,599</b>		
17. Total Iron (Fe)	<b>1</b>	/ 18.2 =	<b>0.05</b>
18. Total Hardness as CaCO3	<b>8,508</b>		
19. Resistivity @ 75 F. (Calculated)	<b>0.181</b>	Ohm · meters	

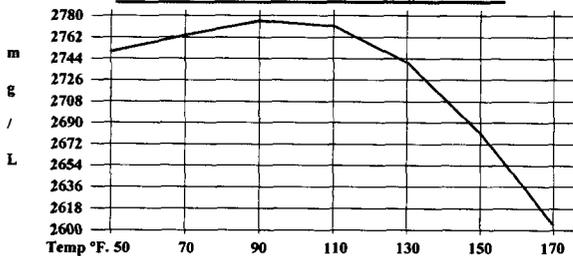
**PROBABLE MINERAL COMPOSITION**

COMPOUND	EQ. WT.	X	*meq/L	=	mg/L.
Ca(HCO3)2	<b>81.04</b>		7.59		615
CaSO4	<b>68.07</b>		33.01		2,247
CaCl2	<b>55.50</b>		83.03		4,608
Mg(HCO3)2	<b>73.17</b>		0.00		0
MgSO4	<b>60.19</b>		0.00		0
MgCl2	<b>47.62</b>		45.82		2,182
NaHCO3	<b>84.00</b>		0.00		0
NaSO4	<b>71.03</b>		0.00		0
NaCl	<b>58.46</b>		716.03		41,859

**LOGARITHMIC WATER PATTERN**



**Calcium Sulfate Solubility Profile**





# WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **PALADIN**  
 Lease : **SV**  
 Well No.: **1-26**  
 Location: **OIL TANK**  
 Attention:

Date Sampled : **4/01/05**  
 Date Analyzed: **05-April-2005**  
 Lab ID Number: **Apr05057.000001E-03- 1**  
 Salesperson : **J. SHRAUNER**  
 Requested By:  
 File Name : **C:\ANALYSES\DATA\Apr05057.000001E-03**

## ANALYSIS

- 1. Ph **5.500**
- 2. Specific Gravity 60/60 F. **1.067**
- 3. CACO3 Saturation Index **-1.826**  
     @ 80F  
     @140F **-0.906**

### Dissolved Gasses

	MG/L.	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide	34		
5. Carbon Dioxide	100		
6. Dissolved Oxygen	Not Determined		

### Cations

7. Calcium (Ca++)	9,900	/ 20.1 =	492.54
8. Magnesium (Mg++)	802	/ 12.2 =	65.74
9. Sodium (Na+) (Calculated)	23,211	/ 23.0 =	1,009.17
10. Barium (Ba++)	10	/ 68.7 =	0.15

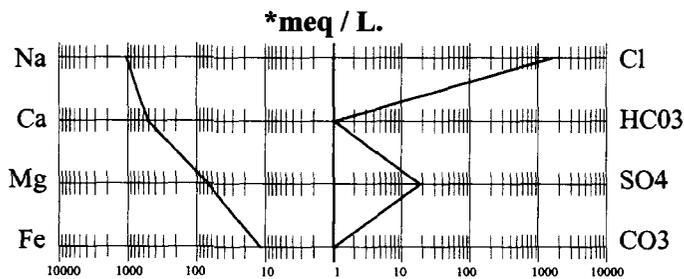
### Anions

11. Hydroxyl (OH+)	0	/ 17.0 =	0.00
12. Carbonate (CO3=)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO3-)	24	/ 61.1 =	0.39
14. Sulfate (SO4=)	875	/ 48.8 =	17.93
15. Chloride (Cl-)	54,988	/ 35.5 =	1,548.96
16. Total Dissolved Solids	89,810		
17. Total Iron (Fe)	204	/ 18.2 =	11.21
18. Total Hardness as CaCO3	28,025		
19. Resistivity @ 75 F. (Calculated)	0.106	Ohm · meters	

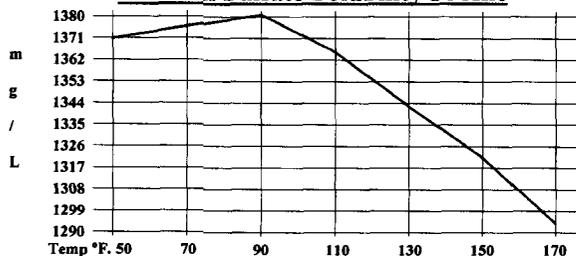
### PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Ca(HCO3)2	81.04		0.39	32
CaSO4	68.07		17.78	1,211
CaCl2	55.50		474.36	26,327
Mg(HCO3)2	73.17		0.00	0
MgSO4	60.19		0.00	0
MgCl2	47.62		65.74	3,130
NaHCO3	84.00		0.00	0
NaSO4	71.03		0.00	0
NaCl	58.46		1,008.86	58,978

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile





# WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **PALADIN**  
 Lease : **SV**  
 Well No.: **35.3**  
 Location: **HEATER**  
 Attention:

Date Sampled : **4/01/05**  
 Date Analyzed: **05-April-2005**  
 Lab ID Number: **Apr0505.004- 1**  
 Salesperson : **J. SHRAUNER**  
 Requested By :  
 File Name : **C:\ANALYSES\DATA\Apr0505.004**

## ANALYSIS

- |    |                           |              |              |
|----|---------------------------|--------------|--------------|
| 1. | Ph                        | <b>6.000</b> |              |
| 2. | Specific Gravity 60/60 F. | <b>1.173</b> |              |
| 3. | CACO3 Saturation Index    |              | <b>1.484</b> |
|    |                           |              | <b>3.224</b> |

@ 80F  
@ 140F

### Dissolved Gasses

- |    |                  | <u>MG/L.</u>   | <u>EQ. WT.</u> | <u>*MEQ/L</u> |
|----|------------------|----------------|----------------|---------------|
| 4. | Hydrogen Sulfide | 0              |                |               |
| 5. | Carbon Dioxide   | 700            |                |               |
| 6. | Dissolved Oxygen | Not Determined |                |               |

### Cations

- |     |           |                    |               |          |                 |
|-----|-----------|--------------------|---------------|----------|-----------------|
| 7.  | Calcium   | (Ca++)             | <b>24,930</b> | / 20.1 = | <b>1,240.30</b> |
| 8.  | Magnesium | (Mg++)             | <b>1,459</b>  | / 12.2 = | <b>119.59</b>   |
| 9.  | Sodium    | (Na+) (Calculated) | <b>71,874</b> | / 23.0 = | <b>3,124.96</b> |
| 10. | Barium    | (Ba++)             | 0             | / 68.7 = | <b>0.00</b>     |

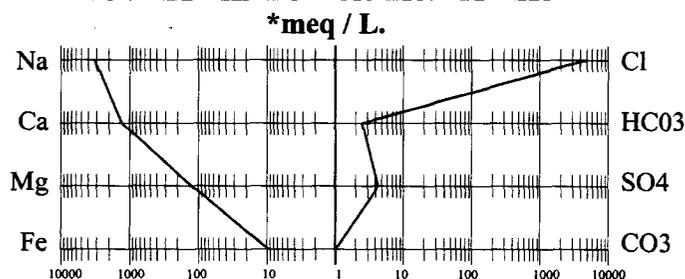
### Anions

- |     |                                  |         |                           |          |                 |
|-----|----------------------------------|---------|---------------------------|----------|-----------------|
| 11. | Hydroxyl                         | (OH+)   | 0                         | / 17.0 = | <b>0.00</b>     |
| 12. | Carbonate                        | (CO3=)  | 0                         | / 30.0 = | <b>0.00</b>     |
| 13. | Bicarbonate                      | (HCO3-) | <b>146</b>                | / 61.1 = | <b>2.39</b>     |
| 14. | Sulfate                          | (SO4=)  | <b>201</b>                | / 48.8 = | <b>4.12</b>     |
| 15. | Chloride                         | (Cl-)   | <b>158,964</b>            | / 35.5 = | <b>4,477.86</b> |
| 16. | Total Dissolved Solids           |         | <b>257,574</b>            |          |                 |
| 17. | Total Iron                       | (Fe)    | <b>163</b>                | / 18.2 = | <b>8.96</b>     |
| 18. | Total Hardness as CaCO3          |         | <b>68,261</b>             |          |                 |
| 19. | Resistivity @ 75 F. (Calculated) |         | <b>0.001 Ohm · meters</b> |          |                 |

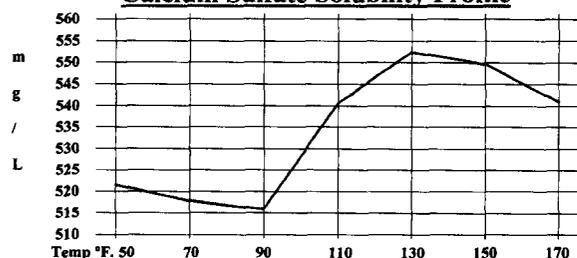
### PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Ca(HCO3)2	<b>81.04</b>		2.39	194
CaSO4	<b>68.07</b>		4.12	280
CaCl2	<b>55.50</b>		1,233.79	68,475
Mg(HCO3)2	<b>73.17</b>		0.00	0
MgSO4	<b>60.19</b>		0.00	0
MgCl2	<b>47.62</b>		119.59	5,695
NaHCO3	<b>84.00</b>		0.00	0
NaSO4	<b>71.03</b>		0.00	0
NaCl	<b>58.46</b>		3,124.48	182,657

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile





# WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **PALADIN**  
 Lease : **SV**  
 Well No.: **27-3**  
 Location: **HEATER**  
 Attention:

Date Sampled : **4/01/05**  
 Date Analyzed: **05-April-2005**  
 Lab ID Number: **Apr0505.002- 1**  
 Salesperson : **J. SHRAUNER**  
 Requested By :  
 File Name : **C:\ANALYSES\DATA\Apr0505.002**

## ANALYSIS

- |    |                           |              |                |
|----|---------------------------|--------------|----------------|
| 1. | Ph                        | <b>5.700</b> |                |
| 2. | Specific Gravity 60/60 F. | <b>1.033</b> |                |
| 3. | CACO3 Saturation Index    |              | @ 80F<br>@140F |

-1.199  
-0.279

### Dissolved Gasses

- |    |                  | MG/L.          | EQ. WT. | *MEQ/L |
|----|------------------|----------------|---------|--------|
| 4. | Hydrogen Sulfide | 17             |         |        |
| 5. | Carbon Dioxide   | 1600           |         |        |
| 6. | Dissolved Oxygen | Not Determined |         |        |

### Cations

- |     |           |                    |        |          |        |
|-----|-----------|--------------------|--------|----------|--------|
| 7.  | Calcium   | (Ca++)             | 12,264 | / 20.1 = | 610.15 |
| 8.  | Magnesium | (Mg++)             | 1,313  | / 12.2 = | 107.62 |
| 9.  | Sodium    | (Na+) (Calculated) | 5,069  | / 23.0 = | 220.39 |
| 10. | Barium    | (Ba++)             | 0      | / 68.7 = | 0.00   |

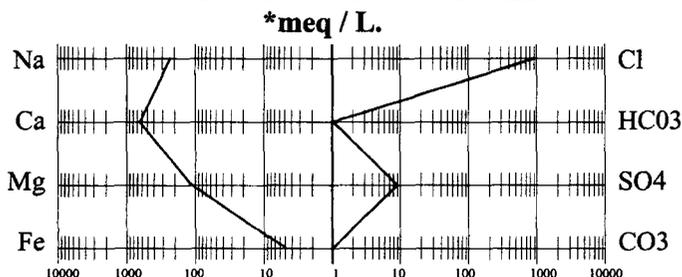
### Anions

- |     |                                  |         |                    |          |        |
|-----|----------------------------------|---------|--------------------|----------|--------|
| 11. | Hydroxyl                         | (OH+)   | 0                  | / 17.0 = | 0.00   |
| 12. | Carbonate                        | (CO3=)  | 0                  | / 30.0 = | 0.00   |
| 13. | Bicarbonate                      | (HCO3-) | 61                 | / 61.1 = | 1.00   |
| 14. | Sulfate                          | (SO4=)  | 425                | / 48.8 = | 8.71   |
| 15. | Chloride                         | (Cl-)   | 32,993             | / 35.5 = | 929.38 |
| 16. | Total Dissolved Solids           |         | 52,125             |          |        |
| 17. | Total Iron                       | (Fe)    | 85                 | / 18.2 = | 4.67   |
| 18. | Total Hardness as CaCO3          |         | 36,032             |          |        |
| 19. | Resistivity @ 75 F. (Calculated) |         | 0.177 Ohm · meters |          |        |

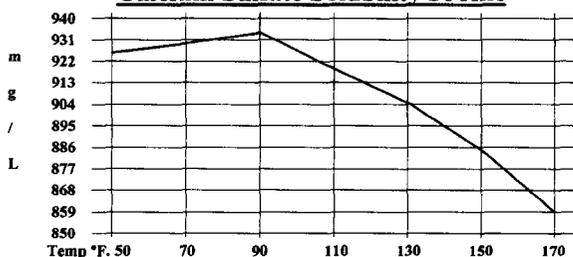
### PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L	=	mg/L.
Ca(HCO3)2	81.04		1.00		81
CaSO4	68.07		8.71		593
CaCl2	55.50		600.44		33,325
Mg(HCO3)2	73.17		0.00		0
MgSO4	60.19		0.00		0
MgCl2	47.62		107.62		5,125
NaHCO3	84.00		0.00		0
NaSO4	71.03		0.00		0
NaCl	58.46		221.32		12,938

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile





# WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : **PALADIN**  
 Lease : **REEVES**  
 Well No.: **2-26**  
 Location: **WELLHEAD**  
 Attention:

Date Sampled : **4/01/05**  
 Date Analyzed: **05-April-2005**  
 Lab ID Number: **Apr0505.001- 1**  
 Salesperson : **J. SHRAUNER**  
 Requested By:  
 File Name : **C:\ANALYSES\DATA\Apr0505.001**

### ANALYSIS

- 1. Ph **7.200**
- 2. Specific Gravity 60/60 F. **1.033**
- 3. CACO3 Saturation Index **0.445**  
     @ 80F  
     @140F **1.375**

#### Dissolved Gasses

- 4. Hydrogen Sulfide **17**
- 5. Carbon Dioxide **10**
- 6. Dissolved Oxygen **Not Determined**

#### Cations

			<u>MG/L.</u>	<u>EQ. WT.</u>	<u>*MEQ/L</u>
7.	Calcium	(Ca++)	<b>2,365</b>	/ 20.1 =	<b>117.66</b>
8.	Magnesium	(Mg++)	<b>438</b>	/ 12.2 =	<b>35.90</b>
9.	Sodium	(Na+) (Calculated)	<b>16,212</b>	/ 23.0 =	<b>704.87</b>
10.	Barium	(Ba++)	<b>0</b>	/ 68.7 =	<b>0.00</b>

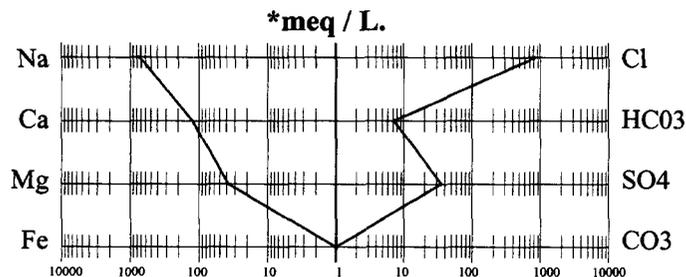
#### Anions

11.	Hydroxyl	(OH+)	<b>0</b>	/ 17.0 =	<b>0.00</b>
12.	Carbonate	(CO3=)	<b>0</b>	/ 30.0 =	<b>0.00</b>
13.	Bicarbonate	(HCO3-)	<b>427</b>	/ 61.1 =	<b>6.99</b>
14.	Sulfate	(SO4=)	<b>1,655</b>	/ 48.8 =	<b>33.91</b>
15.	Chloride	(Cl-)	<b>28,993</b>	/ 35.5 =	<b>816.70</b>
16.	Total Dissolved Solids		<b>50,090</b>		
17.	Total Iron	(Fe)	<b>3</b>	/ 18.2 =	<b>0.16</b>
18.	Total Hardness as CaCO3		<b>7,707</b>		
19.	Resistivity @ 75 F. (Calculated)		<b>0.186</b>	Ohm · meters	

#### PROBABLE MINERAL COMPOSITION

COMPOUND	EQ. WT.	X	*meq/L	= mg/L.
Ca(HCO3)2	<b>81.04</b>		6.99	566
CaSO4	<b>68.07</b>		33.91	2,309
CaCl2	<b>55.50</b>		76.76	4,260
Mg(HCO3)2	<b>73.17</b>		0.00	0
MgSO4	<b>60.19</b>		0.00	0
MgCl2	<b>47.62</b>		35.90	1,710
NaHCO3	<b>84.00</b>		0.00	0
NaSO4	<b>71.03</b>		0.00	0
NaCl	<b>58.46</b>		704.04	41,158

#### LOGARITHMIC WATER PATTERN



#### Calcium Sulfate Solubility Profile

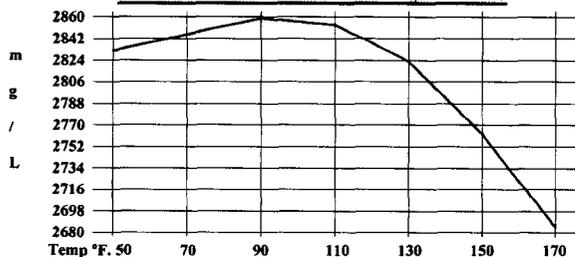


EXHIBIT XI

**Schlumberger**

Hobbs District Laboratory

Company: <u>Paladin</u>	Report No.: _____
Lease & Well: <u>Fresh Water Well</u>	Service Point: <u>HNM LAB</u>
County, State: _____	Prepared by: <u>B.Henderson</u>
Formation: _____	Prepared for: _____
BHT (F): _____	Date: <u>4/21/2005</u>

Specific gravity: 1.000 @ 67.2 degrees F      ph 7.00

**Anions**

	Factor	ml	Sample	mg/l	Factor	me/l	Ionic Strength		(ppm)
							(mg/l)	(me/l)	
Chlorides	3545	0.50	10	177	0.0282	5.00	0.0025	0.0025	177
Sulfates		200.0	25	0	0.0208	0.00	0.0000	0.0000	0
Carbonates	492	0.0	10	0	0.0333	0.00	0.0000	0.0000	0
Bicarbonates	1000	2.80	10	280	0.0164	4.59	0.0022	0.0023	280

**Cations**

	Factor	ml	Sample	mg/l	Factor	me/l	Ionic Strength		(ppm)
							(mg/l)	(me/l)	
Calcium	401	3.1	10	124.31	0.0499	6.20	0.0062	0.0062	124
Magnesium	243	1.00	10	24.3	0.0823	2.00	0.0020	0.0020	24
Iron		0	10	0	0.0358	0.00	0.0000	0.0000	0
Sodium	0	0	0	32	0.0435	1.39	0.0007	0.0007	32

Total Dissolved Solids: 637.7563      19.18  
 Total Ionic Strength: 0.0136      0.0137

**Calcium Carbonate Deposition**

Stiff-Davis Equation:  $Stability\ Index(SI) = pH - pCa - pAlk - K$

pH= 7.00  
 pCa= 2.50  
 pAlk= 2.63  
 K= 1.31

Total Ion Equivalent NaCl Concentration= 451.4408 ppm

SI= 0.56

The Stiff-Davis equation predicts this water does have a tendency toward calcium carbonate deposition.

**Calcium Sulfate Deposition**

CaSO4 Solubility:  $S = 1000 (\sqrt{X^{**2} + 4*K}) - X$

Total Ionic Strength= 0.0136  
 Solubility Constant, K= 0.00290  
 X= 0.0031

S= 104.64 me/l

Laboratory analysis shows that this water contains 0.00 me/l, therefore the tendency towards calcium sulfate deposition does not exist.

EXHIBIT XII

Paladin Energy Corp.

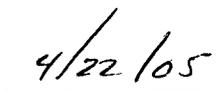
RE: API #30-025-03150  
Application for Authority to Inject  
Water into the **South Vacuum Unit 351 SWD**, located  
In Sec 35, 18S, 35E  
Lea County, New Mexico

**XII. Geologic Data – Statement of Examination**

	<u>Formation</u>	<u>Lithology</u>	<u>Top</u>	<u>Bottom</u>
Injection Interval:	Devonian	Lime/Dolomite	11,547'	12,300' (+,-)

I 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.

  
\_\_\_\_\_  
David Plaisance  
V.P. Exploration & Production

  
\_\_\_\_\_  
Date



CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

04/29/05 13:44:16  
OGOWVJ -TPOG  
PAGE NO: 1

Sec : 35 Twp : 18S Rng : 35E Section Type : NORMAL

D 40.00 NMSH E01533 0003 PALADIN ENERGY CO C U 10/10/57	C 40.00 NMSH E01533 0003 PALADIN ENERGY CO C U 10/10/57 A	B 40.00 NMSH E01533 0004 FOREST OIL PERMIA C 10/10/57	A 40.00 NMSH E01533 0004 FOREST OIL PERMIA C 10/10/57 A
E 40.00 NMSH E01533 0004 FOREST OIL PERMIA C 10/10/57	F 40.00 NMSH E01533 0004 FOREST OIL PERMIA C 10/10/57	G 40.00 NMSH E01533 0003 PALADIN ENERGY CO C U 10/10/57 A A	H 40.00 NMSH E01533 0003 PALADIN ENERGY CO C U 10/10/57

PF01 HELP    PF02            PF03 EXIT    PF04 GoTo    PF05            PF06  
PF07 BKWD   PF08 FWD      PF09 PRINT   PF10 SDIV     PF11            PF12

EXHIBIT XIV

AFFADAVIT OF MAILING

RE: API #30-025-003150  
Application for Authority to Inject  
Water into the south Vacuum Unit 351 SWD, located  
In Sec 35, 18S, 35E  
Lea County, New Mexico

I, the undersigned (David Plaisance) do hereby declare that on April 22, 2005, I posted a true copy of the above reference application in Certified U.S. Mail in sealed envelopes addressed to the following, postage pre-paid:

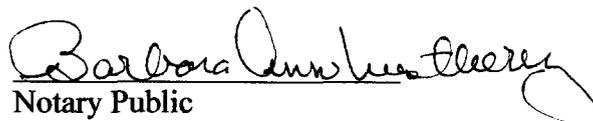
State of New Mexico  
Commissioner of Public Lands  
P.O. box 1148  
Santa Fe, NM 87504-1148

Forest Oil Permian  
1600 Broadway  
Suite 2200  
Denver, CO 80202



David Plaisance  
V.P. Exploration & Production

Subscribed and sworn to before me this 20<sup>th</sup> day of April, 2005 .

  
Notary Public

My commission expires 03/17/07 .

