EXHIBIT 1
CASE NO. 13863

PARALLEL

AUTHORITY FOR EXPENDITURE

OPERATOR	LEASE/WELL NAME		AFE NUMBER
Parallel Petroleum	Hope Unit 1821-16 State #1		4070003
LOCATION	**COUNTY**	**STATE**	**DOCUMENT DATE**
S/2 Sec 16, T18S, R21E	Eddy	New Mexico	12-Jan-07
PURPOSE		**TYPE WELL**	**TO BE STARTED**
Drill & Complete Wolfcamp Horizontal Gas Well		gas	APR 07
PRODUCING LEASE NUMBER / PROSPECT NAME / FIELD NAME			**PROPOSED DEPTH**
501058 / Dugout / Wildcat(Wolfcamp Gas)			8758 MD, 4550 TVD

									BCP	ACP	TOTAL
INTANGIBLE WELL COSTS											
830.020	PERMIT	$ 2,000	830.030	SURVEY LOC	$ 2,500				$ 4,500		$ 4,500
830.040	SURF DAMAGES	$ 4,000	830.050	INSURANCE	$ -	830.020	TITLE	$ 10,000	$ 14,000		$ 14,000
830.110	LOC & PITS	$ 54,000	830.110	ROADS	$ 2,000				$ 56,000		$ 56,000
830.130	DRLG - DAYWORK	26.0 DAYS @			$17,000 /DAY				$ 442,000		$ 442,000
830.130	DRILLING	0 FEET @			$0.00 /FT	830.130	TURNKEY	$ -			
830.120	DRILLING RIG - MOB	$ 49,000							$ 49,000		$ 49,000
830.200	BITS	$ 65,000	830.250	WELDING	$ 2,000				$ 67,000		$ 67,000
830.180	WATER - BCP	$ 35,000	830.190	MUD & CHEM	$ 58,000	840.140	WTR - ACP	$ 35,000	$ 35,000	$ 93,000	$ 128,000
830.140	TRUCKING - BCP	$ 18,200	840.140	TRUCKING - ACP	$ 8,000				$ 18,200	$ 8,000	$ 26,200
830.170	POWER & FUEL	$ 30,000	830.135	DIRECTIONAL	$ 130,000				$ 160,000		$ 160,000
830.270	MUD LOGGING	$ 25,000	830.270	DST	$ -				$ 25,000		$ 25,000
830.230	CEMENTING: SURF	$ 35,000	830.230	INTERMED.	$ -	850.080	FLOAT EQ	$ 3,000	$ 38,000		$ 38,000
840.190	PRODUCTION	$ 30,000	860.080	FLOAT EQUIP	$ 3,000					$ 33,000	$ 33,000
830.270	CORING	$ -	830.270	CORE ANAL.	$ -						
830.290	WL LOGGING: OH	$ 32,000	840.200	CSD. HOLE	$ 7,000	840.200	PERF	$ 70,000	$ 32,000	$ 77,000	$ 109,000
840.100	COMPLETION UNIT	5 DAYS @			$4,500 /DAY					$ 22,500	$ 22,500
830.150	BCP - RENTALS: SURF	$ 20,000	830.160	BCP - SUBSURFACE	$ 35,000				$ 55,000		$ 55,000
840.150	ACP - RENTALS: SURF	$ 15,000	840.160	ACP - SUBSURFACE	$ 20,000					$ 35,000	$ 35,000
840.220	STIMULATE: ACID	$ 25,000	840.220	FRACTURE	$ 385,000					$ 410,000	$ 410,000
			840.140	COMPL. FLUID	$ 5,000					$ 5,000	$ 5,000
830.240	ENVIRON. COST - BCP	$ 15,000	840.260	ENV. COST - ACP	$ 15,000				$ 15,000	$ 15,000	$ 30,000
830.320	DRLG OVERHEAD	$ 6,000	830.070	GEOL SUPR	$ 5,000	830.080	ENGR SUPR	$ 10,000	$ 16,000	$ 5,000	$ 21,000
830.090	LABOR: CO. - BCP	$ 31,200	830.250	CONTRACT - BCP	$ 15,000				$ 46,200		$ 46,200
840.030	LABOR: CO. - ACP	$ 5,000	840.020	CONTRACT - ACP	$ 15,000					$ 20,000	$ 20,000
830.240	CLEAN UP SITE	$ 50,000	830.250	FENCE LOC	$ 3,000				$ 50,000	$ 3,000	$ 53,000
830.250	MISC. INTANG. COST	$ 20,000	840.120	MISC. COST - ACP	$ 10,000				$ 20,000	$ 10,000	$ 30,000
830.340	CONTINGENCY: BCP	5.00%	840.280	CONTING: ACP	5.00%				$ 57,100	$ 36,800	$ 93,900
								TOTAL INTANGIBLE WELL COSTS	**$ 1,200,000**	**$ 773,300**	**$ 1,973,300**
TANGIBLE WELL COSTS											
850.020	CASING: SURFACE	0 FEET OF.....			0.000 INCH CASING @			$0.00 /FT			
850.030	INTERMEDIATE	1500 FEET OF.....			8.625 INCH CASING @			$26.00 /FT	$ 39,000		$ 39,000
850.030	PROTECTION	0 FEET OF.....			0.000 INCH CASING @			$0.00 /FT			
860.040	PRODUCTION	8758 FEET OF.....			5.500 INCH CASING @			$14.00 /FT		$ 122,612	$ 122,612
860.040	LINER	0 FEET OF.....			0.000 INCH CASING @			$0.00 /FT			
830.210	INSPECT TUB. - BCP	$ 4,500	840.170	INSP. - ACP	$ 4,500	840.120	CSG SRVCS	$ 6,000	$ 7,500	$ 7,500	$ 15,000
850.050	CASINGHEAD	$ 7,500	860.030	TUBINGHEAD	$ 7,500				$ 7,500	$ 7,500	$ 15,000
860.070	CHRISTMAS TREE	$ 10,000	860.070	WH FITTINGS	$ 5,000					$ 15,000	$ 15,000
860.090	TUBING	4500 FEET OF.....			2.875 INCH TUBING @			$5.63 /FT		$ 25,335	$ 25,335
860.110	RODS	0 FEET OF RODS @			$0.00 /FT (AVG)						
860.130	SUBSURFACE PUMP	$ -	860.120	TBG ANCHOR	$ -	860.120	PACKER	$ 7,500		$ 7,500	$ 7,500
860.200	FLOWLINE	$ 2,000	860.190	ELEC CONSTR	$ -					$ 2,000	$ 2,000
860.210	TANK BATTERY	$ 15,000	860.260	COMPRESSOR	$ -	860.100	COAT TBG	$ -		$ 15,000	$ 15,000
860.220	GAS PROD. UNIT	$ -	860.260	DEHYDRATOR	$ 10,000					$ 10,000	$ 10,000
860.220	HEATER-TREATER	$ -	860.220	SEPARATOR	$ 10,000					$ 10,000	$ 10,000
860.130	PLUNGER LIFT	$ -	860.180	PRIME MOVER	$ -						
860.230	SURF EQUIP FTNGS	$ 16,000	860.250	BUILDINGS	$ -					$ 16,000	$ 16,000
860.020	INSTALLATION LABOR	$ 18,000	840.130	TRUCKING	$ 18,200				$ 3,200	$ 33,000	$ 36,200
860.170	PUMPING UNIT	$ -	860.290	METER/CONTROLS	$ 20,000					$ 20,000	$ 20,000
860.280	GAS PIPELINE/METER	$ 50,000								$ 50,000	$ 50,000
860.160	CONTINGENCY	10.00%							$ 5,700	$ 34,153	$ 39,853
								TOTAL TANGIBLE COSTS	**$ 62,900**	**$ 375,600**	**$ 438,500**
								TOTAL WELL COSTS	**$ 1,262,900**	**$ 1,148,900**	**$ 2,411,800**
								PLUG & ABANDON EXPENSE	**$ -**		
								DRY HOLE COST	**$ 1,262,900**		

CATEGORY					
TYPE	**DEPARTMENT**	**CATEGORY**	**COMPANY**	**DECIMAL**	**NET ESTIMATED COST**
X CAPITAL	BUDGETED		Parallel Petroleum	0.8500000	$ 2,050,030
PREPARED BY	Deane Durham - Engineer	**DATE**			**NET AFE FOR DRY HOLE COST ONLY**
Deane Durham		12 JAN 07			$ 1,073,465

APPROVALS	Brian McCurry - Operations Manager	DATE	APPROVALS	Larry Oldham - President/CEO	DATE

APPROVALS	Don Tiffin - Chief Operating Officer	DATE	APPROVALS

PARTICIPANT APPROVAL

NAME OF COMPANY	AUTHORIZED REPRESENTATIVE'S SIGNATURE	T

BEFORE THE OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 13863 Exhibit No. 1
Submitted by:
PARALLEL PETROLEUM CORPORATION
Hearing Date: January 18, 2007

This Authorization for Expenditure (AFE) is merely an estimate of the costs and expenses for the proposed operation. The actual costs and expenses associated with the proposed operation could substantially exceed such estimates.

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

APPLICATION OF PARALLEL PETROLEUM CORPORATION FOR APPROVAL OF A UNIT AGREEMENT EDDY COUNTY, NEW MEXICO. **CASE NO. 13863**

AFFIDAVIT OF MICHAEL M. GRAY

BEFORE THE OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 13863 Exhibit A
Submitted by:
PARALLEL PETROLEUM CORPORATION
Hearing Date: January 18, 2007

STATE OF TEXAS)
) ss.
COUNTY OF MIDLAND)

I, Michael M. Gray, being first duly sworn on oath, states as follows:

1. My name is Michael M. Gray. I reside in Midland County, Texas. I am the Landman employed by Parallel Petroleum Corporation ("Parallel") who is responsible for the formation of the proposed Hope State Exploratory Unit ("the Unit") comprised of 1,840 acres, more or less, of State of New Mexico lands situated in Eddy County, New Mexico. The horizontal limits of said Unit Area are described as follows:

Township 18 South, Range 21 East, N.M.P.M.

Section 10: S/2, S/2 N/2, N/2 NW/4
Section 15: All
Section 16: All

2. Parallel, as the designated Unit Operator in the Hope State Exploratory Unit Agreement, proposes the formation of the Unit to test all formations from the surface to the top of the Wolfcamp shale formation.

3. The initial unit well will be drilled at a surface location 778 feet FSL and 200 feet FEL with an orthodox penetration point in the Wolfcamp formation 777 feet FSL and 660 feet FEL with an orthodox bottom-hole location 778 feet FSL and 660 feet FWL of Section 16, Township 18 South, Range 21 East, NMPM, Eddy County, New Mexico to an approximate vertical depth of 4,450 feet and an approximate measured depth of 8,758 feet to test all formations from the surface to the top of the Wolfcamp

shale formation. The estimated costs for this well are $2,411,800. (The AFE is attached as Exhibit 1).

4. Attachment A to the Affidavit is a copy of the Unit Agreement for the proposed Hope State Exploratory Unit. This agreement is on the New Mexico State Land Office State/Fee Unit Agreement form.

5. Attachment B to the Affidavit is the plat to the Unit Agreement that shows the boundaries of the Hope State Exploratory Unit and the location of the initial unit test well. Attachment B-1 is a copy of the C-102 location plat depicting the location of the initial unit test well.

6. Attachment C to this Affidavit is a copy of Schedule B to the Unit Agreement for the Hope State Exploratory Unit that identifies the working interest ownership in the unit area. One hundred percent of the working interest in the Unit Area is committed to the Unit.

7. The schedule under Attachment C to the Affidavit also identifies the royalty interest and overriding royalty interest in the Unit Area. One hundred percent of the royalty interest is owned by the State of New Mexico. Attachment D to this Affidavit is a letter from the New Mexico Commissioner of Public Lands giving preliminary approval of the State Land Office to the proposed Hope State Exploratory Unit.

8. All of Parallel's interest in the Unit Area has been committed to the Unit.

9. Attachment E to this affidavit is a Gross Isopach Map of the Wolfcamp pay (porosity) "target zone". This is the interval that is targeted for horizontal drilling. It demonstrates the rather irregular nature (i.e.: thickness and distribution) of the target pay interval across the proposed unit area. Porosity within this play occurs as 2' to 10' thick "spiky" (5% to 14%) units separated by low porosity dolomites and limestones. Core analysis indicates the presence of intercrystalline porosity, probably related to diagenetic alteration of limestone to dolomite. This porosity was proven to be gas charged when production was established in *Cottonwood Creek; Cottonwood Creek, East; Cottonwood Creek, West; Eagle Creek; High Hope; High Hope, East; Collins Ranch; Collins Ranch N.E., Gopher; Antelope Sink; Antelope Sink, West; and Runyon Ranch* fields. These fields were established when Pennsylvanian (Morrow) exploratory wells were plugged-back to the Wolfcamp reservoir which was considered a salvage zone. Poor reservoir characteristics (porosity and permeability), which could not be improved by completion techniques such as fracture treatments, resulted in recoveries

of hydrocarbons which did not justify commercial development. Based on the distribution of these fields and the widespread occurrence of porosity (extending approximately 30 miles by 8 miles across portions of Eddy and Chaves Counties), a probable depositional setting for this reservoir is an open to restricted platform environment behind a Wolfcamp platform margin situated basinward (southeast) from the production. This platform would have formed as part of the Northwest Shelf (landward along the northwest margin of the Delaware Basin). Cores and open hole logs indicate the porosity is typically overlain by anhydrite filled dolomitic carbonates. Well control located to the northwest suggests that the gas filled porosity becomes increasingly occluded by anhydrite in that direction (in response to the increasingly more saline conditions that were present during deposition). It seems probable that up-dip anhydrite-filled porosity is the stratigraphic trap responsible for this hydrocarbon filled play.

10. Attachment F to this affidavit is a Structure Map of the top of the Wolfcamp shale. This shale represents a regionally deposited zone from which true structural dip across the proposed unit can be established. Dip determination is critical for the planning and design of each lateral to keep the well path within the target porosity horizon.

11. Attachment G is a northwest-southeast oriented Stratigraphic Cross-section (A-A') which incorporates porosity well logs of the Wolfcamp pay (horizontal target zone) on both sides of the proposed unit. These well logs demonstrate gradual thinning of the pay to the northwest.

12. Attachment H is a north-south oriented Stratigraphic Cross-section (B-B'), which also incorporates porosity well logs from former vertically productive wells, but also includes pilot hole logs for recent horizontally directed wellbores. Fracture porosity is also critical to overall recoveries of natural gas. Oriented core analysis, micro-seismic monitoring and FMI logs within this play, all suggest a roughly northeast-southwest general fracture orientation. Most operators have re-designed well path orientation from north-south to east-west in order to maximize fracture encounters within laterals. The potential of enhanced recoveries of natural gas from fracture systems is suspected since well performance in recent horizontally drilled wells cannot be determined based on the pay/porosity thickness encountered in the pilot hole. The Attachment H (cross-section B-B') demonstrates this by the fact that the Parallel *Box Top 1921 Federal* #1 well does not have any demonstrably higher or thicker porosity than any of the adjacent wells displayed on this cross-section, but has significantly out performed any well included on either of the cross-sections.

13. If the initial unit well is successful, additional wells will be drilled in the Unit Area. Accordingly, approval of the unit agreement will result in the efficient recovery of hydrocarbons.

14. Approval of the Hope State Exploratory Unit and the development of the Unit Area pursuant to a unit plan is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

FURTHER AFFIANT SAYETH NOT.

Michael M. Gray

SUBSCRIBED AND SWORN before me on this 15th day of January, 2007.

Notary Public

My Commission Expires:
01-03-2008

PAMELA J. REECE
NOTARY PUBLIC
STATE OF TEXAS
My Comm. Expires 01-03-2008