JAMES BRUCE PO BOX 1056 BANTAYFENNM 87504 STONES NO -

10-27-04 LOGGED IN TYPE NSL

DSem0430130853

ABOVE THIS LINE FOR DIVISION USE ONLY

### NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE Application Acronyms: [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication] [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling] [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement] [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion] [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase] [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response] TYPE OF APPLICATION - Check Those Which Apply for [A] [1] [A] Logation - Spacing Unit - Simultaneous Dedication NSL NSP SD Check One Only for [B] or [C] Commingling - Storage - Measurement Injection - Disposal - Pressure Increase - Enhanced Oil Recovery [C]☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR PM [D] Other: Specify [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or \(\nneq\) Does Not Apply Working, Royalty or Overriding Royalty Interest Owners [A] [B] Offset Operators, Leaseholders or Surface Owner [C] Application is One Which Requires Published Legal Notice Notification and/or Concurrent Approval by BLM or SLO [D]U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office For all of the above, Proof of Notification or Publication is Attached, and/or, [E] [F]Waivers are Attached [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE. [4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is accurate and complete to the best of my knowledge. I also understand that no action will be taken on this

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

application until the required information and notifications are submitted to the Division.

Signature

e-mail Address

JAMES BRUCE ATTORNEY AT LAW

POST OFFICE BOX 1056 SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213 SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone) (505) 660-6612 (Cell) (505) 982-2151 (Fax)

iamesbruc@aol.com

October 26, 2004

Michael E. Stogner Oil Conservation Division 1220 South St. Francis Drive Santa Fe. New Mexico 87505

Dear Mr. Stogner:

Pursuant to Division Rule 104.F(2), Apache Corporation applies for administrative approval of an unorthodox oil well location for the following well:

Well: Southland Royalty A Well No. 21
Location: 1310 feet FSL & 480 feet FEL

Well Unit: SE%SE% of Section 4, Township 21 South, Range 37 East, N.M.P.M., Lea County, New Mexico

The well will be drilled to test the Blinebry formation (Blinebry Oil & Gas Pool), Tubb formation (Tubb Oil & Gas Pool), and Drinkard formation (Drinkard Pool). The Blinebry Oil & Gas Pool and Tubb Oil & Gas Pool are prorated pools, and the special rules of each pool provide for (1) oil well units of 40 acres, (2) gas well units of 160 acres, and (3) a well unit may not be simultaneously dedicated to an oil well and a gas well. The Drinkard Pool is spaced on statewide rules.

The SE%SE% of Section 4 will be simultaneously dedicated to the proposed well and to the Southland Royalty A Well Nos. 4 and 19 (Drinkard only in the No. 19), and applicant requests approval of the simultaneous dedication.

The application is based on geologic and engineering reasons. A complete discussion, with appropriate exhibits, is attached as Exhibit A. Existing wells in the SE% of Section 4 are located in the approximate center of each quarter-quarter section. The reservoirs in the three pools are compartmentalized, and applicant believes that drilling the infill wells will recover reserves which will not be recovered by existing wells. This theory has been tested in applicant's Northeast Drinkard Unit, located to the east

of the proposed well. In addition, applicant desires to complete in all three zones to enhance project economics.

Exhibit A contains a listing of the Blinebry/Tubb/Drinkard wells offsetting the proposed well. It shows that the existing wells are oil wells. Thus, the infill well will not violate the special pool rules for the Blinebry Oil & Gas Pool and Tubb Oil & Gas Pool.

Attached as Exhibit B is a land plat, highlighting the proposed well's location. The NE½SE½, SE½SW¾, and S½SE¼ of Section 4 (and the NE¼ of Section 9) are covered by a single fee lease, which has common royalty, overriding royalty, and working interest ownership. Therefore, there are no offset interest owners or adversely affected parties to notify of this application.

Please call me if you need any further information on this matter.

Very truly yours,

Attorney for Apache Corporation

### Application of Apache Corporation for administrative approval of an unorthodox well location:

40 acres – 1310' FSL & 430' FEL
Section 4, Township 21 South, Range 37 East, NMPM
Lea County, New Mexico

PRIMARY OBJECTIVES: Blinebry, Tubb, and Drinkard

In support:

- Apache Corporation (Apache) is the operator of the proposed Southland Royalty A #21 well (Exhibit 1).
- 2. The proposed unorthodox location is offset by the following wells which are, or have been productive from various combinations of the Blinebry, Tubb, and Drinkard (Exhibit 2).

				CUM B-T-D	DAILY B-T-D	CURRENT
OPER	WELL	LOC	RESRVR	O/G/W	O/G/W	POOL
Apache	Southland Royalty A #7	4-Q	B-D	287/4531/61	6/57/2	Blinebry Oil and Gas AND Drinkard
Apache	Southland Royalty A #4	4-X	B-T-D	282/4787/19	0/0/0	Penrose Skelly Grayburg
Apache	Southland Royalty A #19	4-X	DKRD	3/19/2	31/211/21	Drinkard
Apache	NEDU #301	3-P	B-T-D	54/1600/194	0/0/0	Eunice, Blinebry, Tubb, Drinkard, North
Apache	NEDU #302	3-U	B-T-D	471/4101/106	11/59/32	Eunice, Blinebry, Tubb, Drinkard, North
Apache	NEDU #332	3-U	B-T-D	17/161/99	6/109/50	Eunice, Blinebry, Tubb, Drinkard, North

MBO BOPD MMCFG MCFGPD MBW BWPD

3. The proposed **Southland Royalty A #21** unorthodox Blinebry, Tubb, and Drinkard location of 1310' from south line and 430' from east line is predicated by geological and drainage considerations:

### a. Blinebry, Tubb and Drinkard

The Blinebry, Tubb, and Drinkard Formations are members of the Yeso Group, Permian Leonardian in age. Portions of the Eunice area were



unitized by Shell in 1987 into the Northeast Drinkard Unit for waterflood operations. The unit is governed by the North Eunice Blinebry-Tubb-Drinkard Field Rules. The stratigraphic relationships, specifically top of Blinebry being 75' above the Blinebry Marker, and fluid contacts, specifically Blinebry GOC at -2255 and Drinkard OWC at -3225, employed by Shell in the unitization hearings have been used here.

All three formations are shallow marine carbonates, consisting primarily of dolomite. The Tubb has appreciable clastic content and the Drinkard becomes limey toward its base. Anhydrite can occur throughout the interval. Porosity and permeability are low. Distribution and continuity of individual zones of porosity and permeability are erratic. Wells are not capable of draining a full 40 Acre Spacing Unit. In fact, Apache's calculations indicate drainage area is approximately 20 Acres.

Structure is significant in that it controls the fluid distribution and amount of pay above and below the Blinebry and Drinkard oil-gas contacts.

Apache approached its evaluation by mapping log derived SoPhiH for each of the four major reservoirs (Blinebry Gas Cap, Blinebry Oil Leg, Tubb, and Drinkard). This analysis required modern neutron-density and resistivity logs for any well to be used. Many wells thus had to be excluded from analysis because of the vintage of downhole logs or lack of a full suite of logs. Sufficient new well control exists in and near the Northeast Drinkard Unit to allow this interpretation.

Reservoir engineering used the four SoPhiH maps to estimate drainage of each offsetting well in each reservoir. Recoverable reserves for this location are calculated as the volumetrics under a 20 A radius (less if the direct offsets were not capable of draining 20 A) with reduced reservoir pressure where drainage has occurred. Drainage offsetting this location is as follows:

					EUR		DRAINED
SEC	LEASE NAME	WELL	PROD ZONE NAME	OIL	WATER	GAS	ACRES
4	Southland Royalty A	7	BLINEBRY GAS CAP	2	1	234	8
4	Southland Royalty A	4	BLINEBRY GAS CAP	0	0	0	0
4	Southland Royalty A	19	BLINEBRY GAS CAP	6	6	612	20
3	Northeast Drinkard Unit	301	BLINEBRY GAS CAP	0	0	0	0
3	Northeast Drinkard Unit	302	BLINEBRY GAS CAP	0	0	0	0
4	Southland Royalty A	7	BLINEBRY OIL LEG	116	12	753	25
4	Southland Royalty A	4	BLINEBRY OIL LEG	67	5	436	15
4	Southland Royalty A	19	BLINEBRY OIL LEG	60	20	350	15
3	Northeast Drinkard Unit	301	BLINEBRY OIL LEG	0	0	0	0
3	Northeast Drinkard Unit	302	BLINEBRY OIL LEG	0	0	0	0

4	Southland Royalty A	7_	TUBB	0	0	23	1
4	Southland Royalty A	4	TUBB	37	4	3663	165
4	Southland Royalty A	19	TUBB	6	6	612	20
3	Northeast Drinkard Unit	301	TUBB	5	0	476	20
3	Northeast Drinkard Unit	302	TUBB	0	0	0	0
4	Southland Royalty A	7_	DRINKARD	81	9	530	27
4	Southland Royalty A	4_	DRINKARD	176	10	1148	64
4	Southland Royalty A	19	DRINKARD	60	20	360	20
3	Northeast Drinkard Unit	301	DRINKARD	27	0	176	10
3	Northeast Drinkard Unit	302	DRINKARD	208	3	1352	85

Volumetrics for the proposed location are as follows:

			RESERVOIR	DRAINAGE	EUR	
		PROD ZONE NAME	PRESSURE	ACRES	OIL	GAS
SOUTHLAND ROYALTY A	21	BLINEBRY GAS CAP	1500	20	3	256
		BLINEBRY OIL LEG	1900	20	79	512
		TUBB	700	20	1	46
		DRINKARD	500	20	0	0
		TOTAL			82	814

### b. Blinebry Gas Cap (Exhibit 3)

Thickness of the Blinebry Gas Cap is partially related to the subsea top of the Blinebry. The higher the top, the thicker the gas cap can be. Using a 5% threshold, porosity averages 10.5% and water saturation averages 29% in 92 wells selected for analysis. SoPhiH at this location is expected to be 3.6'.

### c. Blinebry Oil Leg (Exhibit 4)

Thickness of the Blinebry Leg is partially related to the subsea top of the Blinebry, the higher the top, the thinner the oil leg might be. Using a 5% threshold, porosity averages 8.7% and water saturation averages 32% in 92 wells selected for analysis. SoPhiH at this location is expected to be 6.5'.

### d. Tubb (Exhibit 5)

The Tubb is generally considered to be a gas reservoir. No gas-oil or gas water contact has been suggested. Using a 5% porosity threshold and a 50 APIU Gamma ray threshold because of the greater amount of clastic material, porosity averages 8.4% and water saturation averages 30% in 91 wells selected for analysis. SoPhiH at this location is expected to be 5.2'.

### e. Drinkard (Exhibit 6)

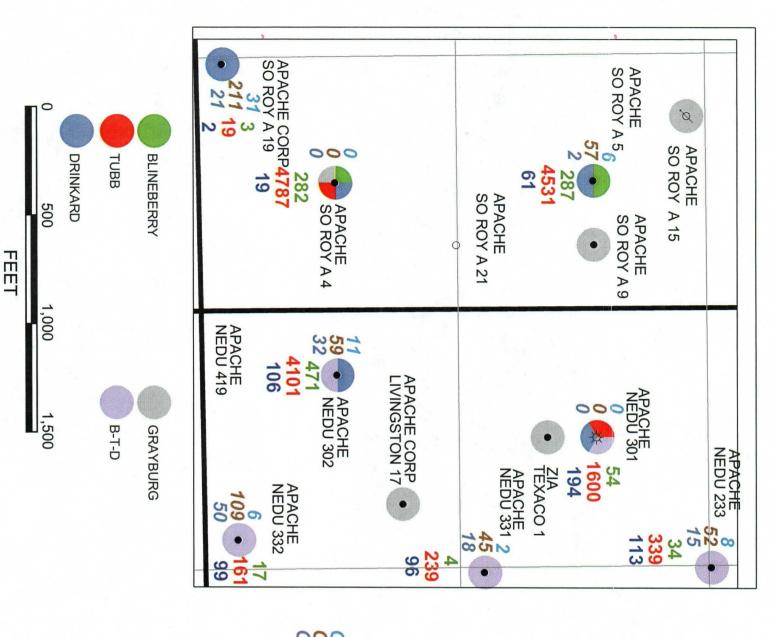
The thickness of the Drinkard is also related to its subsea position, the higher the top, it can be. Using a 5% threshold, porosity averages 9.1% and water saturation averages 25% in 82 wells selected for analysis. SoPhiH at this location is expected to be 6.0'.

### f. Drainage

The proposed **Southland Royalty A #21** location is designed to approximate a 20 Acre infill location. It is approximately equidistant from the Southland Royalty A #5 and #4 wells and greater than the standard 330' off the section line.

### 4. Notice

- a. Apache is the operator of the Blinebry, Tubb, and Drinkard wells toward which the proposed well will encroach, being the Southland Royalty A #5 and #19, and is also the only working interest owner. Additionally, all three reservoirs are contained within one oil and gas lease (Southland Royalty A) with common working and revenue interest owners. Therefore, there are no adversely affected parties and no one was notified of the application.
- 5. Approval of this application will afford the interest owners in this spacing unit an opportunity to recover oil and gas which would not otherwise be recovered and to do so without violating correlative rights.



### WELL SYMBOLS

- Location Only
- Oil Well
- Dry

Gas Well

## POSTED WELL DATA

CURRENT BOPD CURRENT MCFD CURRENT BWPD

OPERATOR WELL LABEL

MBO MMCFG

CORPORATION
CENTRAL REGION elyprod

TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224

MBW

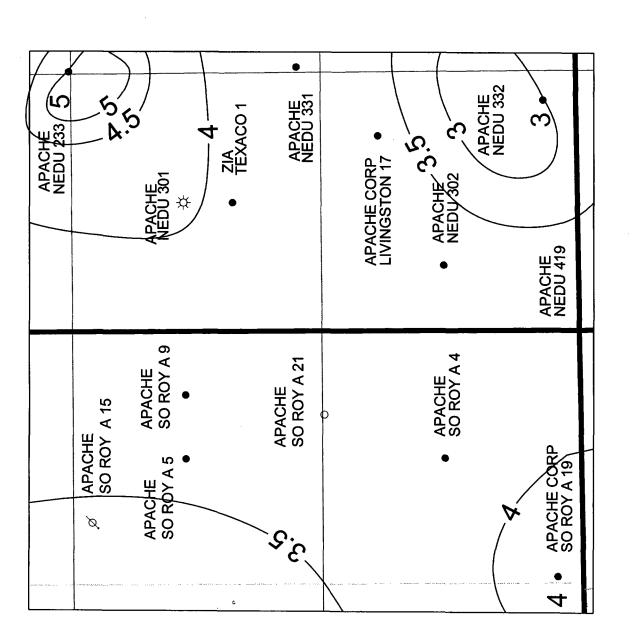
SO. ROY. A #2

LEA COUNTY, NEW MEXICO SEC 4-T215-R37E

WELL INFORMATION EXHIBIT 2

DWG: PROD (CURTIS\OCD-NM\2004 BTD)

DATE: 7/22/04



GAMMA RAY LTE 40 APIU XPHI GTE 5% **SW LTE 50%** 

### WELL SYMBOLS

- Location Only
- ☆ Gas Well Oil Well

  - ф Dry

## POSTED WELL DATA

OPERATOR WELL LABEL BLBY GAS CAP SOPHIH



TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224

#2 # SO. ROY. A

SEC 4-T218-R37E LEA COUNTY, NEW MEXICO

EXHIBIT 3

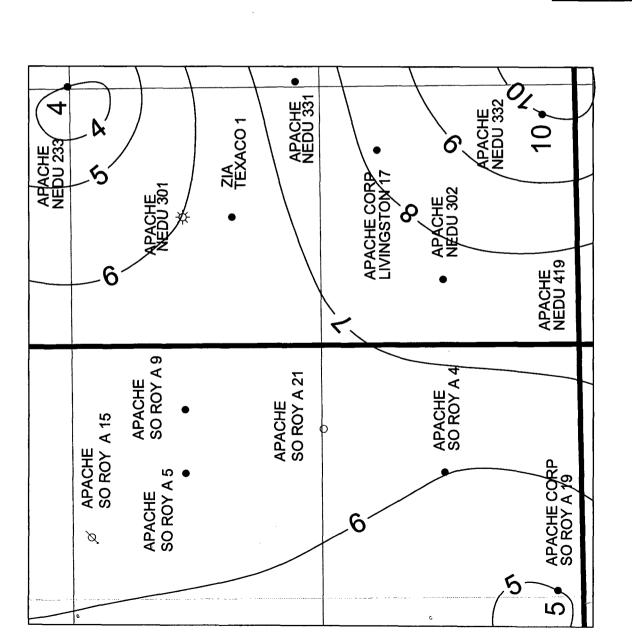
BLBY GAS CAP SOPHIH

1,000

500

FEET

DWG: PROD (CURTIS\OCD-NM\2004 BTD) DATE: 7/22/04



**GAMMA RAY LTE 40 APIU** XPHI GTE 5% **SW LTE 50%** 

### WELL SYMBOLS

- Location Only
- 🕁 Gas Well Oil Well
  - ф Dıy

## POSTED WELL DATA

BLBY OIL LEG SOPHIH

TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224

SO. ROY. A #2

SEC 4-T218-R37E LEA COUNTY, NEW MEXICO

EXHIBIT 4

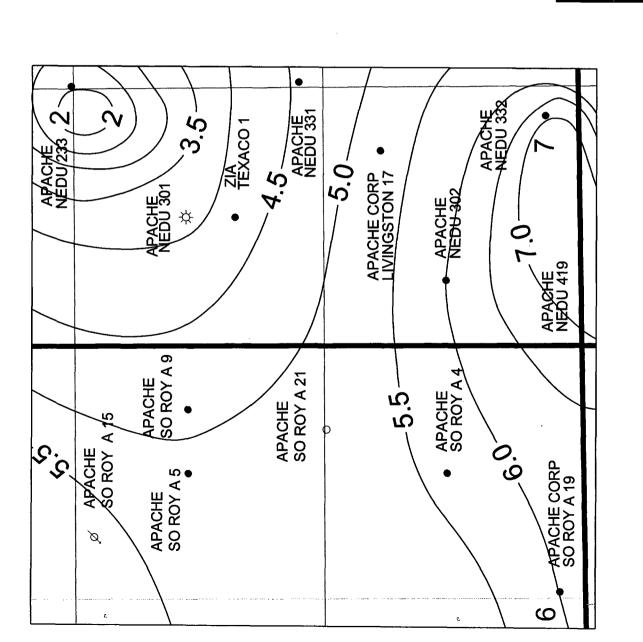
BLBY OIL LEG SOPHIH

1,000

200

FEET

DWG: PROD (CURTIS\OCD-NIM\2004 BTD) DATE: 7/22/04



GAMMA RAY LTE 50 APIU XPHI GTE 5% **SW LTE 50%** 

### WELL SYMBOLS

- **Location Only**
- Oil Well
- ☆ Gas Well ф Ру

## POSTED WELL DATA

TUBB SOPHIH



TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224

# SO. ROY. A #2

SEC 4-TZ18-R37E LEA COUNTY, NEW MEXICO

### EXHIBIT 5

TUBB SOPHIH

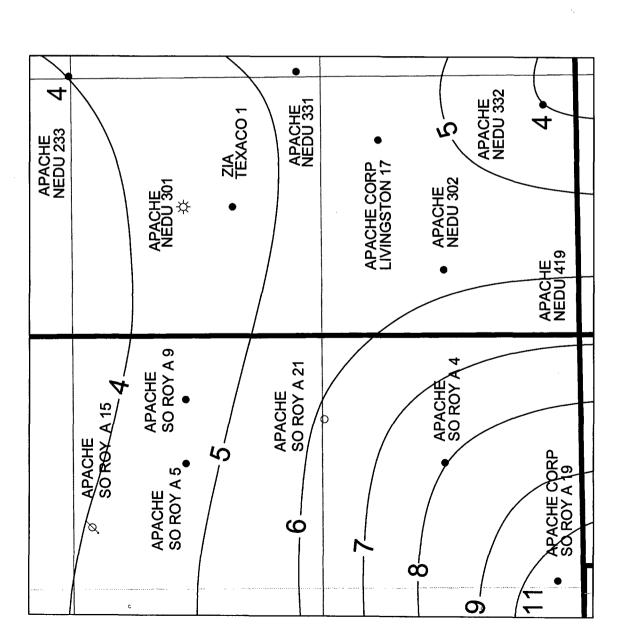
1,000

200

FEET

DWG: PROD (CURTIS\OCD-NM\2004 BTD)

DATE: 7/22/04



**GAMMA RAY LTE 40 APIU** XPHI GTE 5% **SW LTE 50%** 

٠.٠.

### WELL SYMBOLS

- Location Only
- ⇔ Gas Well Oil Well
- ф Dıy

## POSTED WELL DATA

OPERATOR WELL LABEL DRKD SOPHIH



TWO WARREN PLACE, SUITE 1500 6120 SOUTH YALE TULSA, OKLAHOMA 74136-4224

# SO. ROY. A #2

SEC 4-T219-R37E LEA COUNTY, NEW MEXICO

### EXHIBIT 6

DRKD SOPHIH

DWG: PROD (CURTIS\OCD-NM\2004 BTD)

DATE: 7/22/04

1,000

200

FEET

and beauty and	Service and the least to the service and the s	The state of the s
שומו לביים אווי איני איני איני איני איני איני איני	Establish Age 15 1000 A 2000 A	Z O S Table 1 and
TYPE TO THE THE HEAD HIS TOP THE TYPE TO THE TYPE TO THE TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYP		(and Say and Property of the Control
THE THE TOTAL THE	Transport of the state of the s	WARD CHENDONEN
(21)	1   1   1   1   1   1   1   1   1   1	CENTRAL DATA OF
2707 27001 27000 2700 2700 2700 2700 270	SECOLAR STATE OF THE SECONARY STATE OF THE S	1997 Location Million Committee Comm
The state of the s	Try (and) (and) (and)	2) Canada a law a canada a can
97.00   50.50	and all the state of the state	The state of the s
100 100 100 100 100 100 100 100 100 100	Spinis Storios S word (100) mag 110 mg	about the same of
	MINISTER CENTED CONTRACTOR (BLIT)	The state of the s
EXHIBIT 1900 1900 1900 1900 1900 1900 1900 190	Duran Salar	TO THE PARTY THAT I WAS A THE PARTY TO THE PARTY THE PAR
Triang of TWS O	17 Append and the analysis of	The state of the s
18 (0 14 14 11 13 )	inate city of the time of the city of the	A Short Chevront Chevront Chevront Chevroling
Total 1919 STONE TO STONE TO STONE TO THE TOTAL STONE TO	Committee of the standard of t	TOTAL STATE OF THE
1925 A STATE TO STATE SACRET SACRET (OR) AGO 320 EV	200 000 000 000 000	Total and the second se
May Chan and Horizon (1912) (1912) (1913) (1	Judge Tably 65 manager hard 15 hard manager tay of the second to the second tay of t	A TOTAL CONTROL OF THE PARTY OF
Tarris Overein (1975) Anner (19	(mad) 9/ cond) 5/ (2/d) 10/ cond 10/ co	The field of the f
56.5.6   5.7 (an)   6.5.6   6.6	Leverbul Character Colors of Character Character Colors of Character Charact	Mary Charles Charles 17 to Section 1992 of 199
IN CALL TO THE TIME TO THE CITY CITY CALL CITY OF THE CITY CALL CITY OF THE CI	157 75 104 105 105 105 105 105 105 105 105 105 105	( allow) and a second s
Sen 1 28 hours 1 20 ho	September 2 1992   1992	Total Commercial Control Contr
Trans to the mental stalles   W.E. McKell (500 Fer 1811)	JAPAN COM SOLVER	15) 15 15 15 15 15 15 15 15 15 15 15 15 15
4757 100-300 1	John (A) Managa Managa Managa A	* S/Y = 1// W
Appendigues Appendigues Sanda April 1945 - 1945   1945	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	As subjust of 1 acco
6570 7007 1 5 Uhun C actica pai Laufise7 . 6 4814	(Ind)  scoze  sc	21 maints on 1 , MTEO CHANT Of MIRE MAN HAD, MOTO
State word to the state of the	1.5 th (1.5 th	SAME CAN A STAN
Carolin 1.25 (1.25 carol) (2.40) (2.40) (2.40) (2.40)	THE PARTY OF THE P	CONTRACT SAINT (INCO ATTENDED TO A SECONDARY SAINT SAI
Zilland Dahloys October 100 Control Co	Open See See See See See See See See See S	(ind) sealing on the sealing saling sealing se
Apoche Econ Econ Mesidon Mesivon Dec	The state of the s	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Illine and I would be the second of the second seco		The state of the s
Latrice Jorna (2500)	(c) 27 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2	Coll Female John 1 1 2
OZZONI DU ZON	The second secon	was the part of th
Secreta Askarte Janes Askarte		TANK AND THE PROPERTY OF THE P
The control of the co	16-4 # F. P. 4111 41 4 41 CENT 110	Ami to Time State (1907) Margar State (1908) M
CELOTION THE COPERATION OF THE	POS EOK TOLON TOLON ,	ישר אינים באיניל באינים ביים ביים ביים אינים באינים
TOUR COUNTY AND THE TOUR COUNTY OF THE TOUR COUNTY	ON THE SENT TO THE PER THE	TO NOT TO SERVICE STATE OF THE
10 03078]   100 03078]	Im. in 100 250 in 100 and 200 in 100 in 100 and 100 an	to the provide a
7 (41) 3500 acres (41) (41) (41) (41) (41) (41) (41) (41)	AND THE COURT OF THE PARTY AND	Condition of the party of the p
Parado (C) A 7 OUOSODON IS SIM S O DOS (C) J 7 DEVAIS	CODE OF THE STATE	מוציון בפנש כ אבעי דוס (ש) אפיני או הפוש ב אפון דוס (ש)
The state of the s	000 000 000 000 000 000 000 000 000 00	Darroll (1/140100)
Toballoy I was a series of the	7584184818	May-03-2004 02:41pm From-APACHE COR!
T-641 P.002/002 F-640	1201101010	., .,

### Stogner, Michael

From:

Stogner, Michael

Sent:

Friday, December 03, 2004 8:13 AM

To:

'JamesBruc@aol.com'

Cc:

Ezeanyim, Richard

Subject: RE: Apache Corp./NSL applications in 21S-37E

Your request is duly noted and I will make every effort to accommodate Apache's needs.

----Original Message----

From: JamesBruc@aol.com [mailto:JamesBruc@aol.com]

Sent: Friday, December 03, 2004 7:41 AM

To: mstogner@state.nm.us

Subject: Apache Corp./NSL applications in 21S-37E

Mike: I know you have approximately one billion other things on your desk, but Apache is really bothering me for another NSL approval, so they can drill this month. I think there are three pending. As always, anything you can do will help. Thanks.

If you want to call and scream at me to relieve the pressure, I'm at your service (982-2043).

Jim

This email has been scanned by the MessageLabs Email Security System. For more information please visit http://www.messagelabs.com/email