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**

Ti	HIS CHECKLIST IS M	MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE
Applic	ation Acronym	S:
	_	ndard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
	-	nhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
	_	ool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
		[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
		[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
	TEOR Out	lified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]
	[EOR-Qua	illied Emilanced Off Recovery Certification   [FFR-Fositive Froduction Response]
C13	TO THE OF A	DDI ICATION Chook Those Which Apply for [A]
[1]		PPLICATION - Check Those Which Apply for [A]
	[A]	Location - Spacing Unit - Simultaneous Dedication
		□ NSL □ NSP □ SD
		SEP - 5 2001
	Check	Cone Only for [B] or [C]
	[B]	Commingling - Storage - Measurement
	[~]	☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
	rc)	Triantian Diamonal Business Increase Enhanced Oil Bassayami
	[C]	Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
		☐ WFX MPMX 💢 SWD 🗌 IPI 🗌 EOR 🗍 PPR
	[D]	Other: Specify
[2]	NOTIFICAT	ION REQUIRED TO: - Check Those Which Apply, or Does Not Apply
	[A]	Working, Royalty or Overriding Royalty Interest Owners
	<u></u> 3	
	[B]	Offset Operators, Leaseholders or Surface Owner
	լոյ	Office Operators, Deadenoiders of Burlace Owner
	ron.	A multipation in One William Describes Dublished I and Marine
	[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,
	ريدا	/
	[17]	Waivers are Attached
	[F]	walvers are Attached
503	CTTD3 FORM 1 C	
[3]		CURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE
	OF APPLICA	ATION INDICATED ABOVE.
[4]	CERTIFICAT	<b>TION:</b> I hereby certify that the information submitted with this application for administrative
		nd complete to the best of my knowledge. I also understand that no action will be taken on this
		quired information and notifications are submitted to the Division.
арриос		quind information and nontroductional or dis 214 local
	Note:	Statement must be completed by an individual with managerial and/or supervisory capacity.
	·—,	O Ad O a l' M' aladai
107.	YLAISANO	it com Hoberne Troduction MANAGON 8/29/01
Print or	Type Name	Signature Title Date
	- •	Signature Production MANAGON 3/29/01  Title Date  PLAISANCE JLDE ACL. COM
		YCHISHNOE JLOG, HOL, COM

e-mail Address





#### PALADIN ENERGY CORP.

August 29, 2001

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco
Santa Fe. New Mexico 87505

Re: Application For Authorization To Inject

Paladin Energy Corp.

State BTP #1

Bagley, North Field, Lea County

1980' FNL, 660' FWL Sec 34, T1S, R33E

Dear Sir/Madam.

Paladin Energy Corp. is herewith submitting the above referenced application to convert the State 'BTP' #1 well to a salt water disposal well in the Bagley Permo Penn, North Formation. Paladin is in need of additional salt water disposal capacity in the Bagley & Bagley, North fields due to the successful recompletion of two of its Devonian producing wells, with high volume submersible pumps. The result of these workovers has been an increase in fieldwide oil and water production. Therefore, additional salt water disposal capacity will greatly improve our overall saltwater handling capabilities in the field and also facilitate further re-completions and increases in oil production.

Therefore for your consideration please find enclosed the following: a) Form C-103, to convert well to SWD, b.) Form C-108 and all necessary attachments and "proofs of notice" required for administrative approval.

If you have any questions or need further information, please call David Plaisance at 214-352-5245, Ext. 8. Thank you.

Sincerely,

David Plaisance Production Manager

Cc Oil Conservation District

**Hobbs Division** 

Cc State of New Mexico

Commissioner of Public Lands

### Submit 3 Copies to Appropriate District Office

### STATE OF NEW MEXICO Energy, Minerals and Natural Resources Department

Form C-103 Revised 1-1-89

#### **OIL CONSERVATION DIVISION**

<u>DISTRICT I</u>		2040 Pac	heco St.			WELL API NO.		
P.O. Box 1980, Hobbs, NM 88240		Santa Fe,	NM 87505				30-025-01	014
						5. Indicate Type o		[
DISTRICT II	n					STATE x 6. State Oil & Gas	FE Lease No	E
P.O. Drawer DD, Artesia, NM 88821	U					O. State Off & Gds	2498 2498	13
DISTRICT III								
1000 Rio Brazos Rd., Aztec, NM 874								
I.	NOTICES AN					7. Lease Name or U	Init Agreement Na	me
(DO NOT USE THIS FORM	NI FOR PROPOSALS RESERVOIR. USE "/			JG BACK TO	A			
	(FORM C-101) FOR					State BT "F	ייכ	
Type of Well:		···	<del></del>		<del></del>			
OIL		GAS		OTHER	SWD			
2. Name of Operator	Paladin En	WELL Com		OTHER	300	8. Well No.		
2. Name of Operator							1	
Address of Operator	10290 Mon	roe Dr., Ste.	Ste 301, Da	llas, TX 7	5229	9. Pool name or \	Vildcat	
4 Well Location						Pbagley Pe	ermo Penn, I	North
Unit Letter E	: <u>1980</u>	Feet From The	North	Line and	1980	Feet from The	West	Line
Section 34		Township	11-S	Range	33-E	NMPM	Lea	County
		Elevation	(Show whether	DF,RKB, R	T, GR, etc)			
4272' DF  Check Appropriate Box to Indicate Nature of Notice, Report, Or Other Data								
	• •	•	to Indicate I	Nature of	1			·-
	INTENTION T					SUBSEQUENT		)F: 
PERFORM REMEDIAL WORK	<del> </del>	PLUG AND ABAN			REMEDIAL WORK	<del> </del>	ALTRG CSG	<b>  </b>
TEMPORARILY ABANDON PULL OR ALTER CASING	<del></del>	CHANGE PLANS			COMMENCE DRL	<del></del>	POLA	
	. Call Marker Dies	and Male					_	
	Salt Water Disp			X	OTHER			
<ol> <li>Describe Proposed or Comp date of starting any proposed</li> </ol>			ertinent details, ar	nd give pertir	nent date, including	g estimated		
After Permit Approval								
Move on location, rig up. Pull Rods and Tubing. GIH w/ 4-1/2" bit and drill out 5-1/2" CIBP @ 9885', Push to bottom.								
GIH with 5-1/2" packer and work string and set packer at 9550' (+,-). Test casing to 500 psi, record test.								
Rig up Acid Truck and pump 5000 gallons of 15% HCL in present perfs and open hole section. Two Phases								
if necessary. (Existing Perforations: 9550-9876', Open hole: 9920-10,024'. POOH with packer and workstring.)								
Run 5-12" Weatherford Arrow Set, plastic coated Packer w/ 9450' of 3-1/2" 9.3#, N-80, plastic coated tubing.								
Set packer @ 9450' (+	·,-). Perform ca	asing integrit	ty test. Nippl	e up tree.	Rig down & N	MOL.		
I hereby certify that the information a	ove is true and comp	lete to the best of	my knowledge and	d belief.		······································	,	<del></del>
, , , ,	1100.	200. 01	,3- 4				0/2-	1.
SIGNATURE	Allera	nq	TITLE			DA1		101
					<del> </del>		214-65	4-0132
TYPE OR PRINT NAME	David Plais	ance, Produ	uction Manag	jer		TEL	EPHONE NO.	<del></del>
(This space for State Use)								
APPROVED BY			TITLE			DA	re	

CONDITIONS OF APPROVAL, IF ANY:

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

FORM C-108 Revised 4-1-98

#### APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage Application qualifies for administrative approval? Yes No
II.	OPERATOR: Paladin Energy Corp.
	ADDRESS: 10290 Monroe Dr., Ste. 301, Dallas, Texas 75229
	CONTACT PARTY: David Plaisance PHONE: 214-654-0132
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 X 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:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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.).</li> </ol>
*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: David Plaisance  TITLE: Production Manager  SIGNATURE: 8/29/01
	SIGNATURE: DATE: 8/29/01
*	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:

Side f. A.

# INJECTION WELL DATA SHEET

OPERATOR: PALADIN ENERGY CORP.	VERGY CORP.				
WELL NAME & NUMBER:	NEW MEXICO STATE BTP ;	BTP #1 SWD			
WELL LOCATION: 19	1980' FNL, 660' FWL	עו	34	11-5	33-E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE
WELLBORE SCHEMATIC	CHEMATIC		WELL CC Surfac	WELL CONSTRUCTION DATA Surface Casing	<b>4</b> 1

	£.				_ft³	
Casing Size: 13-3/8"		Method Determined: Circ.	asing	9-5/8" Casing Size:		Method Determined: Circ.
Ü		2	te C	Ö	sx. or	≥,
	SX.		nedia		SX.	
17-1/2"	275	Surface	Intermediate Casing	12-1/4"	1500	Surface
Hole Size:	Cemented with:	Top of Cement:		Hole Size:	Cemented with:	Top of Cement: _

## **Production Casing**

Hole Size:	8-3/4"	Casing Size; 5-1/2"
Cemented with:	900	sx. <i>or</i>
Top of Cement:	7,330'	Temperature Method Determined: Log
Total Depth:	9,920'	. 1

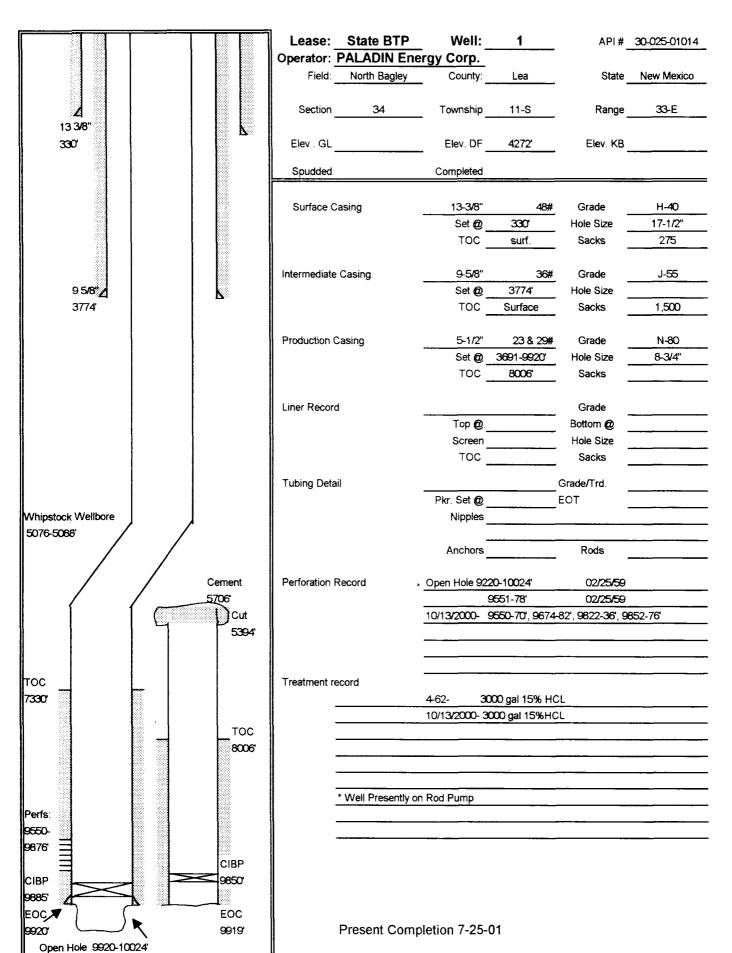
## Injection Interval

, 10,024'	(9,920-10,024) Open Hole; indicate which)
\$	ole;
9,550 feet	(9,550-9,876') Perforated (9,920-10, (Perforated or Open Hole; indicate which)

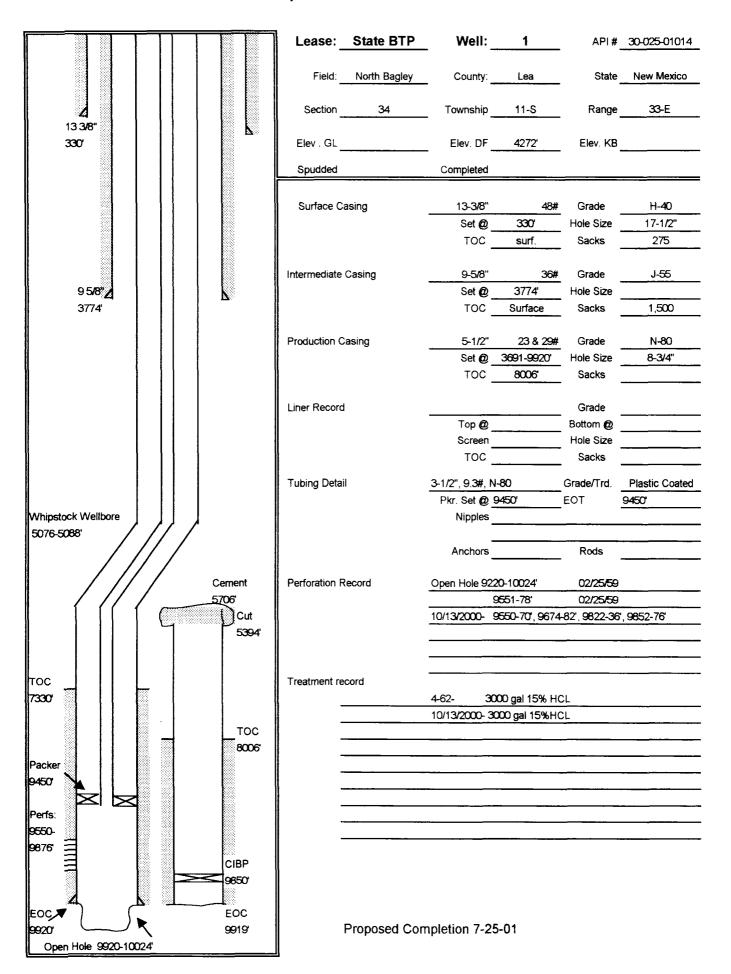
# INJECTION WELL DATA SHEET

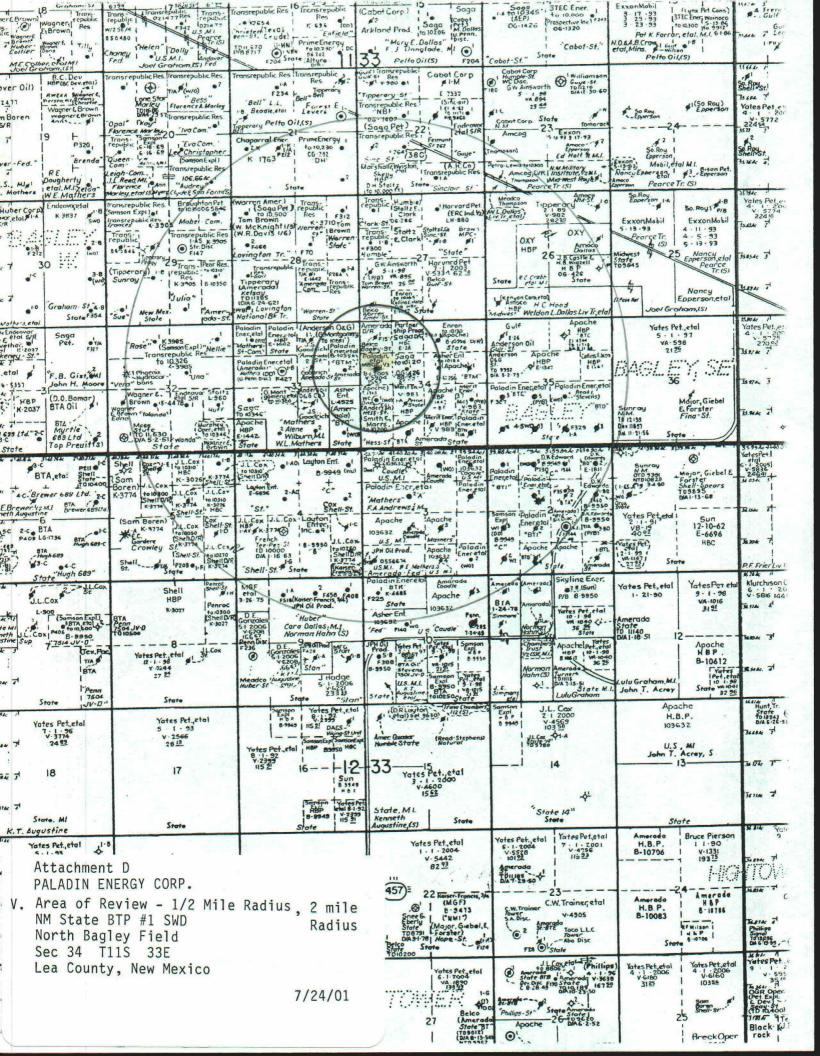
Type of Packer: Weatherford Arrowset Packer (5-1/2" dia.) - Plastic Coated Packer Setting Depth: 9,450' (+,-)  Other Type of Tubing/Casing Seal (if applicable):  Additional Data  If no, for what purpose was the well originally drilled? Production  If no, for what purpose was the well originally drilled? Production  Name of the Injection Formation: Bagley Permo Penn, North  Name of Field or Pool (if applicable): Bagley, North  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.  Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Bagley Permo Penn, North  9,120 - 9,350'	Турє		
Packer Setting Depth: 9,450' (+,-)  Other Type of Tubing/Casing Seal (if applicable): Additional Data  1. Is this a new well drilled for injection?  If no, for what purpose was the well originally drilled? Yes X No  If no, for what purpose was the well originally drilled? Product ion  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  1. Is this a new well drilled for injection?  2. Name of Field for Pool (if applicable):  1. Is this a new well drilled for injection?  2. Name of Field for Pool (if applicable):  1. Is this a new well drilled for injection?  2. Name of Field for injection?  2. Name of Field for injection?  3. Name of Field for injection?  2. Name of Field for injection?  3. Name of Field for injection?  2. Name of Field for injection?  2. Name of Field for injection?  2. Name of Field for injection?  3. Name of Field for injection?  2. Name of Field for injection?  3. Name of Field for injection?  2. Name of Field for injection?  3. Name of Field for injection?  2. Name of Field for injection?  3. Name of Field for injection?  2. Name of Field for injection?  3. Name of Fi		- 1	/ - Flastic Coated
Other Type of Tubing/Casing Seal (if applicable):    Additional Data	Pack		
	Othe	her Type of Tubing/Casing Seal (if applicable):	
		Additional Data	
		Is this a new well drilled for injection?  If no, for what purpose was the well originally drilled?	X uction
		Name of the Injection Formation:	North
		Name of Field or Pool (if applicable): Bagley,	
	4.		such perforated ) used
			overlying the proposed
		-	

#### **Current Wellbore Schematic**



#### **Proposed Wellbore Schematic**





Attachment E VI. Area of Review Well Data

			Status Of	Spud	Comp.	2	Comp.	Prod	TOC &		r
Well Name	Operator	Location	Well	Date	Date	PBTD	Interval	Form.	Method	Casing Program	_
Warren American	Belco Pet. N.A.	660 FSL, 510 FWL	P&A'd	12/11/70	01/25/71	10,065	9277-10,001	Penn	.5669	8-5/8" SRF CSG @3740,CMT w/500	_
State #1		Sec 27, T115, R33E							Calculated	Sks. Circ., 4-1/2" PRD CSG @ 10,065',	
										CMT w/400 SKS.	
State A #1	Petrus OP. Co.	1874 FSL, 1874 FWL	P&A'd	10/08/84	11/30/84	10,420	9927-9965	Penn.	5722,	8-5/8" SRF CSG @3863', CMT w/1800	
		Sec 34, T115, 33E							Calculated	Sks. Circ., 5-1/2" PRD CSG @ 10,435',	
									:	CMT w/768 SKS.	
Amerada State #2	John S. Goodrich	1830 FNL, 1980 FEL	P&A'd	12/13/78	07/23/79	10,150	9456-10,038	Penn.	4989	8-5/8" SRF CSG @3750',CMT w/1300	
		Sec 33, T11S, R33E							Calculated	Sks. Circ., 5-1/2" PRD CSG @ 10,150',	
										CMT w/1125 SKS.	
Bagley State #1	Belco Pet. N.A.	660 FNL, 660 FWL	P&A'd	05/16/68	09/13/68	10,068	9822-9998'	Penn.	6551	8-5/8" SRF CSG @3800", CMT,	_
		Sec 34, T11S, R33E							Calculated	Circ., 5-1/2" PRD CSG @ 10,060',	
										CMT w/575 SKS.	
Hess State #1	Smith & Mars	1980 FSL, 660 FWL	Prod	01/09/72	02/12/72	10,100	9667-9994	Penn.	7806	8-5/8" SRF CSG @3760", CMT w/300	
		Sec 34, T11S, R33E							Calculated	Circ., 5-1/2" PRD CSG @ 10,100",	
										CMT w/375 SKS.	-
Bagley State Com #1	Saga Pet. Co.	1980 FNL, 1980 FWL	Shut-in	07/03/72	08/04/72	10,021	9646-9747	Penn.	7269	8-5/8" SRF CSG @3785',CMT w/375	
		Sec 34, T11S, R33E							Calculated	Circ., 5-1/2" PRD CSG @ 10,021',	
										CMT w/450 SKS.	
State BTM #2	Paladin Energy Corp.	1980 FNL, 660 FEL	Prod	06/06/58	08/15/58	.0266	8626-9896	Penn.	5791	9-5/8" SRF CSG @3774",CMT w/1500	
		Sec 34, T11S, R33E							Calculated	Circ., 5-1/2" PRD CSG @ 9919',	
										CMT w/900 SKS.	
State 34 #1	Asher Enterprises LTD	1980 FNL, 1980 FEL	Prod	02/11/73	04/15/73	10,050	9380-9632'	Penn	7756	8-5/8" SRF CSG @3737',CMT w/300	_
		Sec 34, T11S, R33E							Calculated	Circ., 5-1/2" PRD CSG @ 10050",	
										CMT w/375 SKS.	_

#### Attachment E1

#### PRESENT WELLBORE SCHEMATIC

280 Sx surfac	e plug, cut below ground			Warren Amer. State	Well: _	1	API#_	30-025-236570
		Ор	erator:	Belco Developmen	t Corp.			
			Field:	Bagley	County: _	Lea	State_	New Mexico
400	35 sx plug from		Section	27	Township _	11-S	Range _	33-E
400° / 12-3/4"	1500-1586'		Elev . GL	4260	Elev. DF		Elev. KB_	
			Spudded	12/11/70	Completed	01/25/71		
Casing Cut			Surface (	Casing	12-3/4"		Grade	
2502				_	Set @	400	Hole Size	17 1/2"
	Cut Casing @ 3731'				тос _	Sur.	Sacks _	375
8 5/8" 3740'	35 sx plug	l In	termediate	e Casing	8 5/8" OD	<b>32#/</b> Ft.	Grade	
		1 1			Set @		Hole Size	11"
•	4	42			TOC		Sacks	500
					_	Calculated)		
		Pr	roduction	Casing	41 <i>1</i> 2" OD	· ·	Grade	
						10065	_	6-3/4"
					TOC		Sacks	400
					_	Calculated	_	100
		l rii	ner Recor	d		#/Ft.	Grade	
	20 Sx Plug	-"		_				
	7278-7510							
					TOC.			<del></del>
		ı			-		-	
		∦ Ti	ubing Deta	ail _			Grade/Trd.	
		1			TAC Set @ _		EOT	
		тос			Nipples _	· · · · · · · · · · · · · · · · · · ·		
		7762			-			
					Anchors _	·	Rods _	
	20 Sx Plug	Pe	erforation	Record <u>9</u>	9998-10001', 9	931-50', 9388	<b>46</b> 2, 9277 <b>-32</b>	5
	Top@8378'			_ {		-68'		
					· · · · · ·			
				_				
CIBP	<b>→</b> ≥<			7	M- # D O A14 A		<del></del>	<del></del>
8,610	- # L'	erfs 8633-		_	Well P & A'd 4			
		9068'		-	20 sx plug 861			
CIRD		3000			20 sx plug 727			
CIBP					35 Sx plug 365		····	
9,101'		1			35 Sx plug 150			<del></del>
		1			280 sx plug fro			<del></del>
w/35' cemer	<u>.</u>   E.	erfs			cut casings be	iwo grouna ievi	21	
W/SS CEITIE	"`	9277-		· · · · · · · · · · · · · · · · · · ·				
TD		10001'		Comments:				
10,065	, 🔠 📭	oc		Commonto.				
10,000	A-4	0065						
		ll l						

PRESENT COMPLETION

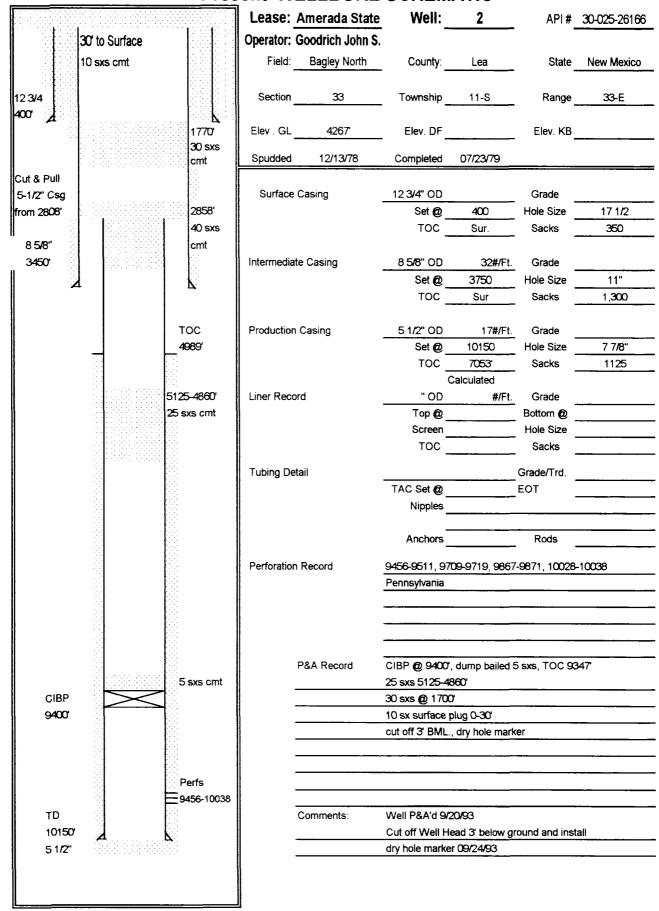
Prepared By:

Date:

Attachment E2 PRESENT WELLBORE SCHEMATIC Well: 1 10 Sx surface plug, welded steel plate Lease: State A API# **Operator: Petrus Energy** Field: Bagley County: Lea State New Mexico 13-3/8" Section 34 Township 11-S 33-E Range 452 35 sx plug from Elev. DF Elev. KB 1700-1600 Elev . GL 4277' Spudded Completed 25 sx plug 54.5 Casing Cut Surface Casing 13-3/8" Grade 2502 17 1/2" Set @ Hole Size TOC \_ Sur. Sacks 8 5/8" EOT 3000 3863 Intermediate Casing 8 5/8" OD 32#/Ft. Grade 3863 11" Set @ Hole Size TOC Sur 1,800 Sacks **Production Casing** 51/2" OD 17#/Ft. Grade 10,435 7 7**/8**" Set @ Hole Size 7053 TOC 553 Sacks Calculated " OD Liner Record #/Ft. Grade Bottom @ Top @ \_ Screen Hole Size TOC **Tubing Detail** Grade/Trd. TAC Set @ EOT TOC Nipples 7053 Anchors Rods Perforation Record 9992-96', 9960-75', 9927-65' Packer 9889 Perfs 9927-96 Well P & A'd 5-29-86 P&A Record 600 sxs cement into perforations and tubing CIBP 25 sx plug at 2502' 10,020 35 sx plug 1700-1600 10 sx surface plug, welded plate on 13-3/8" casing CIBP-10,240 w/35' cement Perfs 10,371-81 TD Comments: 10,435 EOC 10,435

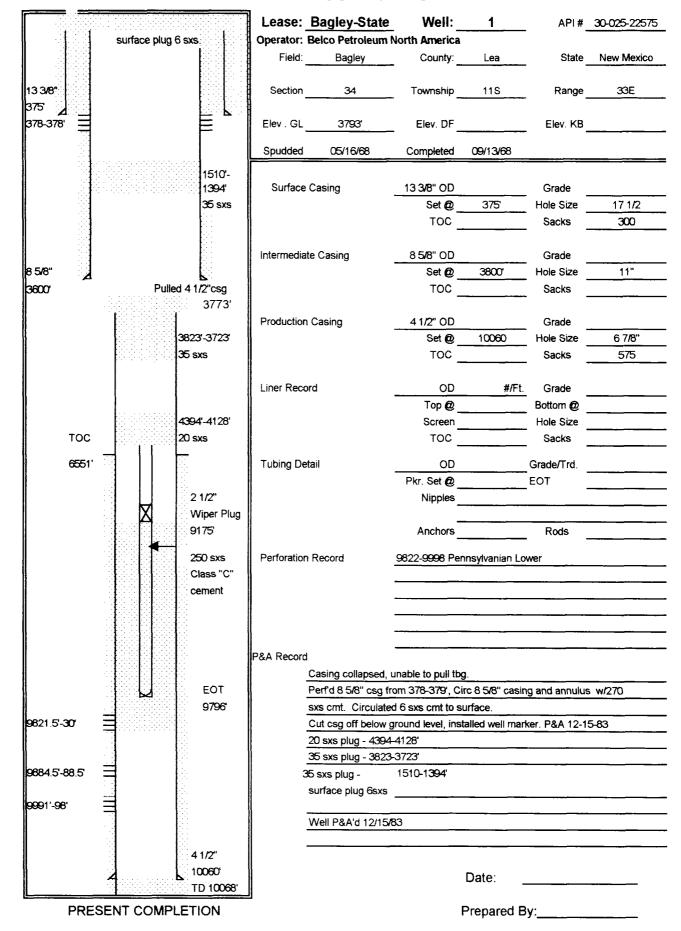
Date: \_\_\_\_\_

#### **Present WELLBORE SCHEMATIC**



Date:	
Prenared Rv	

#### WELLBORE SCHEMATIC



#### Application For Authorization to Inject Cont...

#### VII. Proposed Operations

- Proposed Maximum Daily Injection Rate: Maximum 10,000 BWPD
   Proposed AverageDaily Injection Rate: Average 7,500 BWPD
- 2.) Injection System: Closed System
- Proposed Maximum Injection Pressure: Maximum 1000 psi
   Proposed Average Injection Pressure: Less than 500 psi, (expect to be on vacuum)
- 4.) Sources of injection water will be produced water from Bagley & Bagley North Devonian, Permo Penn and Wolfcamp formation wells (see list of source wells, Attachment F). A water analysis from Bagley Devonian and Permo Penn wells is included (see Attachment G1 & G2).
- 5.) Chlorides in all of the source wells are expected to be similar to the water analysis in Attachments G1 and G2.

#### VIII. Injection Zone

The Bagley Permo Penn, North in the State BTP #1 well has an overall thickness of about 1000'. In this disposal well, the top of the formation is approximately 9000'. We intend to dispose of produced water in the middle Bagley Permo Penn, North and lower (Strawn) sections, through perforations and open hole intervals from 9,550 to 10,024'.

- 1.) Bagley Permo Penn, North
- 2.) Dolomite
- 3.) Thickness: 476' (+,-)
- 4.) Depth: 9,550' 10,024'
- 5.) Aquifers 300' (+,-)

#### IX. Stimulation

- 1.) Acidize w 5000 gallons of 15% NE HCL acid (+,-)
- XI. There are no producing fresh water wells within one mile of the proposed State BTP #1 SWD well.
- XII. Paladin Energy Corp. has examined the available geologic and engineering information for the area of interest and have found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

Dani J Floisonce	Production Manger	3/29/01
signature	title	date

Paladin Energy Corp.		Attachment F			
State BTP #1 SWD			-		
1980' FNL, 660' FWL					
Section 34, T11S, R33E			<del></del>	·	
Lea County, New Mexico				:	
			-		
VII. Item 4.					
List of Produced Water Source	Wells:	<del></del>	1		
			1		
Well Name	Field	County	State	Location	
J T Caudle Gas Com 2	Bagley	Lea	NM	NW/4 NW/4 Sec 3-T12S-R33E	<del></del>
State BT "C" 5	Bagley	Lea	NM	NE/4 SW/4 Sec 35-T11S-R33E	
State BT "D" 2	Bagley	Lea	NM	NW/4 SE/4 Sec 35-T11S-R33E	
State BT "D" Com A 1	Bagley	Lea	NM	SW/4 SE/4 Sec 35-T11S-R33E	
State BT "D" 3	Bagley	Lea	NM	SE/4 SE/4 Sec 35-T11S-R33E	
State BT "I" 1	Bagley	Lea	NM	NW/4 NW/4 Sec 2-T12S-R33E	
W E Mathers "A" 1	Bagley	Lea	NM	NW/ 4NE/4 Sec 3-T12S-R33E	
W E Mathers "A" 2	Bagley	Lea	NM	SE/4 NW/4 Sec 3-T12S-R33E	
State BT "A" 3	Bagley	Lea	NM	SW/4 NE/4 Sec 2-T12S-R33E	
State BT "N" 1	Bagley	Lea	NM	SE/4 SE/4 Sec 34-T11S-R33E	
State BT "C" 3	Bagley	Lea	NM	NW/4 SW/4 Sec 35-T11S-R33E	
State BT "A" 1	Bagley	Lea	NM	NW/4 SE/4 Sec 2-T12S-R33E	
Bagley SWD #4	Bagley	Lea	NM	SE/4 SW/4 Sec 35-T11S-R33E	
	No 1	<del></del>			
Mathers State Com 1	Bagley North	Lea	NM	NW/4 NW/4 Sec 33-T11S-R33E	
State BT "M" 2	Bagley North	Lea	NM	SE/4 NE/4 Sec 33-T11S-R33E	
State BT "R" 1	Bagley North	Lea	NM	NW/4 NW/4 Sec 10-T12S-R33E	
W E Mathers 2	Bagley North	Lea	NM	SE/4 SE/4 Sec 3-T12S-R33E	
W E Mathers B 1	Bagley North	Lea	NM	SE/4 NW/4 Sec 33-T11S-R33E	<del></del>
And subsequent wells to be dri	illed or recompleted in	Sections 35	5, 34, 33	1 3, T11S, R33E - also, Sections 2, 3	, 9, 10, T12S, R33E
<del> </del>				:	
<del> </del>					

#### ATTACHMENT G1

P. O. BOX 1468 MONAHANS, TEXAS 79756 PH. 943-3234 OR 563-1040

#### Martin Water Laboratories, Inc.

709 W, INDIANA MIDLAND, TEXAS 79701 PHONE 683-4521

#### **RESULT OF WATER ANALYSES**

	LA	BORATORY NO	/01-242		
Mr. Mickey Horn	SA	MPLE RECEIVED		<del> </del>	
4006 Dunkirk, Midland, Texas	79707 RE	SULTS REPORTED	8/7/01	8/7/01	
Paladin France Corpora	tion	o=	istad		
OMPANY Paladin Energy Corpora	Bagley LEA	SE	.15.60	<del></del>	
		<del></del>	NM		
ECTION BLOCK SURVEY T-11&128&R-3	E_ COUNTYLea	STATE	- NFI		
OURCE OF SAMPLE AND DATE TAKEN:	0 11 "0	7/00/07	Damarity	anian Formati	
NO.1 Produced water - taken fr		7/30/01	<del></del>		
NO.2 Produced water - taken fr				<u>anian Forama</u> t	
NO.3 Produced water - taken fr			<u>Pennsylv</u>	anian Formati	
NO.4 Produced water - taken fr	om State "C" #	1. 7/30/01	Pennsylv	anian Fomatio	
EMARKS: Penn	l				
	ICAL AND PHYSICAL	PROPERTIES			
	NO. 1	NO. 2	NO. 3	NO. 4	
Specific Gravity at 60° F.	1.0487	1.1610	1.0062	1.0581	
pH When Sampled					
pH When Received	6.10	6,22	6.29	6.29	
Bicarbonate as HCO,	451	159	171	268	
Supersaturation as CaCO,	20	20	20	30	
Undersaturation as CaCO,					
Total Hardness as CaCO,	11,400	23,000	1,750	16,000	
Calcium as Ca	3,280	3,000	480	4,880	
Magnesium as Mg	778	3,767	134	923	
Sodium and/or Potassium	24,179	99,856	2,443	24,714	
Sulfate as SO.	504	5,472	108	413	
Chloride as Cl	44,730	166,140	4,828	48,990	
Iron as Fe	64.5	109	161	7.7	
Barium as Ba			<u> </u>		
Turbidity, Electric	ļ				
Color as Pt					
Total Solids, Calculated	73,922	278,394	8.163	80,188	
Temperature *F.					
Carbon Dioxide, Calculated	<del></del>				
Dissolved Oxygen,	<del></del>				
Hydrogen Sullide	0.0	9.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	0.118	0.048	0.690	0.111	
Suspended Oil	<del></del>	<del> </del>			
Filtrable Solids as mg/l	<del></del>	<del> </del>			
Volume Filtered, ml	<del></del>	<b></b>			
Calcium Carbonate Scaling Tendency	None	None	None	None	
Calcium Sulfate Scaling Tendency	None	Severe	None	None	
	Results Reported As Milligra	Ims Per Liter			
Additional Determinations And Remarks	The state of the s		· · · · · · · · · · · · · · · · · · ·		
		<del></del>			
f .	<del></del>		<del></del>		
			<del> </del>		

Form No. 3

#### Martin Water Laboratories, Inc.

P O. BOX 1468 MONAHANS, TEXAS 79756 PH. 943-3234 OR 563-1040

709 W INDIANA MIDLAND, TEXAS 79701 PHONE 683-4521

#### RESULT OF WATER ANALYSES

			ATORY NO	701-242	(page 2)
TO: Mr. Mickey Horn			ERECEIVED _	7/30/01	
4006 Dunkirk, Midland, Texas 79707			TS REPORTED	8/7/01	
COMPANY Paladin Energy Corpora	tion	LEASE	As lis	sted	
FIELD OR POOL	Bagley	LLAGE _		<del></del>	
SECTION BLOCK SURVEY T-11&12S8		Lea	STAT	F NM	
SOURCE OF SAMPLE AND DATE TAKEN:	COUNTY		SIAI	E	
NO.1 Produced water - taken f	rom State #3	/ <sub>1</sub> 1	7/30/01	Pennelvy	anian Formation
NO.2 Produced water - taken f				_ <del></del>	<del></del>
	TOM State BI	1 #1.	7/30/01	Devonian	Formation
NO. 3				<del></del>	
NO. 4					_
REMARKS:1. Penn	. 2. Devo	nian			
CHEN	ICAL AND PHYSI	CAL PRO	PERTIES		
	NO. 1		NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0624		1.0330		
pH When Sampled	<u> </u>				
pH When Received	6.15		6.68		
Bicarbonate as HCO,	281		598		
Supersaturation as CaCO,	20		10		
Undersaturation as CaCO <sub>3</sub>					
Total Hardness as CaCO <sub>3</sub>	17,600		7,600		
Calcium as Ca	5,040		1,680		
Magnesium as Mg	1,215		826		
Sodium and/or Potassium	28,047		14,318		
Sulfate as SO.	245		2,112		
Chloride as CI	55,380		25,560	·	
Iron as Fe	6.4		1.7		
Barium as Ba	0				
Turbidity, Electric				<del></del>	
Color as Pt	<u> </u>				
Total Solids, Calculated	90,207		45,094		
Temperature *F.	<del>_</del>				<u> </u>
Carbon Dioxide, Calculated					<b></b>
Dissolved Oxygen,	<u> </u>				<del>                                     </del>
Hydrogen Sulfide	0.0		13.0	<del></del>	<del> </del>
Resistivity, ohms/m at 77° F.	0.118		0.179		
Suspended Oil		<del> </del>			
Filtrable Solids as mg/l					
Volume Filtered, ml					<del> </del>
Calcium Carbonate Scaling Tendency	None		None		
Calcium Sulfate Scaling Tendency	None	-	None		
	Results Reported As Mil	Iligrams Per	Liter		<del></del>
Additional Determinations And Remarks First, we need				herellall #1 her	ein does not
correlate with what we would expect fr					
between these Penn. waters and the De					
contain some soluble iron whereas the					
would be classified as being incompati					
If your intent is to commingle the waters downhole, since we suspect that the presence of iron is the result of corrosion in the well, there is a possibility that the Penn. and Devonian waters could be					
commingled downhole. However, as previously stated, we would not suggest mixing the Peng. waters and					
Devonian waters on the surface for re-		would			
Form No. 3			311	of hall	20
		Бу	196	wash a horas	

#### Affidavit of Publication

STATE OF NEW MEXICO	)
	) \$5.
COUNTY OF LEA	)
says that she is Advertisting DAILY LEADER, a daily new tion published in the English County, New Mexico; that satisfied in such county continuperiod in excess of Twenty-sprior to the first publication of hereinafter shown; and that duly qualified to publish legal	uly sworn on oath deposes and Director of THE LOVINGTON waspaper of general paid circulated language at Lovington, Leadid newspaper has been so publicularly and uninterruptedly for a six (26) consecutive weeks next of the notice hereto attached as said newspaper is in all things at notices within the meaning of assion Laws of the State of New
That the notice which is her	eto attached, entitled
Legal Not:	
was published in a regular	and entire issue of THE LOV-
	nd not in any supplement there-
	, beginning with the issue of
	2001 and ending with the issue
of July 25	, 2001.
1/ 01	ning said notice is the sum of hich sum has been (Paid) as
Juge Cell	min2
Subscribed and sworn to be of August 2001.	pefore me this 16th day
Alling ho	Mine
Debbie Schilling	

Notary Public, Lea County, New Mexico My Commission Expires June 22, 2002

#### LEGAL NOTICE

Paladin Energy Corp. pro-poses to convert the State BTP #1 located 1980' FNL and 660' FWL of Unit E Section 34, T11S, R33E, N.M.P.M., Lea County, New Mexico to a saltwater disposal well. Paladin will dispose of saltwater into the Bagley Permo Penn, North formation from a depth of 9550'-9876' at a maximum rate of 10,000 BPD and at a maximum pressure of 1000 psi. Questions pertaining to this application should be directed to Mr. David Manager, Plaisance, Drilling and Production for Paladin, 10290 Monroe Drive, Suite 301, Dallas, Texas 75229; phone number (214) 654-0132, Ext. 8. Interested parties should file objections or requests for hearing with the Oil Conservation Dvision, P.O. Box 2088, Santa Fe, New Mexico 87501, within fifteen (15) days.

Published in the Lovington Daily Leader July 25, 2001.

Paladin Energy Corp. State BTP #1 SWD 1980' FNL, 660' FWL Section 34, T11S, R33E Lea County, New Mexico

#### Attachment I

XIII. Item A

List of Surface Owners within 1/2 Mile Radius of Subject Well:

Marcia Mathers Hilburn P.O. Box 978 Tatum, NM 88267

List of Lease Operators within 1/2 Mile Radius of Subject Well:

Asher Enterprises Limited Co. P.O. Box 423 Artesia, New Mexico 88211-0423

Smith Mars P.O. Box 863 Kermit, Texas 79745

(Section 33 & 34, T11S, R33E) State of New Mexico (Permit submitted to Division of Conservation)

#### Attachment J

XIII. Certificate of Mailing

#### STATE OF TEXAS COUNTY OF DALLAS

BEFORE ME, the undersigned authority on this day personally appeared David J. Plaisance, Production Manager with Paladin Energy Corp., who being by me duly sworn, deposes and state that the persons listed on the foregoing attached list have been sent a copy on August 29, 2001, of the New Mexico Oil Conservation Division form C-108 entitled, "Application For Authorization To Inject" for the State BTP #1 SWD well, located in Section 34, T11S, R33E, Lea County, New Mexico.

Paladin Energy Corp.

David I Plaisance

**SUBCRIBED AND SWORN TO** before me on August 29, 2001, to certify which witness my hand and seal of office

NOTARY PUBLIC, STATE ŎF TEXAS