### History of circumstances surrounding The Bertha J. Barber No. 12 well Located 330' FNL and 990" FEL of Section 7-20S-37E, Lea Co., NM

- I. On or about October 17, 2000, Sapient received a letter from Chevron stating that it would seek regulatory approval to deepen an existing well, the G.C. Mathews #12, at a non standard location for the Monument Tubb West Pool at a location 330' North of Sapient's lease line. The letter stated that any objections to the application must be filed within 20 days.
- II. Sapient's initial review revealed that Chevron had other available wellbores in the SE/4 of Section 6 that were at standard locations which appeared to be re-entry candidates therefore, Sapient, believing it had an NMOCD approved unorthodox location filed an objection to Chevron's application.
- III. Falcon Creek purchased the Bertha Barber #12 well, along with several hundred other wells, from Cross Timbers Oil Company on April 1, 2000. Prior to such purchase Cross Timbers represented that all properties complied with any required regulatory permits and/or other orders needed to operate, produce and own the properties. Such representations have now expired. Further, Falcon Creek personnel performed a routine due diligence and found no evidence or notice, with regard to the Bertha Barber #12 that further regulatory approval was needed.
- IV. Sapient Energy Corp. acquired all of Falcon Creek, through merger agreement on July 14, 2000. In such merger, Sapient acquired 340 producing wells. Sapient relied on Falcon Creek's expertise as an experienced and knowledgeable operator of New Mexico properties to have in place all needed State orders to properly and legally produce all wells. In addition, a cursory review of all properties did not reveal or disclose anything that would lead one to believe additional State approvals were needed. As such, Sapient gave full value for the 100% WI, 87.5% NRI which Falcon Creek owned in the well.
- V. After Chevron filed its request for a unorthodox location, a closer review of the well file by Sapient indicated that Cross Timbers, as owner / operator of the Bertha Barber #12 prior to its sale to Falcon Creek on April 1, 2000, recompleted the well from an oil well to a gas well producing from the Tubb formation.
  - A. The file contained a State of New Mexico form C-103 dated August 10, 1999 wherein Cross Timbers provides notice that it intended to recomplete the well in the Tubb formation. Said form C-103 was approved by the State on September 20, 1999.
  - **B.** Cross Timbers then filed a State form C-105 dated September 9, 1999 providing notice that the well had been recompleted as a Tubb gas well.
  - C. Cross Timbers then filed a form C-103 dated September 9, 1999 providing notice that the well had indeed been recompleted in the Tubb formation as a gas well. The form was approved by the State on September 20, 1999.
  - D. Cross Timbers then filed a form C-102 dated September 9, 1999 showing an unorthodox Tubb gas well location being 330' FNL and 660' FEL of Section 7-20S-37E and the dedication of a 160 spacing unit described as the E/2 E/2 of said Section 7.
  - E. The State then approved, on September 20, 1999, Cross Timbers form C-104 allowable request, which grants an allowable for a wildcat Tubb gas well.

OIL CONSERVATION COMMISSION
Case No.12605 Denovo Exhibit No.
Submitted By:
Sapient Energy Corp.
Hearing Date: November 6, 2001

- F. The well was then sold to Falcon Creek on April 1, 2000 and on April 14, 2000 the State approved Falcon Creek's allowable request form C-104 granting an allowable to produce gas from the Monument Tubb West Gas Pool.
- VI. There was no indication in the files at any time that Cross Timbers or Falcon Creek had violated any regulatory rules or requirements nor does there exist any internal memos or letters of notification from the State of New Mexico that further approvals were required. To the contrary, it appeared to Sapient, who had not previously owned or operated any properties in New Mexico until its merger with Falcon Creek, that all needed State Regulatory papers had been approved.
- VII. It was not until our attorney, after receipt of Chevron's request to deepen the G.C. Mathews #12, and after his review of the records in Sapient's file and at the NMOCD in Santa FE that Sapient was made aware
- VIII. In Addition to Sapient paying Falcon Creek full value for 100% of the Bertha Barber #12 well. Sapient has also paid its 79 different royalty owners \$137,000.

# SEP 2 3 1999

1000 pt 1 1110 c - 1

Submit 3 Copies

Appropriate
Strict Office

State of New Mexico
Energy, Minerals and Natural Resources Department

CONDITIONS OF APPROVAL, IF ANY:

Form C-103 Revised 1-1-89

strict Office			T	
STRICT I	OIL CONSERVAT		WELL API NO.	
P.O. Box 1980, Hobbs NM 88241-1980  DESTRICT II	2040 Pache Santa Fe, NI		30-025-05978	
P.O. Drawer DD, Artesia, NM 88210	Saina 16, 141		5. Indicate Type of Lease STATE FEE	$\mathbf{x}$
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410			6. State Oil & Gas Lease No.	
SUNDRY NOT	ICES AND REPORTS ON V	VELLS		
	OPOSALS TO DRILL OR TO DEEP RVOIR. USE "APPLICATION FOR P 101) FOR SUCH PROPOSALS.)		7. Lease Name or Unit Agreement Name Bertha J. Barber	
1. Type of Well: OIL GAS WELL WELL O	OTHER		I	
2. Name of Operator			8. Well No.	
cross Timbers Operating Comp.	any		12	
<ol> <li>Address of Operator</li> <li>Garfield, Suite 175</li> </ol>	Midland, Texas 79705		9. Pool name or Wildcat Monument Abo	
4. Well Location Unit Letter A : 330	Feet From The North	Line and 660	Feet From The East L	ine
7	000	Range 37E	NMPM Lea Cou	
Section /	101110110	ther DF, RKB, RT, GR, etc. 3557' GR	NVII VI	
11. Check An	propriate Box to Indica		ce, Report, or Other Data	
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<ol> <li>Describe Proposed or Completed Opwork) SEE RULE 1103.</li> </ol>	reration <b>(Clearly state all pertinent</b> c	details, and give pertinent d	lates, including estimated date of starting any	brot
POH w/pkr & tbg. Perf Tu w/1 JSPF (25 holes). RIH NEFE HCl across perfs. F NEFE HCl. Acidize Tubb p	ubb w/3-3/8" csg gun @ 6.4 H w/treating pkr, SN & 2-3 PUH & set pkr @ <u>+</u> 6,325'.	424-6,419°, 6,412°-6 3/8" J-55 production Breakdown & EIR int ,350 gals 15% NEFE H	test RBP to 1,500 psig. Unset pk 410', 6,389-6,378' & 6,367'-6,364 tbg to 6,400'. Spot 2 bbls 15% to Tubb perfs fr/6,424'-6,364' w/1 Cl & 38 - 7/8" 1.3 SG ball sealer BEFURE THE OIL CONSERVATION COMMISSION	.5% 'S.
			Case No.12605 Denovo Exhibit No. Submitted By: Sapient Energy Corp. Hearing Date: November 6, 2001	
			AFFORE THE	
Dereby certify that the information above is t		•		
CNATURE DAY	The m	n <sub>E</sub> <u>Operations Engin</u>	DATE 8/10/99	
FEORPRINTNAME Darrin L. Stee	<u>:d</u>		TELEPHONE NO. 915/682-88	<u>73</u>
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PROVED BY	ını Kaütz	Π.E	DATE :	

# BEFORE THE OIL CONSERVATION COMMISSION

Case No.12605 Denovo Exhibit No.\_\_
Submitted By:

Submitted By: it to Appropriate

Form C-105

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		Hearing E	ate: Nover	nber 6,	2001		WELL API NO	).		
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Submit 3 Copies To Appropriate District Offics Bismit 1 525 N. French Dr., Hobbs, NM 87240 mit II	State of N Energy, Minerals ar	nd Natur	ral Resources	WELL AP		Form C-103 evised March 25, 1999	
South First, Artesia, NM 87210 ist III Rio Brazos Rd., Aztec, NM 87410 District IV D40 South Pacheco, Santa Fe, NM 87505	OIL CONSER V 2040 So Santa Fe	uth Pac	heco	STA	e Type of Lease	EE 😿	
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Name of Operator  ross Timbers Operating Compa  Address of Operator  O00 N. Garfield, Suite 175  Well Location	<u>m</u> y			8. Weil No. 12 9. Pool na Wildcat	me or Wildcat		
Unit Letter A : Section 7	Township  10. Elevation (Show v	20S	Range 37E	NMPM	feet from theCour		
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				Case No.1 Submitted Sapient	BEFURE I HI SERVATION C 2605 Denovo By: Energy Corp ate: November	OMMISSION Exhibit No	
ATURE Dawn	Steed		ny knowledge and bel		DATE -	9/09/99	
per print name Darrin L. Steenhis space for State use)  PPROVED BY proditions of approval, if any:		<u>.</u> ≦tin	<sub>bE</sub> Geolo	gist	Telephone No.  DATE	915/682-8873 SEP 2 0 1999	

District I PO Box 1980, Hobbs, NM 88241-1980 State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102 Revised October 18, 1994 Instructions on back

\$11 South First, Artesia, NM \$2210 | District III

District II

OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505 Submit to Appropriate District Office State Lease - 4 Copies

1900 Rio Brazze Rd., Aziec, NM 87410 District IV Fee Lease - 3 Copies

2040 South Pachaco, Santa Fe, NM 87505

` AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT API Number 96968 30-025-05978 WILDCAT TUBB Well Number Property Name 4 Property Code 12 Bertha J. Barber 3341 <sup>6</sup> Operator Name \* Elevation OGRID No. Cross Timbers Operating Company 3557' 005380 <sup>10</sup> Surface Location Lot Ida Feet from the North/South line Feet from the East/West line County UL or lot no. Section Township Range East Lea 660 North 330 37E 7 205 11 Bottom Hole Location If Different From Surface Lot Ida Range Feet from the North/South line Feet from the East/West line UL or lot Do. Section Township County \* Dedicated Acres 15 Joint or Infill 14 Consolidation Code 15 Order No. NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION 17 OPERATOR CERTIFICATION 3301 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief 660' DARRIN L. STEED Printed Name OPERATIONS ENGINEER Tilk Date 18SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by mi or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey Signature and Seal of Professional Surveyor: BEFORE THE OIL CONSERVATION COMMISSION Case No.12605 Denovo Exhibit No. Submitted By: Certificate Number Sapient Energy Corp.

Hearing Date: November 6, 2001

State of New Mexico Form C-104 y, Minerals & Natural Resources Department Revised October 18, 19 PO 8ex 1980, Hobbs, NM 88241-1980 Instructions on ba District II **OIL CONSERVATION DIVISION** Submit to Appropriate District O rawer DD, Artesia, NM 88211-0719 2040 South Pacheco RECTO. / MIDLAND 5 Copies L....det III Santa Fe, NM 87505 1000 Rio Brazos Rd., Aztec, NM 87410 District IV ☐ AMENDED REPORT SEP 23 1999 2040 South Pacheco, Santa Fe, NM 87505 REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT <sup>2</sup> OGRID Number Operator name and Address Cross Timbers Operating Company THIS WELL HAS BEEN PLACED IN THE POST DESIGNATED BELOW. IF YOU DO NOT CONCUE 005380 3000 N. Garfield, Suite 175 3 Reason for Filling Code Midland, Texas 79705 NOTIFY THIS OFFICE. 6 Pool Code 4 API Number 5 Pool Name 96968 25-05978 Wildcat Tubb 30-0 <sup>7</sup> Property Code 334 l 9 Well Number 8 Property Name Bertha J. Barber Surface Location II. UL or lot no. Section Township Range Lot. Idn Feet from the North/South Line Feet from the East/West lin 205 330 North 650 "Bottom Hole Location Ul, or lot no. East/West line Section Township Lot. Idn Feet from the North/South Lind Feet from the County 15 C-129 Permit Number 13 Producing Method Code 14 Gas Connection Date 16 C-129 Effective Date 12 Lse Code 17 C-129 Expiration Date

Oil and Gas Transporters OGRID 20 POD 21 O/G 22 POD ULSTR Location 19 Transporter Name and Address and Description Petro Sources Partnership Ltd 017407 0840210 O A-7-20S-37E 9802 Westheimer, Suite 900 Houston, TX 77042 Dynegy Midstream Service, LTD 024650 0840230 G 6 Desta Drive, Suite 5800 Midland, TX 79705-5050

 IV. Produced Water

 23 POD
 24 POD ULSTR Location and Description

 0840250
 A-7-20S-37E

V. Well Completion Data <sup>26</sup> Ready Date 27 TD 28 PBTD 29 Perforations 25 Spud Date 30 DHC, DC, MC 6364-6424\* (Tubb 6475 8/16/99 (PB) 7530 8/21/99 31 Hole Size 33 Depth Set 34 Sacks Cement 32 Casing & Tubing Size 17-1/4" 13-3/8" 899, 750 sx 12-1/4" 2898 9-5/8" 1000 sx 8-3/4" 5300. 350 sx 6-1/4" 4-1/2" 365 sx 7528

VI. Well Test Data 35 Date New Oil 36 Gas Delivery Date 37 Test Date 38 Test Length 40 Csg. Pressure Tbg. Pressure O 8/21/99 8/30/99 FTP 150 24 hrs 45 AOF 41 Choke Size 42 Oil 43 Water 44 Gas 46 Test Method 28/64\* 610 47 I hereby certify that the rules of the Oil Conservation Division have be OIL CONSERVATION DIVISION complied with anothat the information given above is true and com the best of my knowledge and beings Drig, Signed by, Approved by: Signature Geolog Bt inted name Title: arrin L. Steed Γitle: Approval Date: SFP 2 0 1999 Operations Engineer BEFORE THE

Date: 9/09/99 Phone: 915/682-8873

48 If this is a change of operator fill in the OGRID number and name of the previous operator

Previous Operator Signature Printed Name

OIL CONSERVATION COMMISSION
Case No.12605 Denovo Exhibit No.\_\_

Submitted By:

Sapient Energy Corp. Hearing Date: November 6, 2001

Revised 1/1/89 Form C-116

OIL CONSERVATION DIVISION 2040 Pacheco St. Santa Fe, NM 87505

DISTRICT II. 811 S. 1st Street, Artesia, NM 88210-2834

SHEWHHIE GOP JPITATE DISTRICT P.O. Box 1980, Hobbs, NIM 88240

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

Brangy, Minerals and Nath. A Resources Department

# GAS - OIL RATIO TEST

Operator Cross Timbers Operating Company						Pool	Mo	Monument Abo			ŏ	County		69	
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			LOCATION	rion		DATE	3n	<u> </u>	DAILY	LENGTH		PROD. D	PROD. DURING TEST	1	10 840
LEASE NAME	NO.	ם	S	-	Œ	TEST	SIZE SIZE	PRESS.	ALLOW-	TEST HOURS	WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	RATIO CU.FT/88L
Bertha J. Barber	12	<b>4</b>	7	202	37E	8/02/99	c.			24	4	38.6	4	38	9500
		_													
											OIL C	B ONSER' 0.1260	BEFORE THE RVATION CO	BEFORE THE OIL CONSERVATION COMMISSION Case No.12605 Denovo Exhibit No.	SSION
								·····			Submit Sapie Hearing	Submitted By: Sapient Ene Hearing Date:	Submitted By: Sapient Energy Corp. Hearing Date: November 6	Submitted By: Sapient Energy Corp. Hearing Date: November 6, 2001	<b>6</b>
									[						
structions:	:	•	•			:				hereby complete.	ertify th to the b	at the a	above ir ny know	ıformati 7ledge a	I hereby certify that the above information is true and complete to the best of my knowledge and belief.
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the poolli hich well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance	shall be rcent.	: produ Operat	ced at or is er	a rate 1 1couras	not exco ged to t	eeding the to ake advantag	p unit allow ze of this 25	able for the percent tole	ع. ح		J. W. C.	(		1 h	(
der that well can be assigned increased allowables when authorized by the Division.	ased allowa	bles w	hen au	thorize	ed by th	he Division.				Signature	-				

915/682-8873 Telephone No.

Regulatory Tech

Janice Courtney
Printed name and title

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

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

e Rule 301, Rule 1116 & appropriate pool rules.)

9/01/99 Date

District I 1625 N. French De. Hobbs. NM 88240

District II
811 South First, Artesia, NM 88210
District III
'') Rio Brazos Rd , Aztee, NM 87410

OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505

Submit to Appropriate District Office

2040 South Pacheco, Sant  [. R  Falcon Creek Re									MENDED REPORT
		OR ALLO	OWABLE	AND AU	<u>JTHOR</u>	IZATIO	ON TO TRA	NSPOR	<u>T</u>
Falcon Creek Re	Opera	ator name and	Address				, C	GRID Numb	er
CD4 4711 C1								169415	Cult
621 17th Street Denver, CO 802								son for Filing	i 1 . 2000
* API Nur				3 Poul	Nam ·		i un errec	tive ADri	6 Pool Code
30-0 25-0	15978		M	onument Tu	hh West	Gas			96968
<sup>7</sup> Property C	ode			8 Propert		440			Well Number
256	4/			Bertha J	. Barber				12
	ace Location								
UL or lot no. Secti		Range	Lot. Idn	Feet from the	<b>I</b> .	outh Line	Feet from the	East/West li	
A It Bott	om Hole Lo	37E		330	<u> </u>	orth	660	<u>East</u>	Lea
UL or lot no. Secti		Range	Lot. ldn	Feet from the	North/S	outh Line	Feet from the	East/West !	ine County
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12 Lse ('ode   1) Pro	oducing Method Cod		onnection Date	15 (2-129)	ermit Nuinb	er '	6 C-129 Effective I	Jate 1	C-129 Expiration Date
III. Oil and Gas	Transporter		/21/99	1		1		1	
18 Transporter	19 Tran	sporter Name	····	20 PC	D	21 <b>Q/G</b>		O ULSTR Loc	
OGRÍD		d Address				<u> </u>	a	and Description	on .
027707	Petro Source		•	084	0210	0	A-7-20S-37E		
	9801 Westheim Houston, TX		900						
	Dynegy Midstr		ces. LP	ng A	0230	G	A 7 000 035		
<u> </u>	6 Desta Drive	. Suite 3			0230		A-7-20S-37E		BEFORE THE
	Midland, TX	79705	·		<u> </u>			CONSE	EVATION COMMI
000000000000000000000000000000000000000				000000000	000000000	2000000000	Case	No.126	05 Denovo Exhib
	<del></del> _		<del></del>				Subm	nitted By	<b>:</b>
***************************************				************	000000000		l a	ont Fr	eray Corp.
							Heari	ng Date	: November 6, 20
IV. Produced V	Vater								
23 POD				24 POD 13	LSTR Local	ion and De	scription		
0840250	A-7-20S	-37E							
V. Well Compl	etion Data  26 Read	v Date	27 T	D T	28 P	3TD	<sup>29</sup> Perfora	tions [	30 DHC. MC
Space Sale	neau	, 54.6		_	r:	-10	FEITOIS		Directific
31 Hole Size		32 Casing	& Tubing Size		33 Depth Set			34 Saci	ks Cement
								-	
					·· <del>····</del> · ···-				
		·	<del></del>		,				
	Data							<del></del>	
VI. Well Test I	36 Gas Deliver	y Date	37 Test Date	,	Test Leng	tir	39 Thg. Pressure		40 Csg. Pressure
VI. Well Test I	20 Oas Deliver						··· <del>·</del>		
35 Date New Oil					44 Gas		45 AOF		46 Test Method
	<sup>42</sup> Oil		43 Water						1
35 Date New Oil 41 Choke Size	42 Oil			H			ICEDA A TION DUVING		
Date New Oil     Choke Size      Thereby certify that the complied with and that the complication of the complication of the complication of the complex of the comple	42 Oil le rules of the Oil Co	nservation Div	vision have been	the the	0	IL CON	SERVATIO	N DIVIS	ION
35 Date New Oil 41 Choke Size 47 I hereby certify that th	42 Oil le rules of the Oil Co	inservation Divabove is true a	vision have been	the Approve		IL CON	NSERVATION CONTRACTOR	N DIVISI	ION go wii waas
41 Choke Size  47 I hereby certify that the complied with and that the best of my knowledge an Signature:	42 Oil le rules of the Oil Co	nservation Divabove is true a	vision have been	the	i hy:	prix	2 Die Thic	Famo	go williams Soor
41 Choke Size  47 I hereby certify that the complied with and that the best of my knowledge an Signature:  48 I hereby certify that the complied with and that the best of my knowledge an signature:  49 I hereby certify that the complied with and that the best of my knowledge and the best of my knowledge a	42 Oil le rules of the Oil Co	nservation Divabove is true a	vision have been	Approved	d by:	prix	NSERVATION DISTRICT	Famo	go williams Soor
41 Choke Size  47 I hereby certify that the complied with and that the best of my knowledge an Signature:	42 Oil the rules of the Oil Colle information given dibelies	inservation Divabove is true a	vision have been	Approve	d by:	prix	2 Die Thic	Famo	go williams Soor
41 Choke Size  47 I hereby certify that the complied with and that the best of my knowledge an Signature:  48 H. J. Kagie  Title:	erules of the Oil Cole information given disclient	above is true a	vision have been	Approved	d by:	prix	2 Die Thic	RVISOR	go williams Soor
41 Choke Size  47 I hereby certify that the compiled with and that the best of my knowledge an Signature:  ated name: H.J. Kagie  Title: Chief Executions	tive Officer	Thume: 303	vision have been and complete to	Approve	1 by: C	01910	2 Die Thic	AVISOR	OC WILLIAMS SHOP  4 ZUU

Requested by:SUPER

Full Revenue-Deck Reference Listing by Well Comp: 1 SAPIENT ENERGY CORP. Page 1

t DMM-R1

	1536	BERTHA J BARBER #12 (ABO)	State:NM Rev-Hold:NO
<b>ـ</b> :	10 Deck:1	EffectiveDate:02/01/98 Name:	Perm

SAN ANTONIO TX 78205-2898 ID:74-1286553

tity	Entity	ST Rev. Memo		~			x-Percentages		Auto
ode	Name	Hold	Type		Rev-Tax #1		-	Rev-Tax #4	
1	SAPIENT ENERGY CORP. 8801 S. YALE, SUITE 150	ок	RI	0.0001399600	0.0001399600	0.0000000000	0.000000000	0.000000000	N
	TULSA OK 74137	ID:73-153272	5						
1	SAPIENT ENERGY CORP. 8801 S. YALE, SUITE 150 TULSA OK 74137	OK ID:73-1532726	WI 5	0.8750000000	0.8750000000	0.000000000	0.000000000	0.000000000	N
1043	TEXACO EXPL & PROD INC PO BOX 841350 DALLAS TX 75284-1350	TX ) ID:510-26-571	RI L3	0.062500000	0.0625000000	0.000000000	0.000000000	0.0000000000	N
4964	ADOBE OIL & GAS INC 1000 BALLPARK WAY, STE 204	TX	RI	0.0015625000	0.0015625000	0.000000000	0.000000000	0.000000000	И
	ARLINGTON TX 76011	ID:75-2588742	2						
4925	AQUAENCO INC P O BOX 702416	ок	RI	0.0004882800	0.0004882800	0.0000000000	0.000000000	0.000000000	N
	TULSA OK 74170-2416	ID:73-1338841	L						
4933	ASPEN LAND & EXPLORATION CO P O BOX 4335	OK	RI	0.0007324200	0.0007324200	0.000000000	0.000000000	0.000000000	N
	TULSA OK 74159	ID:74-2081085	5						
4972	PETER L BAUERLEIN 13807 CHITTUM WOODS	TX	RI	0.0000178600	0.0000178600	0.000000000	0.000000000	0.000000000	N
	SAN ANTONIO TX 78232-5457	ID:450-11-697	77						
5024	COLLEEN C BOOTH TR 12-12-94 COLLEEN CATHEY BOOTH, TTEE 915 W KENNEWICK AVE	WA	RI	0.0003182000	0.0003182000	0.000000000	0.000000000	0.000000000	N
		ID:542-18-351	L <b>4</b>						
5033	NORMA W BRADY C/O LIBERTY & TRUST A/C #72-7704661	OK	RI	0.0011905000	0.0011905000	0.000000000	0.0000000000	0.000000000	N
	15 EAST 5TH STREET TULSA OK 74103	ID:445-18-221	10						
5034	MARY DEBORA BRADY	тx	RI	0.0005952500	0.0005952500	0.0000000000	0.0000000000	0.0000000000	N
	1804 LAKE CREST LANE			•					
	PLANO TX 75023-7442	! ID:431-98-857	75						
5035	WYATT TATE BRADY P O BOX 6034	AR	RI	0.0005952500	0.0005952500	0.000000000	0.0000000000	0.000000000	N
	SPRINGDALE AR 72766	ID:431-94-584	14						
5056	PETER G BURNETT	IL	RI	0.0001953000	0.0001953000	0.000000000	0.0000000000	0.000000000	N
	P O BOX #70 KENILWORTH IL 60043	ID:322-18-418							
50@	NANCY E CARLSON	AZ Hold	RI	0.0000976000	0.0000976000	0.000000000	0.0000000000	0.000000000	N
	3770 S YAQUI DR #104 FLAGSTAFF AZ 86001-6670			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				0.000000	
5091	TERESA CHERRY	Hold	RI	0.0000195400	0.0000195400	0.000000000	0.0000000000	0.000000000	v
	REPORTED UNCLAIMED 1996	ID:	•••	0.000135400	0.0000133403		0.000000000	0.000000000	•
<1.84	ROZELLE CLEVELAND U/W/O TX COMM BANK, TITEE #20-0763-00	TX	RI	0.0000488500	0.0000488500	0.000000000	0.000000000	0.000000000	N
	P O BOX 201595 HOUSTON TX 77216-1595	ID:75-681254	ı						
5123	CONCORD OIL COMPANY ALAMO NATIONAL BLDG	тх	RI	0.0001071900	0.0001071900		BEFC CONSERVAT	RE THE	leeir
	105 S ST MARY'S ST STE 1500 SAN ANTONIO TX 78205-2898	1 Th:74=129655					No.12605 D		

Case No.12605 Denovo Exhibit No.\_ Submitted By: Sapient Energy Corp.

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Full Revenue-Deck Reference Listing by Well Comp: 1 SAPIENT ENERGY CORP. Page 2

1536 BERTHA J BARBER #12 (ABO) State:NM Rev-Hold:NO
10 Deck:1 EffectiveDate:02/01/98 Name: Perm

				Pa	rticipants					
city ode	Entity Name		Rev. Memo Hold	Int. Type	Decimal Interest			-	Rev-Tax #4	
	EVERETT COON, JR 3536 RANKIN DALLAS TX 75205	TX	454-15-700	RI	0.0001562500	0.0001562500	0.000000000	0.000000000	0.000000000	N
			454-15-700							
	BETTY KYTE DREESSEN IRREVO TR DT 12/23/58 ID POWELL TTEE P O BOX 1665		04 6054107	RI	0.0003794500	0.0003794500	0.000000000	0.000000000	0.000000000	N
	LOS ALTOS CA 94022	ID:	94-6054137							
	BETTY M DREESSEN REVOC LIVING TR DT 10/17/77 BM DRESSEN TTEE P O BOX 817	CA		RI	0.0005929000	0.0005929000	0.000000000	0.000000000	0.0000000000	N
	LOS ALTOS CA 94022	ID:	555-26-372	2						
	CECILE MARIE DREESSEN P O BOX 864				0.0000711500	0.0000711500	0.000000000	0.000000000	0.000000000	N
	RIPON CA 95366-0864	11):	561-23-426	3						
	EDWARD T DREESSEN P O BOX 416 LOS ALTOS CA 94022		561-72-129		0.0000711500	0.0000711500	0.000000000	0.000000000	0.000000000	N
5227	ENEX RESOURCES CORP	тх	Hold	RI	0.0003213500	0.0003213500	0.000000000	0.000000000	0.000000000	N
	1221 LAMAR, STE 1020 HOUSTON TX 77010		93-0747806							
752	WILLIAM C FRENCH, III	TX		RÍ	0.0000244100	0.0000244100	0.000000000	0.000000000	0.000000000	N
	714 GOLDEN BEAR KINGWOOD TX 77339	ID:	454-92-950	7						
55200	CHARLOTTE L GEDGE 407 SOUTH ST	IL		RI	0.0000977000	0.0000977000	0.000000000	0.000000000	0.000000000	И
	WEST DUNDEE IL 60118	ID:	337-18-665	9						
	KENNETH H GRAY D/B/A MOUNTAIN HOME OIL CO 4505 MEADOWLARK AVE	тx		RI	0.0000162700	0.0000162700	0.0000000000	0.000000000	0.000000000	И
	MIDLAND TX 79707	ID:	528-68-529	6				v.		
	SHERMAN GRIGGS 192 N 87TH ST	WI		RI	0.0000488300	0.0000488300	0.0000000000	0.000000000	0.000000000	N
	WAUWATOSHA WI 53226	ID:	354-16-394	7						
<b>55.388</b>	C W GRIMES TR, G MCFARLAND TTEE C\O GRIMES OPERATING CO 2525 E 21ST ST, STE 205	οĸ		RI	0.0073940000	0.0073940000	0.000000000	0.000000000	0.0000000000	И
	TULSA OK 74114-1747	ID:	73-0620790							
	OTHA H GRIMES FOUNDATION V KIDD, R JAMES, M GRIMES F HENKE, CO-TTEES BOX 3183	OK		RI	0.0022321000	0.0022321000	0.000000000	0.000000000	0.000000000	И
	TULSA OK 74101	ID:	73-1293858							
537	JEROME T HANNERS P O BOX 1224	NM			0.0003906000	0.0003906000	0.000000000	0.000000000	0.0000000000	и
	LOVINGTON NM 88260	ID:	525-60-218	4						
.5326	HOME-STAKE OIL & GAS CO PARKWAY CENTER II 2805 N DALLAS PARKWAY STE 100	TX		RI	0.0038573500	0.0038573500	0.0000000000	0.000000000	0.000000000	N
	PLANO TX 75093	ID:	73-0288030							
530	HOSFELDT FAMILY PARTNERS	CA		RI	0.0001930000	0.0001930000	0.000000000	0.000000000	0.0000000000	N
	227 BRIGHTON LN REDWOOD CITY CA 94061	ID:	77-0229655	i						
. <b>53</b> 9	MADELINE C HOUSEL UNCLAIMED PROPERTY DIV (1996)	тх		RI	0.0000977000	0.0000977000	0.000000000	0.000000000	0.000000000	N
	P O BOX 12019 AUSTIN TX 78711-2019	ID:								

1: 1536 BERTHA J BARBER #12 (ABO) State:NM Rev-Hold:NO
10 Deck:1 EffectiveDate:02/01/98 Name: Perm

tity	Entity	ST Rev. Memo		-		Revenue Ta	x-Percentages		Auto
ode	Name	Hold	Туре		Rev-Tax #1			Rev-Tax #4	
5620	ORION PROPERTIES INC C/O DONALD W STEPHENS 11776 S 76TH E AVE	OK	RI	0.0001302000	0.0001302000	0.000000000	0.000000000	0.000000000	N
	BIXBY OK 74008	ID:73-1375927	7						
5625	PACTOLA DEVELOPMENT CO P O BOX 701342	ок	RI	0.0002441300	0.0002441300	0.0000000000	0.000000000	0.000000000	N
	TULSA OK 74170-1342	ID:73-1265022	2						
5645	JUDI MILLER PERKINSON 9005 E SOUTH FAIRMONT . IN 46928	IN ID:312-80-887	RI	0.0000040600	0.0000040600	0.000000000	0.000000000	0.000000000	N
	FAIRMONT . IN 46928	ID:312-60-66							
5658	EUPHEMIA JANE PIERCE UNCLAIMED PROPERTY DIVISION P O BOX 12019	TX	RI	0.0000977000	0.0000977000	0.0000000000	0.000000000	0.000000000	N
	AUSTIN TX 78711-2019	ID:							
5662	MURIEL PLETCHER 3903 DEWBERRY LN	FL	RI	0.0020089500	0.0020089500	0.000000000	0.000000000	0.000000000	N
	ST JAMES CITY FL 33956	ID:275-28-823	12						
5667	INGRID POWELL P O BOX 416	CA	RI	0.0000711500	0.0000711500	0.000000000	0.000000000	0.000000000	N
	LOS ALTOS CA 94022	ID:552-70-517	0						
5675	PRINCE MINERALS LTD 7001 PRESTON RD, STE 301 LB 35	TX	RI	0.0031250000	0.0031250000	0.000000000	0.000000000	0.000000000	N
	DALLAS TX 75205	ID:75-2749788	l						
5677	PURNELL MORROW CO 4925 GREENVILLE AVE, STE 1116	TX	RI	0.0001562500	0.0001562500	0.000000000	0.000000000	0.000000000	N
	DALLAS TX 75206	ID:75-1909098	İ						
568 <b>8</b>	C E & DOROTHEA RAWLINSON TR JOYCE RAWLINSON, TTEE 6/24/74	OR	RI	0.0016226000	0.0016226000	0.000000000	0.000000000	0.000000000	N
	621 SW MORRISON ST, STE 437 PORTLAND OR 97205	ID:93-6094396	i						
5714	WILLIAM R ROBERTS 45 NE 47TH AVE	OR	RI	0.0005006000	0.0005006000	0.000000000	0.000000000	0.000000000	N
	PORTLAND OR 97213	ID:543-03-042	!1						
5716	JANET ROBINSON	GA	RI	0.0020089500	0.0020089500	0.000000000	0.000000000	0.000000000	N
	24 OGDEN ST JEKYLL ISLAND GA 31527	ID:275-24-160	9						
5731	SABINE ROYALTY TRUST BANK OF AMERICA NA, TTEE	TX	RI	0.0044294500	0.0044294500	0.000000000	0.000000000	0.000000000	N
	LBX #840887  DALLAS TX 75284-0887	ID:75-6297143	3						
5733	SALVATION ARMY LEGAL SECRETARY	NY	RI	0.0000976500	0.0000976500	0.0000000000	0.000000000	0.000000000	N
	120 W 14TH ST NEW YORK NY 10011	ID:135-56-235	51						
5758	SCOPE EXPLORATION INC P O BOX 702571	ок	RI	0.0004882700	0.0004882700	0.000000000	0.000000000	0.000000000	N
	TULSA OK 74170	ID:73-1235000	)						
15	·	тх	RI	0.0002929500	0.0002929500	0.000000000	0.000000000	0.000000000	N
	P O BOX 50787 MIDLAND TX 79710	ID:75-1895956	5						
5834	JANE W STRICKLAND 3915 N NEW JERSEY-1	IN	RI	0.0000162800	0.0000162800	0.000000000	0.0000000000	0.000000000	N
	INDIANAPOLIS IN 46205	ID:554-54-401	L <b>6</b>						

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tity	Entity				Decimal					
ode	Name		Hold	Туре	Interest	Rev-Tax #1	Rev-Tax #2	Rev-Tax #3	Rev-Tax #4	Susp
			** ****							
5 <b>855</b>	ALICE R TEDEN C/O MARK H TEDEN 36 BROMFIELD ST		ма	RI	0.0019392000	0.0019392000	0.000000000	0.000000000	0.000000000	N
	WATERTOWN	MA 02472-2144	ID:150-36-488	35						
5882	MAURICE B TRACY 1516 BARCLAY PL		ИУ	RI	0.0003906000	0.0003906000	0.000000000	0.000000000	0.0000000000	Y
	SCHENECTADY	NY 12309	ID:							
58 <b>8</b> 5	TRITEX PRODUCTION 2882 SAND HILL RE	), STE 117	CA 75 0550000		0.0004687500	0.0004687500	0.000000000	0.000000000	0.000000000	N
	MENLO PARK	CA 94025	ID:75-2562881	L						
58 <b>9</b> 7	VAUGHN PETRO ROY A TX PARTNERSHIP	·	TX	RI	0.0062500000	0.0062500000	0.000000000	0.0000000000	0.000000000	И
	3738 OAK LAWN AVE DALLAS	TX 75219	ID:75-254457	3						
5904	V W RESOURCES INC P O BOX 471249	:	ок	RI	0.0001302000	0.0001302000	0.000000000	0.0000000000	0.000000000	N
	TULSA	OK 74147	ID:73-1376039	€						
5941	WHITE STAR ENERGY P O BOX 51108	! INC	TX	ŔĬ	0.0001953000	0.0001953000	0.000000000	0.000000000	0.0000000000	N
	MIDLAND	TX 79710	ID:75-243893	7						
5964	SHARON W WOODS 103 SMITH RD		PA	RI	0.0000040700	0.0000040700	0.0000000000	0.000000000	0.000000000	N
	PORT MATILDA	PA 16870	ID:304-60-830	6						
59 <b>69</b>	CALEB WRIGHT 5270 ARREXXO ST		CA		0.0000040700	0.0000040700	0.000000000	0.000000000	0.000000000	N
	PLEASANTON	CA 94566	ID:315-46-116	53						
59 <b>70</b>	DOUGLAS P WRIGHT 9807 WRANGLER DR		AZ		0.0000162700	0.0000162700	0.0000000000	0.0000000000	0.000000000	N
	SUN CITY	AZ 85373	ID:348-18-61	00						
5971	JOANNE M WRIGHT 15444 W ROCKLAND		IL		0.0000162800	0.0000162800	0.0000000000	0.000000000	0.000000000	И
	LIBERTYVILLE	IL 60048	ID:337-28-32	17						
59 <b>86</b>	BENNET BOTSFORD Y	COUNG, JR	IL	RI	0.0001953000	0.0001953000	0.000000000	0.000000000	0.000000000	N
	LAKE FOREST	IL 60045	ID:348-18-656	54						
5987	MONTGOMERY L YOUN		AZ	RI	0.0005859000	0.0005859000	0.000000000	0.0000000000	0.000000000	И
	SEDONA	AZ 86336	ID:520-22-82	16						
6418	BARBARA JANE DEWE	Æ		RI	0.0009672300	0.0009672300	0.000000000	0.000000000	0.0000000000	N
	BLOOMINGTON	NM 55438	ID:396-44-76	11						
6536	MICHAEL HERD MOOF 14850 OAKS NORTH		TX	RI	0.0023717000	0.0023717000	0.000000000	0.0000000000	0.000000000	N
	DALLAS	TX 75240	ID: 455-72-060	03						
	REESE CLEVELAND THE CHASE MANHATT			RI	0.0000244250	0.0000244250	0.000000000	0.000000000	0.000000000	N
	P.O. BOX 10966 MIDLAND	TX 79702	ID:75-633466	4						
6541	KATHY KIEL JOHNSO		TX	RI	0.0000122125	0.0000122125	0.0000000000	0.000000000	0.0000000000	N
	P.O. BOX 97517 WICHITA FALLS	TX 76307	ID:446-76-12	00						

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Full Revenue-Deck Reference Listing by Well

Comp: 1 SAPIENT ENERGY CORP.

Page 6

1536 BERTHA J BARBER #12 (ABO) State:NM Rev-Hold:NO 11: : 10 Deck:1 EffectiveDate:02/01/98 Name:

Perm

Participants Intity Entity ST Rev. Memo Int. Decimal ------Revenue Tax-Percentages---------- Auto Code Name Hold Type Interest Rev-Tax #1 Rev-Tax #2 Rev-Tax #3 Rev-Tax #4 Susp 6542 OLIVER B KIEL, III тx RI 0.0000122125 0.0000122125 0.0000000000 0.000000000 0.000000000 N P.O. BOX 1654 TX 78676 ID:446-76-1199 WIMBERLEY ------ Deck Totals ( 81 Participants) Working Interests: Royalty Interests: Total Interests: 

### MONUMENT-TUBB POOL Lea County, New Mexico

Order No. R-2800, Adopting Operating Rules for the Monument-Tubb Pool, Lea County, New Mexico, December 1, 1964, as Amended by Order No. R-10128, June 3, 1994.

Application of Continental Oil Company for Special Pool Rules, Lea County, New Mexico.

CASE NO. 3123 Order No. R-2800

#### ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on October 13, 1964, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 10th day of November, 1964, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

#### FINDS

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Continental Oil Company, seeks the promulgation of special rules and regulations for the Monument-Tubb Pool in Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, including a provision for 80-acre spacing units and a gas-oil ratio of 6000 to 1.
- (3) That one well in the Monument-Tubb Pool can efficiently and economically drain and develop 80 acres.
- (4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, special rules and regulations providing for 80-acre spacing units should be promulgated for the Monument-Tubb Pool.
- (5) That a limiting gas-oil ratio of 6000 to 1 would be excessive for this pool and might result in waste.
- (6) That the special rules and regulations should provide for a limiting gas-oil ratio of 4000 to 1 in order to allow each operator in the pool the opportunity to use his just and equitable share of the reservoir energy.

### IT IS THEREFORE ORDERED:

That Special Rules and Regulations for the Monument-Tubb Pool are hereby promulgated as follows, effective December 1, 1964:

### SPECIAL RULES AND REGULATIONS FOR THE MONUMENT-TUBB POOL

RULE 1. Each well completed or recompleted in the Monument-Tubb Pool or in the Tubb formation within one mile thereof, and not nearer to or within the limits of another designated Tubb oil pool, shall be spaced, drilled, operated, and

produced in accordance with the Special Rules and Regulations hereinafter set forth.

- RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.
- RULE 4. Each well shall be located no nearer than 330 feet to any governmental quarter-quarter section or lot line.
- RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditons. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.
- RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 2.77 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80-acres.

RULE 7. (As Amended by Order No. R-10128, Effective June 3, 1994.) The limiting gas-oil ratio shall be 10,000 cubic feet of gas per barrel of oil produced.

### IT IS FURTHER ORDERED:

- (1) That any well presently drilling to or completed in the Monument-Tubb Pool or in the Tubb formation within one mile thereof that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before December 1, 1964.
- (2) That each well presently drilling to or completed in the Monument-Tubb Pool or in the Tubb formation within one mile thereof shall receive a 40-acre allowable until a Form C-128 dedicating 80 acres to the well has been filed with the Commission.
- (3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

# BEFORE THE OIL CONSERVATION COMMISSION

Case No.12605 Denovo Exhibit No.\_ Submitted By:

Sapient Energy Corp. Hearing Date: November 6 2001

### SAWYER-SAN ANDRES GAS POOL Lea County, New Mexico

er No. R-1517, October 30, 1959, Reclassifying as Gas Pool, amended by Order No. R-1652, April 19, 1960; Order No. R-6, September 1, 1962; Order No. R-2485, June 1, 1963; Or-No. R-2569, October 1, 1963; Order No. R-2879, April 1, 5; Order No. R-3014, January 1, 1966; Order No. R-3455, gust 1, 1968; Order No. R-4258, March 1, 1972; Order No. 499, April 1, 1973; Order No. R-4809, July 1, 1974; Order R-4915. December 1, 1974; Order No. R-4995, May 1, 1975; Order No. R-5309, November 1, 1976.

-9-S. R-37-E SW/4, E/2 Sec. 13; NE/4 Sec. 23; W/2 Sec. E/2 Sec. 25.
-9-S. R-38-E Lots 3, 4, W/2 SW/4 Sec. 9; W/2 Sec. 16; s. 18, 19, 20; W/2 Sec. 21; S/2, NW/4 Sec. 28; Secs. 29, 30; Sec. 31; Secs. 32, 33.

-10-S, R-38-E NW/4 Sec. 4; N/2 Sec. 5; NE/4 Sec. 6.

### BAISH-ABO POOL Lea County, New Mexico

er No. R-1532, November 23, 1959, Establishing Pool.

ool abolished by Order No. R-1572, January 18, 1960.

### MONUMENT-TUBB POOL (Formerly Monument Tubb-Drinkard Pool) Lea County, New Mexico

Lea County, New Mexico

ler No. R-1532, November 23, 1959, Establishing Pool, as ded by Order No. R-1720, July 15, 1960; Order No. R-January 1, 1963; Order No. R-2427, March 1, 1963; Order c-2527, August 1, 1963; Order No. R-2602, December 1, 2000; Order No. R-2692, May 1, 1964; Order No. R-2781, Nonber 1, 1964; Order No. R-2879, April 1, 1965; Order No. R-3051, April 1, 1966; Order No. R-3104, September 1, 1960; Order No. R-3182, February 1, 1967; Order No. R-4734, rch 1, 1974; Order No. R-5911, February 1, 1979; Order No. R-7248, April 1, 1983; Order No. R-8826, January 1, 1980; Order R-7248, April 1, 1983; Order No. R-8826, January 1, 1990; Order No. R-10177, September 1, 1994; Order No. R-42, May 1, 1995; Order No. R-10556, March 1, 1996; Order R-10641, September 1, 1996; Order No. R-10972, May 1, 8; Order No. R-11116, January 1, 1999; Order No. R-11243, October 1, 1999; Order

-19-S, R-37-E S/2 Sec. 34; SW/4 Sec. 35. -20-S, R-37-E W/2, SE/4 Sec. 2; Sec. 3; SE/4 Sec. 5; Sec. 8; E/2, SW/4 Sec. 9; Secs. 10, 11, 12, N/2 Sec. 13; W/2 SW/4 Sec. 14; SE/4, NE/4 Sec. 15; E/2, NW/4 Sec. NE/4 Sec. 20; N/2 Sec. 21; N/2 Sec. 22; W/2 Sec. 23. -20-S, R-38-E S/2 Sec. 6; N/2, SW/4 Sec. 7.

# CANYON-WOLFCAMP POOL Eddy County, New Mexico

er No. R-1532, November 23, 1959, Establishing Pool.

19-S, R-24-E NW/4 Sec. 36.

# BELL LAKE-PENNSYLVANIAN GAS POOL Lea County, New Mexico

No. R-569, January 13, 1955, Establishing Pool, as Amended der No. R-2062, October 1, 1961; Order No. R-4635, October 1, 1973.

ol abolished by Order No. R-4821, August 1, 1974.

# BLACK RIVER POOL (DELAWARE) Eddy County, New Mexico

Order No. 850, January 1, 1950, Redefining Pool, as Amended by Order No. R-71, April 30, 1951; Order No. R-10962, March 1, 1998; Order No. R-11005, August 1, 1998; Order No. R-11244, October 1, 1999.

T-24-S, R-26-E E/2, NW/4 Sec. 10; S/2 Sec. 11; SW/4 Sec. 12; W/2 Sec. 13; E/2 Sec. 14; N/2 Sec. 15; NE/4 Sec. 23; NW/4 Sec. 24.

### SAND SPRINGS-DEVONIAN POOL Lea County, New Mexico

Order No. R-1129, February 20, 1958, Establishing Pool, as Amended by Order No. R-2201, April 1, 1962; Order No. R-2705, June 1, 1964; Order No. R-5781, September 1, 1978.

T-11-S, R-34-E SW/4 Sec. 1; SE/4 Sec. 2; NE/4 Sec. 11; NW/4 Sec. 12.

### DARK CANYON POOL (DELAWARE) Eddy County, New Mexico

Order No. R-219, December 4, 1952, Establishing Pool.

T-23-S. R-26-E S/2 Sec. 22.

#### BANDANA POINT-PENNSYLVANIAN GAS POOL Eddy County, New Mexico

Order No. R-1559, December 18, 1959, Establishing Pool.

T-23-S, R-23-E SE/4 Sec. 13.

### BUFFALO-PENNSYLVANIAN GAS POOL Lea County, New Mexico

Order No. R-1559, December 18, 1959, Establishing Pool, as Order No. R-1539, December 18, 1939, Establishing Fool, as Amended by Order No. R-2620, January 1, 1964; Order No. R-5781, September 1, 1978; Order No. R-6033, July 1, 1979; Order No. R-6449, September 1, 1980; Order No. R-6476, October 1, 1980; Order No. R-6967, May 1, 1982; Order No. R-7114, November 1, 1982.

T-19-S, R-32-E S/2 Sec. 1; S/2 Sec. 12. T-19-S, R-33-E N/2 Sec. 4; Secs. 5 through 9; N/2 Sec.

# CULWIN-YATES POOL Eddy County, New Mexico

Order No. R-1559, December 18, 1959, Establishing Pool, as Amended by Order No. R-1857, February 1, 1961.

Pool abolished by Order No. R-2128, November 29, 1961.

Moument

# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 12321 Order No. R-11304

THE APPLICATION OF THE OIL CONSERVATION DIVISION FOR AN ORDER CREATING AND EXTENDING CERTAIN POOLS IN LEA COUNTY, NEW MEXICO.

### ORDER OF THE DIVISION

### BY THE DIVISION

This case came on for hearing at 8:15 a.m. on January 6, 2000, in Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 12th day of January, 2000, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

### FINDS THAT

- (1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter
- (2) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Upper Silurian formation, bearing the designation of North Fowler-Upper Silurian Pool. The North Fowler-Upper Silurian Pool was discovered by the Altura Energy Ltd. South Mattix Unit Federal Well No. 24 located in Unit O of Section 15, Township 24 South, Range 37 East, NMPM, which was completed in the Upper Silurian formation on June 18, 1999 The top of the perforations is at 7,118 feet.
- (3) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Abo formation, bearing the designation of Southwest Lovington-Abo Pool. The Southwest Lovington-Abo Pool was discovered by the David H. Arrington Oil & Gas Inc. Brassie Well No. 1 located in Unit I of Section 33, Township 16 South, Range 36 East, NMPM, which was completed in the Abo formation on July 25, 1999. The top of the perforations is at 8,891 feet.

BEFORE THE
OIL CONSERVATION COMMISSION
Case No.12605 Denovo Exhibit No.\_
Submitted By:
Sapient Energy Corp.
Hearing Date: November 6, 2001

Case No. 12321 Order No. R-11304

- (4) There is need for the creation of a new pool in Lea County, New Mexico, for the production of gas from the McKee formation, bearing the designation of Maljamar-McKee Gas Pool. The Maljamar-McKee Gas Pool was discovered by the Mack Energy Corporation MC Federal Well No. 1 located in Unit E of Section 22, Township 17 South, Range 32 East, NMPM, which was completed in the McKee formation on October 15, 1999. The top of the perforations is at 14,805 feet.
- (5) There is need for the creation of a new pool in Lea County, New Mexico, for the production of gas from the Drinkard formation. bearing the designation of North Monument-Drinkard Gas Pool. The North Monument-Drinkard Gas Pool was discovered by the Chevron USA Inc. Monument 13 State Well No. 17 located in Unit F of Section 13, Township 19 South, Range 36 East, NMPM, which was completed in the Drinkard formation on June 30, 1999. The top of the perforations is at 6,696 feet.
- (6) There is need for the creation of a new pool in Lea County, New Mexico, for the production of gas from the Tubb formation, bearing the designation of West Monument-Tubb Gas Pool. The West Monument-Tubb Gas Pool was discovered by the Cross Timbers Operating Company Bertha J. Barber Well No. 12 located in Unit A of Section 7, Township 20 South, Range 37 East, NMPM, which was completed in the Tubb formation on August 21, 1999. The top of the perforations is at 6,364 feet
- (7) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the San Andres formation, bearing the designation of West Nadine-San Andres Pool. The West Nadine-San Andres Pool was discovered by the Capataz Operating Inc. Keach Well No. 1 located in Unit O of Section 4. Township 20 South, Range 38 East, NMPM, which was completed in the San Andres formation on April 22, 1999 The top of the perforations is at 4,224 feet.
- (8) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Yates formation, bearing the designation of North Nadine-Yates Pool. The North Nadine-Yates Pool was discovered by the Xeric Oil and Gas Corporation Cain Well No. 2 located in Unit N of Section 14, Township 19 South, Range 38 East, NMPM, which was completed in the Yates formation on May 29, 1999. The top of the perforations is at 2,937 feet.
- (9) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Wolfcamp formation, bearing the designation of North Teague-Wolfcamp Pool. The North Teague-Wolfcamp Pool was discovered by the Texaco Exploration and Production Inc. R. R. Sims A Well No. 1 located in Unit N of Section 4, Township 23 South, Range 37 East, NMPM, which was completed in the Wolfcamp formation on May 18, 1999. The top of the perforations is at 7,246 feet.
- (10) There is need for certain extensions to the Antelope Ridge-Atoka Gas Pool, the Antelope Ridge-Strawn Gas Pool, the South Big Dog-Strawn Pool, the Blinebry Oil and Gas Pool, the South Corbin-Bone Spring Pool, the DK-Abo Pool,

Case No. 12321 Order No. R-11304

the EK-Delaware Pool, the Southwest Eunice-San Andres Pool, the Gem-Morrow Gas Pool, the Goodwin-Abo Pool, the Grama Ridge-Morrow Gas Pool, the North Hardy-Strawn Pool, the High Plains-Permo Upper Pennsylvanian Pool, the House-Drinkard Pool, the Johnson Ranch-Wolfcamp Gas Pool, the Klein Ranch-Morrow Gas Pool, the West Lovington-Strawn Pool, the West Midway-Upper Pennsylvanian Pool, the Teas-Delaware Pool, the North Vacuum-Atoka-Morrow Gas Pool, and the West Wantz-Abo Pool, all in Lea County, New Mexico.

### IT IS THEREFORE ORDERED THAT:

(a) A new pool in Lea County, New Mexico, classified as an oil pool for Upper Silurian production is hereby created and designated as the North Fowler-Upper Silurian Pool, consisting of the following described area:

### TOWNSHIP 24 SOUTH RANGE 37 EAST, NMPM Section 15: SE/4

(b) A new pool in Lea County, New Mexico, classified as an oil pool for Abo production is hereby created and designated as the Southwest Lovington-Abo. Pool., consisting of the following described area:

## IOWNSHIP 16 SOUTH RANGE 36 EAST, NMPM Section 33: SE/4

(c) A new pool in Lea County. New Mexico, classified as a gas pool for McKee production is hereby created and designated as the Maljamar-McKee Gas Pool, consisting of the following described area:

### TOWNSHIP 17 SOUTH, RANGE 32 EAST\_NMPM Section 22: W/2

(d) A new pool in Lea County, New Mexico, classified as a gas pool for Drinkard production is hereby created and designated as the North Monument-Drinkard Gas Pool, consisting of the following described area:

# TOWNSHIP 19 SOUTH, RANGE 36 EAST, NMPM Section 13: NW/4

(c) A new pool in Lea County, New Mexico, classified as a gas pool for Lubb production is hereby created and designated as the West Monument-Tubb Gas Pool, consisting of the following described area:

# TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM Section 7: E/2

(f) A new pool in Lea County, New Mexico, classified as an oil pool for San Andres production is hereby created and designated as the West Nadine-San Andres Pool, consisting of the following described area.

Case No. 12321 Order No. R-11304

(aa) The Teas-Delaware Pool in Lea County. New Mexico, is hereby extended to include:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM

Section 2. SW/4
Section 3: SE/4

(bb) The North Vacuum-Atoka-Morrow Gas Pool in Lea County, New Mexico, is hereby extended to include:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM

Section 19: E/2 Section 20: NW/4

(cc) The West Wantz-Abo Pool in Lea County, New Mexico, is hereby extended to include:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM Section 30: N/2 and SW/4

### IT IS FURTHER ORDERED THAT

- (1) Pursuant to Section 70-2-18, NMSA, 1978, an operator of any well that, by virtue of any of the above pool extensions, is subject to pool rules providing for spacing or proration units larger than the one presently dedicated thereto, shall have 60 days from the effective date of this order to file Form C-102 dedicating a standard unit for the pool to that well or to obtain a non-standard unit approved by the Division. Pending such compliance, the well shall receive a maximum allowable in the same proportion to a standard allowable for the pool that the acreage dedicated to the well bears to a standard unit for the pool. Failure to file Form C-102 dedicating a standard unit to the well or to obtain a non-standard unit approved by the Division within that 60-day period shall subject the well to cancellation of allowable.
- (2) The effective date of this order and all creations and extensions included herein shall be February 1, 2000.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY Director

SEAL

# SAPIENT ENERGY CORP.'S ANNOTATED LIST OF PETROLEUM ENGINEERING EXHIBITS

Exhibit 13:
Table of oil and gas production history for Barber 12 Well
Exhibit 14:
Reservoir Data Sheet which shows the values used for calculations
Exhibit 15:
Isopach Map
Exhibit 16:
Volumetric Calculation
Exhibit 17:
7 day shut-in bottom hole pressure data
Exhibit 18:
Material Balance Calculation
Exhibit 19:
BHP/Z vs Cum Production Graph
Exhibit 20:
EUR decline Calculation
Exhibit 21:
Drainage Area Calculation

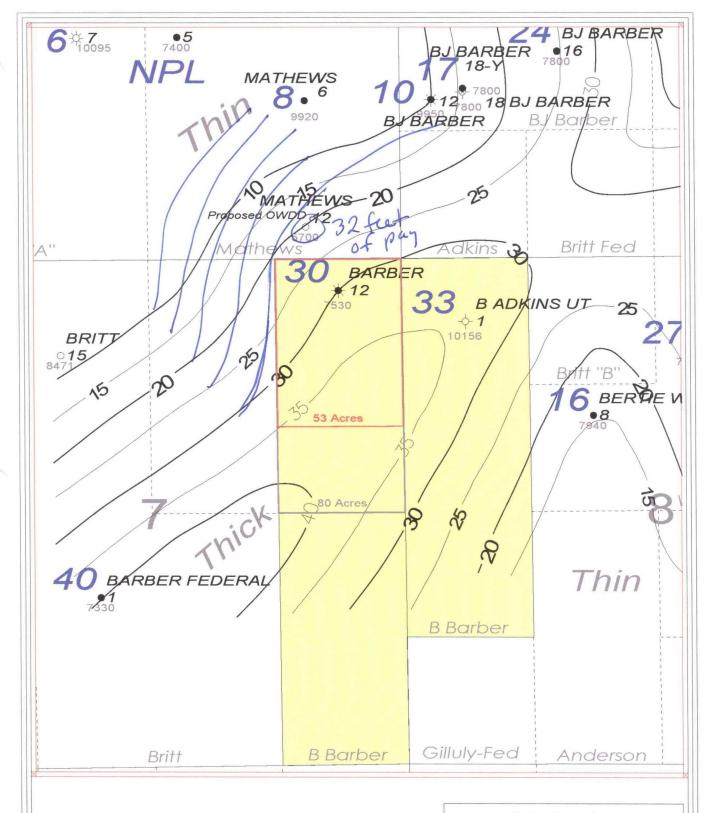
### SAPIENT ENERGY CORP BERTHA BARBER #12 (TUBB) PRODUCTION HISTORY 8/99-CURRENT

	GAS VOLUME	OIL VOLUME	
MONTH	MCF @ 15.025	BBL	web but chokent
Recompleted to Tubb in A			
Aug-99	8226	0	, , , , , ,
Sep-99	15712	21	()
Oct-99	14774	27	, X ·
Nov-99	12213	29	/ %~
Dec-99	13214	45 \	100
Jan-00	42736	155	.O
Feb-00	36055	95	
Mar-00	44109	88	
Crosstimbers Subtotal	187,039	460	
Sold to Falcon Creek which	ch Merged with Sa	apient Energy	- purger u/Sapiento operaco e ele, begins declina
Apr-00	43478	26	(Cochara)
May-00	43478	26	L " nened /
Jun-00	40186	18	Canental Of Land
Jul-00	34256	14	- moger wish of charter
Aug-00	35979	0	
Sep-00	41545	0- P	ext builts decline
Oct-00	40236	0	1,7,
Nov-00	38680	0	
Dec-00	38925	0	
Jan-01	37358	0	
Feb-01	31987	20	
Mar-01	31873	34	
Apr-01	31590	17	
May-01	29132	33	
Jun-01	25324	24	
Jul-01	25460		
Aug-01	19645		
Sep-01	17768		
Oct-01 *	14500		
Sapient Subtotal	621,400	212	
Tubb Totals	808,439	672	

<sup>\*</sup> Oct-01 gas estimated

### Reservoir Data Sheet Sapient Energy Corp Barber # 12

Reservoir Data:	Sapient 11/01 Data	Units psia - le drill steu tettr  ext. 31-6
BHPi	2597	psia — le
Z	0.7837	ex. 31-6
BHPi/Z	3314	F - 1 - 1
BHP @ 10/24/01	1235	psia —actual
Z	0.8362	
BHP/Z @ 10/24/01	1477	psia
Cum @ 10/24/01	808	mmcf
BHP/Z abd	300	psia abondon ment (6.6)
Porosity (Avg)	0.122	psia abondon ment 12.2% porosity (Lonoco (a.le) ohm-m
Rw	0.045	ohm-m
Sw (Avg)	0.27	water saturation 27%
h (thickness)	30	ft
phi-h	3.66	
Temp (reservoir)	98	deg F ((muran-103)
Gas grav	0.68	
Liq grav	37.1	deg F ((neuron-103) deg API - oil, not condensate
Planimetered Volumes:		•
- E/2 of NE/4 80 acres	2706	acre-ft
∕ - W/2 of NE/4 80 acres	1997	acre-ft
√ - Total NE/4 160 acres	4703	acre-ft
•		
Calculated Values:		
GIP mat bal	1458	mmcf
Est Ult Recovery - mat bal	1326	mmcf
Orig Gas In Place - pore vol	815.1	mcf/acre-ft
Recov GIP - pore vol	741.3	mcf/acre-ft
Drainage Area (h = 30')	60	acres
Est Ult Recovery - decline	1315	mmcf .
Volumetric Data:		
- OGIP E/2 of NE/4 80 acres	2206	mmcf
- OGIP W/2 of NE/4 80 acres	1628	mmcf
- OGIP Total NE/4 160 acres	3834	mmcf 🗸
-% of E/2 of NE/4 well will drain	66%	REFORE THE
-% of NE/4 well will drain	38%	OIL CONSERVATION COMMISSION
-Drainage Area (66% of 80 acres)	53	Case No.12605 Denovo Exhibit No Submitted By: Sapient Energy Corp. Hearing Date: November 6, 2001



### **BEFORE THE** OIL CONSERVATION COMMISSION Case No.12605 Denovo Exhibit No.

Submitted By:

Sapient Energy Corp.
Hearing Date: November 6, 2001

### Sapient Energy Corp.

Monument Area, Lea Co., NM Isopach: Net Tubb Porosity Barber #12 Drainage Calculation

W Von Rhee	CI: 5 ft.	10/30/01
1ktbpor2.gpf	Scale 1:12000.	1":1000"

### **Volumetric Calculations**

Sapient Energy Corp Barber # 12

### **Assumptions:**

??? acres 30 feet h avg = Porosity = 0.122 Sw = 0.27 Pi = 2597 psia Zi = 0.7837P/Zi =3314 P/Z abd = 300 RF = 0.9095T =558 deg R

### Calculations:

Original Recoverable Gas In Place = 1541 X 0.122 X (1 - 0.27) X 3314 X 0.9095 / 558 = 741.3 MCF/acre-ft

Original Gas In Place = 1541 X 0.122 X (1 - 0.27) X 3314 / 558 = 815.1 MCF/acre-ft

### **Planimetered Volumes:**

E/2 of NE/4 of Sec 7 (Sapient's 80 Acres) = 2706 acre-ft
W/2 of NE/4 of Sec 7 (Conoco, et al 80 Acres) = 1997 acre-ft
Total NE/4 of Sec 7 = 4703 acre-ft

### Planimetered Gas In Place:

E/2 of NE/4 of Sec 7 (Sapient's 80 acres) = 2706 acre-ft X 815.1 MCF/acre-ft = 2206 MMCF

W/2 of NE/4 of Sec 7 (Conoco, et al 80 acres) = 1997 acre-ft X 815.1 MCF/acre-ft = 1628 MMCF

Total NE/4 of Sec 7 = 3834 MMCF

BEFORE THE
OIL CONSERVATION COMMISSION
Case No.12605 Denovo Exhibit No.
Submitted By:
Sapient Energy Corp.
Hearing Date: November 6, 2001

Well:

Company:

Bertha Barber 12 Sapient Energy Corp.

Run Depth:

6262'

Start Date:

2001-Oct-22

End Date:

2001-Oct-24

Ena L	Jate:	2001-Oct-2	24
	Cum	Pres	
 Date	Hour	psia	Comments
10/22/01			SITP = 1020 psig
10/22/01	4.9417		On bottom w/ gauge @ 6262'
10/2 <b>2/01</b>	5.3000		Made gradient stops - no evidence
10/22/01	5.4000		of fluid in hole
10/22/01	5.5000		
10/22/01	5.6000		
10/22 <b>/01</b>	5.7000		
10/2 <b>2/01</b>	5.8000		
10/2 <b>2/01</b>	5.9000		
10/ <b>22/01</b>	6.0000		
10/22/01	6.4000	1218.04	
10/22/01			Off location
10/22/01	6.6000	1218.24	
10/22/01	6.8000	1218.19	
10/22/01	7.0000	1218.31	
10/22 <b>/01</b>	7.2000	1218.4	
10/22/01	7.5083	1218.54	
10/22/01	7.7583	1218.63	
10/22/01	8.0250	1218.63	
10/22/01	8.5250	1218.97	
10/22/01	9.0083	1219.07	
10/22/01	9.5083	1219.34	1
10/22/01	10.0083	1219.48	
10/22/01	11.0333	1219.9	$\epsilon = \frac{1}{2} p \cdot \epsilon$
10/23/01	12.0167	1220.17	$D_{i}^{\lambda + 1}$
10/23/01	13.0667	1220.62	
10/23/01	14.0583	1220.98	
10/23/01	15.0500	1221.35	
10/23/01	16.0333	1221.71	
10/23/01	17.1000	1222.15	
10/23/01	18.1167	1222.47	Đ.
10/23/01	19.0667	1222.69	V
10/23/01	20.0750	1223.12	
10/23/01	20.9667	1223.43	SITP = 1020 psig
10/23/01	22.1167	1223.83	
10/23/01	23.1333	1224.24	
10/23/01	24.2167	1224.51	
10/23/01	26.0750	1225.08	
10/23/01	28.1083	1225.79	
10/23/01	30.0583	1226.36	
10/23/01	32.1667	1226.97	
10/23/01	34.1083	1227.63	THE
10/24/01	36.2000	1228.42	BEFORE THE
10/24/01	38.0500	1228.94	OIL CONSERVATION COMMISSI Case No.12605 Denovo Exhibit No.
10/24/01	40.0167	1229.5	Case No. 1 2000 Dellovo Exhibit to
10/24/01	42.0917		Submitted By:  Sapient Energy Corp.
			Hearing Date: November 6, 2001
			EGIBLE Hearing Date: November 6, 2001
			<del></del>

BEFORE THE OIL CONSERVATION COMMISSION ase No.12605 Denovo Exhibit No. ubmitted By: Sapient Energy Corp. Hearing Date: November 6, 2001

### Bertha Barber 12 Measured Bottom Hole Pressure Test

Well:

Bertha Barber 12 Company: Sapient Energy Corp.

Run Depth: 6262'
Start Date: 2001-Oct-22
End Date: 2001-Oct-24

Date	Cum Hour	Pres psia	Comments
10/24/01	44.7500	1230.8	SITP = 1030 psig
10/24/01			On location
10/24/01	45.2083	1231.1	
10/24/01	45.6750	1231.13	
10/24/01	46.1417	1231.3	
10/24/01	46.1500	1231.17	
10/24/01			Off location
10/26/01 10/27/01 10/28/01 10/29/01			SITP = 1040 psi SITP = 1040 psi SITP = 1040 psi SITP = 1040 psi

### **Material Balance Calculations**

Sapient Energy Corp Barber # 12

### **Assumptions:**

Initial BHP = 2597 psia
Initial Z factor = 0.7837
Initial P/Z = 3314 psia
10-24-01 BHP = 1231 psia @ 6262'
10-24-01 BHP = 1235 psia @ 6400'
10-24-01 Z factor = 0.8362
10-24-01 BHP/Z = 1477 psia
Cum Production as of 10-24-01 = 808 MMCF
Original Gas In Place = 815 MCF/acre-ft
Original Recoverable Gas In Place = 741 MCF/acre-ft
Thickness = 30'
Abandonment BHP/Z = 300 psia

### Calculations:

Slope = 808 MMCF/(3314 psi - 1477 psi) = 0.440 MMCF/psi

Est Ultimate Recovery = (3314 psi - 300 psi) X 0.440 MMCF/psi = 1326 MMCF

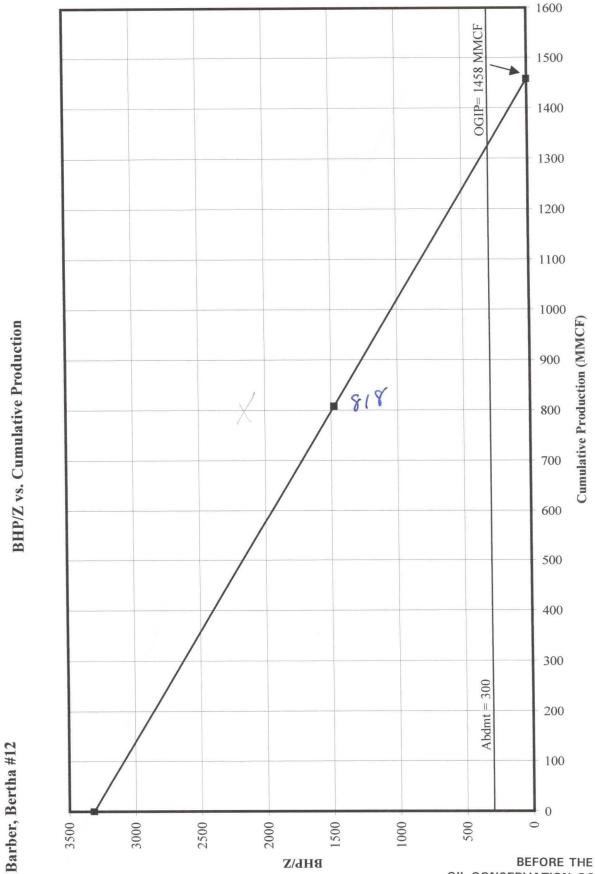
Est Original Gas In Place = 3314 psi X 0.440 MMCF/psi = 1458 MMCF that this well is draining

Note: This well is only draining 66% of the 80 acres in the E/2 of NE/4 i.e. 1458 MMCF / 2206 MMCF (planimetered volume) = 0.66

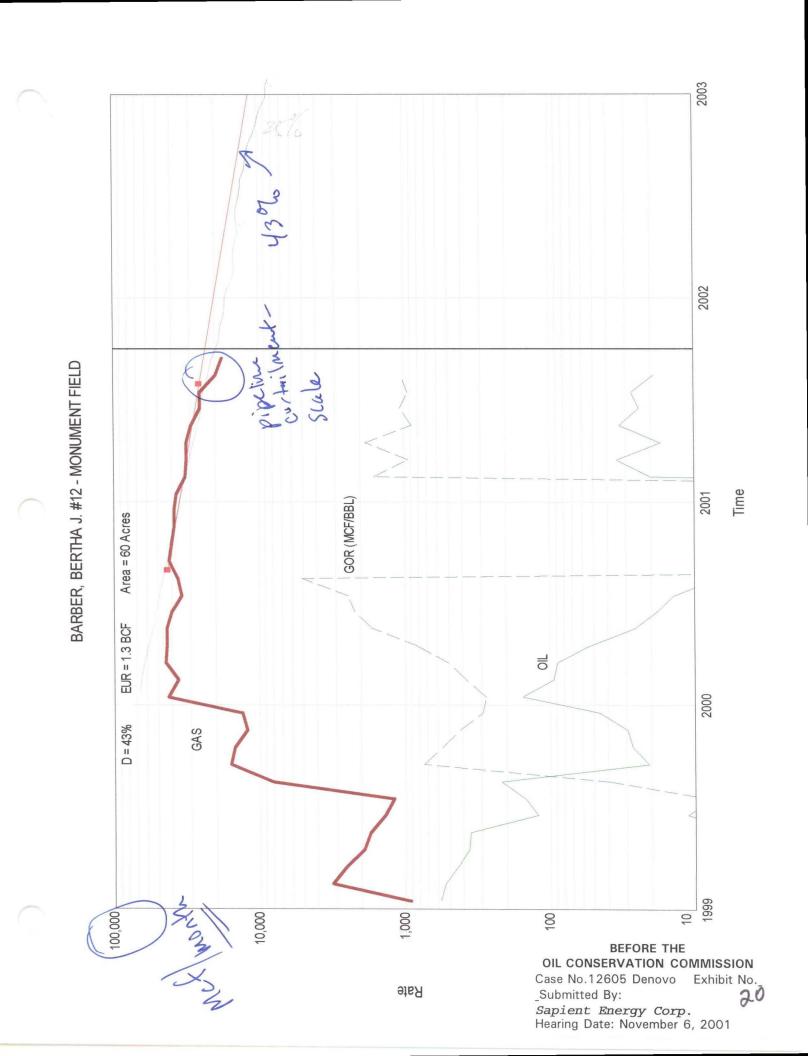
Drainage Area = 0.66 X 80 acres = 53 Acres

Drainage Area Assuming a Constant Thickness = 1458 MMCF / 30 ft / 0.815 MMCF/acre-ft = 60 Acres

BEFORE THE
OIL CONSERVATION COMMISSION
Case No.12605 Denovo Exhibit No.
Submitted By:
Sapient Energy Corp.
Hearing Date: November 6, 2001



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### **Decline Analysis**

Sapient Energy Corp Barber # 12

### **Assumptions:**

Cumulative Production thru 10/24/01 = 808 MMCF

Current Producing Rate = 800 MCFD

Economic Limit = 20 MCFD (when gas below 3 mcf)

Decline Rate = 43 %

a = - In (1 - d) = 0.562

Original Recoverable Gas In Place = 741.3 MCF/acre-ft

Thickness = 30'

### Calculations:

Remaining Recoverable Reserves = (800 - 20) / .562 X 365 = 507 MMCF

Estimated Ultimate Recovery = 808 MMCF + 507 MMCF = 315 MMCF

Drainage Area = 1315 MMCF / 30 ft / .7413 MCF/acre-ft = 59 acres,

ex. 18, material

1.3 bet

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Sapient Energy Corp.

Sapient Energy Corp.
Hearing Date: November 6, 2001

### Sapient Energy Corp. Bertha J.Barber #12

### ANNOTATED LIST OF GEOLOGIC EXHIBITS

### Exhibit 22:

**Structure Map, Monument Tubb Pool:** This is a structure map on the top of the Lower Tubb Limestone. Note the distribution of Tubb completions shown in brown dots (legend). Note the local high areas on the map. This map is the "before" picture.

### Exhibit 23:

Structure Map, Monument Tubb Pool with GAS AREAS: Here's the "after" picture. Same map as before but the 15 wells with cumulative GOR's in excess of 100,000 are grouped within redshaded areas. Also shown is the cumulative production and GOR for each area. It is very clear that Tubb production has been gas on the structurally high areas of Monument Tubb oil pool.

### Exhibit 24:

**Table of /Gas Wells in Monument Tubb:** The list as calculated from the PI/Dwights data for the C-116 filings. Note that all of the active wells have a produced GOR in excess of 100,00 over the past 12 months.

### Exhibit 25:

**Table of Gas/Liquid production for the three geographic areas.** This shows the distribution of the production, and GOR's. Note that 19.7 BCF of gas has been produced from the Weir area which equals no more than 640 acres. (9 wells in 640 acres is de-facto 71 acre spacing!).

### Exhibit 26:

GOR vs. Structure, Monument Tubb Oil Pool: Here's the relationship for all the wells in Monument Tubb for which we had both GOR and a structural point on the top of the Lower Tubb limestone. Looks like a broad relationship of higher GOR with higher structural position.

### Exhibit 27:

**Structure Map:** Map on the top of the Lower Tubb Limestone. This horizon was selected because it is 1) located within the perfed interval, 2) a high-confidence pick, and 3) regionally extensive to be mapped over a wide area.

### Exhibit 28:

**Isopach Map:** Map of the Net Tubb Porosity greater than 4% limestone units. Data is confined to the producing interval as developed in the Barber #12.

Lithology: Refer to Barber #12 mudlog (Exhibit 29d) and lithodensity log (Exhibit 29a), and other wells with lithodensity logs. Tubb lithology is mixed, consisting of beds of Dolomite, Limestone, Sandstone, and mixtures of all of these. Thus picking one porosity cut-off value is therefore difficult. However it is necessary in order to interpret the porosity of different vintage and types of logs with a logical and uniform method.

An empirical analysis was made of three wells near the Barber #12 (Exhibit 28)

### Exhibit 29:

Stratigraphic Cross-Section A-A': Cross section demonstrates the geologic correlations between the Barber #12, and offsetting wells to the north and northeast. This direction was chosen because it contains the most offsetting Tubb production. The cross-section demonstrates 1) the geologic continuity of the Tubb beds, but also 2) the discontinuity of discrete porosity intervals. I noted the lateral development of distinctly new beds within this framework as one moves east into the Monument Tubb field proper (sec 9).

### Exhibit 30:

**Porosity Cut-off Plat:** Map locates the key wells used to develop an empirical porosity cut-off for the Tubb. Results:

Net porosity >4% LS units on Density logs for both limestone and dolomite.

Net porosity >52ms in limestone beds, and >58.5ms in dolomite beds.

Mathews #6: 1961 Sonic Log. According to Chevron, "...production testing resulted in no fluid entry...". Therefore the rocks are too tight to produce. LS porosity is 3.11%. Dolomite porosity is 9.3%. The Tubb must have porosity greater than these levels to yield commercial fluids from the respective lithologies.

Anderson #4: 1976 Neutron/Density & Sonic Log. According to the scout ticket. No commercial fluid entry through dolomite perfs. Density porosity <4%LS. Commercial fluid entry obtained through overlying perfs in dolomite and limestone. Limestone porosity >4%, max 8%. Dolomite porosity >10%, max 12.6%. Comparison of Density and Sonic yielded nearly identical net porosity interpretations across both lithologies using a 4% limestone cut-off. This is equivalent to a 10.3% dolomite cut-off. On Sonic logs, the cut-offs would be 52 and 58.5 microseconds respectively.

Conclude that commercial fluids recoverable if limestone porosity exceeds 4% or dolomite porosity exceeds 10%.

**Anderson #10:** 1996 Neutron/Density & Sonic Log. Visual inspection of both logs established a net porosity equivalence using a 4% limestone cut-off.