

Order Number

455

API Number

30-025 410022

Operator

Apache Corporation

County

Lea

Order Date

04-26-11

Well Name

DuKes

Number

002

Location

K

UL

11

Sec

20S

T (+Dir)

38E

R (+Dir)

Oil %

30%

Gas %

36%

Pool 1

33230

House Blinebry

Pool 2

78760

House Tubb

10%

20%

Pool 3

33250

House Drinkard

60%

44%

Pool 4

Comments:

Posted in RBOMS 4-26-11 CCH

DOWNHOLE COMMINGLE CALCULATIONS:

OPERATOR: Apache Corporation

30-025-40022
DHC HOB-455

PROPERTY NAME: DUKes

WNULSTR: 2-K-11-205-38E

SECTION I:		ALLOWABLE AMOUNT	
POOL NO. 1	<u>House Blinebry</u>	<u>142</u>	<u>284</u> MCF
POOL NO. 2	<u>House Tubb</u>	<u>142</u>	<u>284</u> MCF
POOL NO. 3	<u>House Drinkard</u>	<u>142</u>	<u>284</u> MCF
POOL NO. 4	<u></u>		
POOL TOTALS		<u>426</u>	<u>852</u> MCF

SECTION II:		<u>Oil</u>	<u>Gas</u>
POOL NO. 1	<u>House Blinebry</u>	30%	36%
POOL NO. 2	<u>House Tubb</u>	10%	20%
POOL NO. 3	<u>House Drinkard</u>	60% $\times 426 = 25560$	44%
POOL NO. 4	<u></u>	<u>52567</u>	

	<u>OIL</u>	<u>GAS</u>
SECTION III:	$60\% \div 142 = 236.66$	<u><237></u>

SECTION IV:	$30\% \times 237 = 71.10$	<u><71></u>
	$10\% \times 237 = 23.70$	<u><24></u>
	$60\% \times 237 = 142.20$	<u><142></u>

Office

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

Energy Minerals and Natural Resources

June 19, 2008

WELL API NO.

30-025-40022

5. Indicate Type of Lease

STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Dukes

8. Well Number 002

9. OGRID Number

873

10. Pool name or Wildcat

House;Blinebry/House;Tubb/House;Drinkard

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other:

2. Name of Operator

Apache Corporation

3. Address of Operator

303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705

4. Well Location

Unit Letter K : 1650 feet from the South line and 1650 feet from the West line

Section 11 Township 20S Range 38E NMPM County Lea

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

3567' GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☐
 CASING/CEMENT JOB ☐

OTHER: ☐OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Apache would like to DHC the following pools:

R-11363

Pool Names:

House; Blinebry

33230

Perforations:

Blinebry 6052'-6354'

House; Tubb

78760

Tubb 6536'-6800'

House; Drinkard

33250

Drinkard 7016'-7138'

The allocation method will be as follows based on offset production. (See attached application for exception to Rule 303-C.)

	OIL	GAS	WATER
Blinebry	30%	36%	45%
Tubb	10%	20%	15%
Drinkard	60%	44%	40%

Downhole commingling will not reduce the value of these pools. Ownership is the same for each of these pools.

Spud Date:

04/01/2011

Rig Release Date:

DHC-140B-0455

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Reesa Holland

TITLE Sr. Engr Tech

DATE 04/20/2011

Type or print name Reesa Holland

E-mail address: Reesa.Holland@apachecorp.com

PHONE: 432/818-1062

For State Use Only

APPROVED BY:

[Signature]

TITLE

PETROLEUM ENGINEER

DATE

APR 26 2011

Conditions of Approval (if any):

RECEIVED

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1501 W. Grand Avenue, Artesia, NM 88201

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

APR 25 2011

HOBBSOCD

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised July 16, 2010

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-40022	Pool Code 33230	Pool Name House; Blinberry
Property Code 303217	Property Name DUKES	Well Number 2
OCRID No. 873	Operator Name APACHE CORPORATION	Elevation 3584'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	11	20 S	38 E		1650	SOUTH	1650	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40		Joint or Infill	Consolidation Code	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

	SURFACE LOCATION Lat - N 32°35'05.764" Long - W 103°07'20.974" NMSPCE - N 578652.510 E 914293.207 (NAD-83)	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <u>Sorina L. Flores</u> 1/19/11 Signature Date <u>Sorina L. Flores</u> Printed Name <u>Sorina.L.Flores@apachecorp.com</u> Email Address
	SURFACE LOCATION Lat - N 32°35'05.35" Long - W 103°07'19.26" NMSPCE - N 578593.371 E 873110.987 (NAD-27)	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JAMES L. JONES Date Surveyed Signature & Seal of Professional Surveyor W.C. Jones Certificate No. Gary L. Jones 7977 BASIN SURVEYS 24030

RECEIVED

APR 25 2011

HOBBSOCD

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1591 W. Grand Avenue, Artesia, NM 88210

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

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised July 18, 2010

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-40022	Pool Code 78760	Pool Name House; Tubb
Property Code 303217	Property Name DUKES	Well Number 2
OGRID No. 873	Operator Name APACHE CORPORATION	Elevation 3584'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	11	20 S	38 E		1650	SOUTH	1650	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40		Joint or Infill		Consolidation Code		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

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <u>Sorina L. Flores</u> 1/19/11 Signature Date <u>Sorina L. Flores</u> Printed Name <u>Sorina.Flores@apachecorp.com</u> Email Address
	SURFACE LOCATION Lat - N 32°35'05.764" Long - W 103°07'20.974" NMSPCE- N 578652.510 E 914293.207 (NAD-83)
	SURFACE LOCATION Lat - N 32°35'05.35" Long - W 103°07'19.26" NMSPCE- N 578593.371 E 873110.987 (NAD-27)
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. <u>JAMES L. JONES</u> Date Surveyed <u>JAMES L. JONES</u> Signature & Seal of Professional Surveyor <u>W.C. Jones</u> Certificate No. Gary L. Jones 7977 BASIN SURVEYS 24030

RECEIVED

APR 25 2011

DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBSCO

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised July 16, 2010

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-4022	Pool Code 33250	Pool Name House; Drinkard
Property Code 303217	Property Name DUKES	Well Number 2
GRID No. 873	Operator Name APACHE CORPORATION	Elevation 3584'

Surface Location

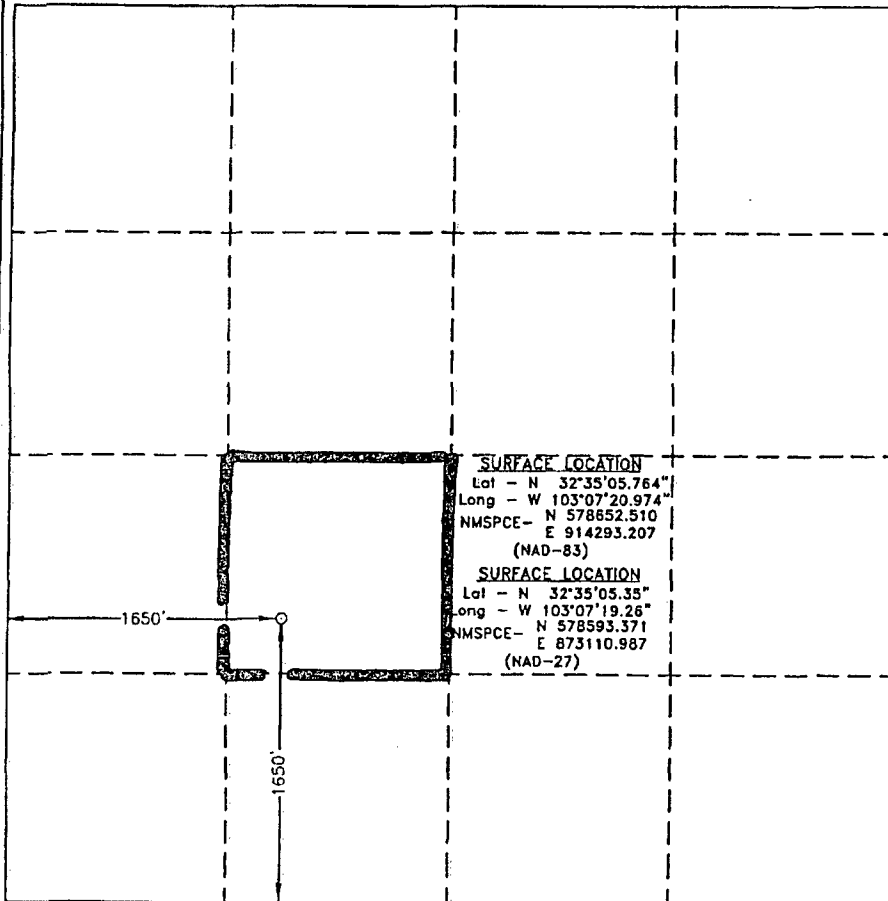
UL or lot No. K	Section 11	Township 20 S	Range 38 E	Lot Idn	Feet from the 1650	North/South line SOUTH	Feet from the 1650	East/West line WEST	County LEA
--------------------	---------------	------------------	---------------	---------	-----------------------	---------------------------	-----------------------	------------------------	---------------

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
---------------	---------	----------	-------	---------	---------------	------------------	---------------	----------------	--------

Dedicated Acres 40	Joint or Infill	Consolidation Code	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

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or leased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <u>Sorina L. Flores</u> 1/19/11 Signature Date <u>Sorina L. Flores</u> Printed Name <u>Sorina.L.Flores@apachecorp.com</u> Email Address
	SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. <u>JAN 19 2011</u> Date Surveyed <u>GARY L. JONES</u> Signature & Seal of Professional Surveyor <u>W.C. Jones</u> Certificate No. Gary L. Jones 7977 BASIN SURVEYS 24030



April 20, 2011

Mr. Paul Kautz
New Mexico Oil Conservation Division
1625 N French Drive
Hobbs, New Mexico 88240

RECEIVED

APR 25 2011
HOBBSOCD

RE: Application for Exception to Rule 303-C – Downhole Commingling
Dukes #2 API 30-025-40022
Unit K, Section 11, T20S, R38E
House; Blinbry (33230), House; Tubb (78760) & House; Drinkard (33250)
Lea County, New Mexico

Dear Mr. Kautz,

Enclosed please find form C-103 and attachments for downhole commingling the captioned well. The ownerships (WI, NRI and ORRI) of these pools are identical in this wellbore. The fluids from each of these pools are compatible as seen in other similar commingles in the area. Combining these fluids will not result in any damage to these pools. Commingling will improve the efficiency of present and future recovery operations. Cross flow will not be a problem due to having a production lift system capable of keeping the well pumped off thereby maximizing production. This commingling will not reduce the value of the total remaining production.

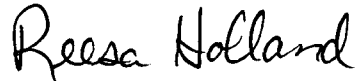
The allocation method used for this well was determined by analyzing the cumulative oil, gas and water production in a nine section area of review surrounding this well. Supporting documentation is shown on the attached spreadsheet. Production for active and inactive wells was grouped by pool in the area of review. The totals for each phase were then divided by the number of wells associated with this pool yielding an average. This average was used to determine the percentage allocation.

The main reason for using this method is based on economics and minimizing reservoir damage. Past completion practices had all three zones perforated and fracture stimulated during one full week. Each zone was isolated by a retrievable bridge plug to allow for production testing of each zone for allocation purposes. This testing period lasted as long as one month before a stabilized rate was observed thus allowing the next zone to be brought on and tested. During this time period the completion fluids used were still confined to the other reservoirs causing gel damage. It is a common practice to get these fluids out of the wellbore as soon as possible to help maximize productivity. On a cost basis it is more expensive to have a completion rig move in and out multiple times to bring on each new zone. Several other factors such as weather, other new completions and regulatory well work may interfere with these new wells.

The area of review used encompasses what has been accepted as a good statistical representation for allocation purposes. By using this allocation method all zones will be brought online in a more effective and efficient manner. This will in turn generate a higher productive rate and quicker revenue streams not only for the operator but for the State of New Mexico too.

If you need additional information or have any questions, please give me a call at (432) 818-1062.

Sincerely,

A handwritten signature in black ink that reads "Reesa Holland". The script is cursive and fluid, with the first name "Reesa" and last name "Holland" clearly distinguishable.

Reesa Holland
Sr. Engineering Technician

Lease Name	Well Number	10DIGITAPI	Location	Cum Oil (BBL)		Cum Gas (MCF)		Cum Water (BBL)	
				Blinberry	Tubb	Blinberry	Tubb	Blinberry	Tubb
L D JONES	1	3002507722	1H 20S 38E SE NE	3476				5043	
PHILLIPS HOUSE STATE	1	3002507725	2O 20S 38E		102152			484311	25495
STATE U	1	3002507727	2P 20S 38E		157611			97687	184324
ARNOLD A	1	3002507761	11F 20S 38E	1267	29711	670	3969	1367267	
HOUSE B	1	3002507764	11P 20S 38E		9855			118752	
BLANKENSHIP	1	3002507766	12E 20S 38E			54657		16638	7010
BLANKENSHIP	2	3002507767	12L 20S 38E	3906	20	134312	9570	42	1177187
BLANKENSHIP	3	3002507768	12M 20S 38E NE SW SW	6173	8816	39616	34845	48286	2435461
CONE A	1	3002507770	12F 20S 38E		17111	206519		66483	238039
CONE B	1	3002507771	12J 20S 38E			239833		591551	69199
HESTER 12	3	3002507772	12O 20S 38E			150171		853402	32702
HESTER 12	2	3002507773	12N 20S 38E			82932		540453	17896
HESTER 12	1	3002512549	12K 20S 38E			97448		457760	16669
CROWN	1	3002520195	13B 20S 38E	279	9965	57149	973	45266	687081
HOWSE C	1	3002522165	11H 20S 38E SE NE			26370		143078	6340
CONE B	2	3002525921	12G 20S 38E			398		86772	1460
L & M	1	3002528287	2L 20S 38E C S2 SW	1320	9790	326	13470	132124	1585
HOUSE	1	3002531006	13D 20S 38E NW NW	33379	275	37226	816662	11359	515800
SHARPS	1	3002534060	13M 20S 38E	39064			202609		45652
SHARPS	2	3002534061	13N 20S 38E	33029			139027		31766
JOE CAMEL	1	3002534160	13K 20S 38E	37745	340	610	66073	1060	1280
BULL DURHAM	1	3002534187	14P 20S 38E S2 SE SE	46677	8618		1079212		41569
JOE CAMEL	2	3002534211	13F 20S 38E SW SE NW	18880	2308		65809	4545	41139
DIAMONDBACK	1	3002534274	14J 20S 38E NW SE	30701			202254		46236
PEARL	1	3002534275	13J 20S 38E NW SE	11581			36620		28742
LUCKY STRIKE	1	3002534285	14I 20S 38E NE SE	79983			1065997		68515
CAPPS FEDERAL	2	3002534289	13O 20S 38E SW SE	36620	6553		147503	41795	37977
BULL DURHAM	2	3002534363	14O 20S 38E SW SE	36383	244		326958	1875	1021
CHESTERFIELD	1	3002534420	14H 20S 38E SE NE	26956	369	783	744509	73978	8221
BUGLER	1	3002534506	13L 20S 38E NW NW SW	75304	815		431961	118061	45510
MOONEY	1	3002534569	13I 20S 38E NE SE			21755		31625	
PAIGE	1	3002534570	13P 20S 38E SE SE	7459		18778	15017		28745
VICEROY	1	3002534625	13E 20S 38E SW NW	31785			533691		75010
PALL MALL	1	3002534634	14A 20S 38E NE NE	1047	418	30328	1505	26191	341007
KOOL	1	3002534642	14B 20S 38E NW NE	36509	581	3485	339895	2600	4164
PICAYUNE	1	3002534734	11J 20S 38E C NW SE		14761	27403	1751	70863	386240
ROITAN	1	3002534735	14G 20S 38E SW NE	23698	6096		576420	143551	53256
DREESSEN	1	3002534857	1G 20S 38E C SW NE	2199			7175		23039
MARLBORO	1	3002534968	14C 20S 38E S2 NE NW	1564			13135		
HOWSER	1	3002534970	1J 20S 38E C NW SE	1371			28097		35934
MERIT	1	3002535240	11O 20S 38E E2 SW SE		9919			601399	
BEECHNUT	1	3002535241	14E 20S 38E SE SW NW	540			2239		
REDTAG	1	3002535333	2J 20S 38E NW NW SE	27244	4210	1806	75957	11443	13571
MERIT II	1	3002535448	11G 20S 38E C SW NE	3993	17282	21816	17878	29391	152116
DUKES	1	3002535614	11K 20S 38E E2 NE SW		7818	33766		38544	144215
REDTAG	2	3002535630	2K 20S 38E NE NE SW	16086			880919		6028
DIXIE QUEEN	1	3002536421	11P 20S 38E SE SE		9437			526449	
WHITE OWL	1	3002536689	2 20S 38E NW NW NW	33770			124856		9450
BIG KICK	1	3002536745	13C 20S 38E W2 NE NW	16908	1153	9473	242358	15973	64422
HESTER 12	6	3002536795	12N 20S 38E	27311	8239	13170	327143	184938	69773
HESTER 12	4	3002536800	12O 20S 38E SW SW SE	15959	5490	4883	264044	128347	116404
SALEM	1	3002537316	3A 20S 38E SE NE NE	3272		8671	9173		25421
JOE CAMEL	3	3002538033	13F 20S 38E NW SE NW	4297	1926	1186	202278	169257	41279
HESTER 12	8	3002538076	12K 20S 38E SW NE SW	13477	4170	3997	128096	92716	58798
HESTER 12	5	3002538211	12P 20S 38E NW SE SE	19423	5916	11742	181873	81963	81051
HESTER 12	7	3002538369	12N 20S 38E NE SE SW	6715	7658	3417	60726	57107	34499
MELOT	1	3002538370	11C 20S 38E SW NE NW	5261	6764	3000	47885	37242	21287
BULL DURHAM	3	3002538379	14P 20S 38E NE SE SE	5736	8198		79183	59407	613
BLANKENSHIP	4	3002538397	12L 20S 38E NE NW SW	3048	3279	6636	13858	23283	23303
BLANKENSHIP	5	3002538399	12M 20S 38E SW SW SW	12963	4857	6099	43941	89546	269890
BLANKENSHIP	6	3002538400	12L 20S 38E SW NW SW	6958	5674	1273	32457	1901	68497
KOOL	2	3002538439	14B 20S 38E SW NW NE	8841	1457	869	18557	33192	
RHINO	2	3002538484	11N 20S 38E SE NE SW	10005	2793	5582	28535	19507	
MAGNOLIA	1	3002538660	11E 20S 38E NE SW NW	5803	5710	4274	84897	16551	17868
DIXIE QUEEN	2	3002538661	11P 20S 38E NE SE SE	12459	3411	6071	65369	29897	60074
HESTER 12	10	3002538662	12O 20S 38E NE SW SE	4529	523	4113	36097	11195	29858
HESTER 12	11	3002538663	12P 20S 38E SW SE SE	1656	1557	3019	85889	86324	8358
BIG KICK	2	3002538664	13C 20S 38E SE NE NW	9380	1582	3880	29836		77721
HOUSE	2	3002538665	13D 20S 38E SE NW NW	4880	2187		34583	2599	
LUCKY STRIKE	2	3002538688	14I 20S 38E SW NE SE	4398	1598		29272	8662	
BUGLER	2	3002538689	13L 20S 38E SW NW SW	7411	2128		66813	27765	
MELOT	2	3002538700	11C 20S 38E NW NE NW	16199	5524	2171	46174	8478	24717
HESTER 12	9	3002538791	12K 20S 38E NE NE SW	2123	1327	5164	51435	5982	5843
MAGNOLIA	2	3002539090	11D 20S 38E NE NW NW	2018	641	5407	69145	37713	102670
L & M	2	3002539450	2N 20S 38E	1487	1066	8066	22913	28942	68741
DIXIE QUEEN	3	3002539451	11I 20S 38E	2130	551	4193	9329	3966	10030
CROWN	2	3002539457	13B 20S 38E	961	436	786	1999	1020	1234
MELOT	3	3002539458	11B 20S 38E	1864	480	3667	7892	3354	8485
BLANKENSHIP	7	3002539488	12E 20S 38E	491	133	1066	2921	1240	3137
MAGNOLIA	3	3002539489	11E 20S 38E	1768	458	3482	28631	12167	30774
ARNOLD A	2	3002539490	11F 20S 38E	1245	314	2340	14762	6273	15870
CONE A	2	3002539491	12F 20S 38E	1386	384	3011	4300	1933	4516
PALL MALL	2	3002539530	14A 20S 38E	1823	827	1492	31715	16548	20683
CHESTERFIELD	2	3002539573	14H 20S 38E	798	365	656	86204	44976	56219
ARNOLD A	3	3002539636	11F 20S 38E NE SE NW	2147	534	4023	10479	4455	11266
BUGLER	3	3002539648	13L 20S 38E	603	330	793	2203	1370	2381
DIAMONDBACK	2	3002539649	14J 20S 38E NW SE	1080	587	1421	2927	1819	3164

Dukes #2
30-025-40022
Apache Corporation

Lease Name	Well Number	10DIGITAPI	Location	Cum Oil (BBL)			Cum Gas (MCF)			Cum Water (BBL)		
				Blinebry	Tubb	Drinkard	Blinebry	Tubb	Drinkard	Blinebry	Tubb	Drinkard
DIXIE QUEEN	4	3002539650	11I 20S 38E	1667	428	3277	9330	3963	10025			
KOOL	3	3002539651	14B 20S 38E NW NE	340	189	468	8123	5188	9250	3837	1796	2531
L & M	3	3002539652	2N 20S 38E	881	628	4787	5498	6945	16494	4544	2199	7914
MERIT	2	3002539653	11O 20S 38E	1225	395	2755	14253	7330	19138	4167	1261	4264
MERIT	3	3002539654	11O 20S 38E SW SE	655	362	1246	12365	9350	8445	3928	857	2357
REDTAG	3	3002539655	2J 20S 38E	723	854	4993	2958	6600	13202	6849	4724	12046
CHESTERFIELD	3	3002539721	14H 20S 38E	179	79	142	24870	12979	16221			
TOTALS				964,471	278,474	1,714,681	10,776,025	4,891,287	10,970,018	1,381,536	325,835	1,096,681
AVERAGES				12,365	4,036	25,216	136,405	73,004	166,212	21,587	6,933	19,240

Proposed Allocations	Oil	Gas	Water
Blinebry	30%	36%	45%
Tubb	10%	20%	15%
Drinkard	60%	44%	40%
TOTAL	100%	100%	100%



AFE No: PA- 11- 0152-C

Dukes #2

API #: 30-025-40022

1650' FSL & 1650' FWL

Section 11, Township 20S, Range 38E

Lea County, New Mexico

Completion Procedure – Blinebry-Tubb-Drinkard

April 14, 2011

Recommended Procedure:

Note: 5-1/2", 17#, J-55 & L-80 csg @ 7352' w/1,300 sx cmt (circ).
(1,011' L-80 csg on top). Marker Joint @ 5494-5517'.

Drinkard:

1. MIRU PU. Install BOP. Pressure test csg.
2. MIRU wireline unit. Run GR/CCL/CBL log from PBTD $\pm 7307'$ to surface. Correlate to Weatherford Photo Density/Compensated Neutron/Spectral Gamma Ray log dated 4/9/11.
3. Perforate Drinkard formation @ 7016', 7018', 7020', 7032', 7039', 7044', 7046', 7048', 7050', 7052', 7064', 7066', 7068', 7137' and 7138' w/2 spf, 120 deg phasing. Total = 30 shots.
4. RIH 2-7/8" tbg and pkr. Spot acid over perfs. Set pkr @ $\pm 6900'$.
5. Acidize Drinkard interval with 3,000 gals 15% NEFE HCL acid and ball sealers. Add 1 drum of corrosion inhibitor & 2 drums scale inhibitor to acid mix.
6. Release pkr & run through perfs to knock off balls. TOH with tbg.
7. ND BOP. Install frac valve.
8. RU frac equipment. Load hole with 10# gel slick water. Frac Drinkard w/60,000# 20/40 Ottawa sand (1-4 ppg ramp) and 20,000# 20/40 SLC resin coated sand (4 ppg hold) down 5-1/2" csg @ ± 30 BPM in 35# XL gel as per frac recommendation. Maximum treating pressure = 4500 psi.
9. Spot 1,500 gals 15% HCL across Tubb interval 6536' – 6800' during Drinkard frac flush.
10. RIH and set composite plug above the Drinkard interval @ $\pm 6940'$. Pressure test CBP to 3000 psi.

Tubb:

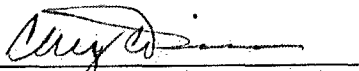
1. Perforate Tubb formation @ 6536', 6538', 6540', 6568', 6620', 6622', 6638', 6640', 6679', 6680', 6684', 6685', 6694', 6696', 6698', 6700', 6743', 6744', 6761', 6762', 6774', 6778', 6782-6786', 6788', 6795', 6796', 6799' and 6800' w/1 spf, 120 deg phasing. Total = 32 shots.
2. Acidize Tubb w/3,000 gals 15% HCL with ball sealers. Add 1 drum of corrosion inhibitor & 2 drums scale inhibitor to acid mix. RIH w/junk basket to knock off balls.
3. Frac the Tubb interval w/80,000# 20/40 Ottawa sand (2-6 ppg ramp) and 20,000# 20/40 SLC resin coated sand (6 ppg hold) down 5-1/2" csg @ 40 BPM in 30# XL gel as per frac recommendation. Maximum treating pressure = 4500 psi.
4. Spot 1,500 gals 15% HCL across Blinebry interval 6052' – 6354' during Tubb frac flush.

5. RIH and set composite plug above the Tubb interval @ +/- 6480'. Pressure test CBP to 3000 psi.

Blinebry:

1. Perforate Blinebry formation @ 6052', 6054', 6056', 6058', 6060', 6062', 6068', 6070', 6108', 6110', 6112', 6120', 6122', 6124', 6148', 6150', 6160', 6162', 6166', 6168', 6170', 6182', 6184', 6197', 6228', 6292', 6294', 6296', 6298', 6314', 6316', 6318', 6320', 6346', 6348', 6350', 6352' and 6354' w/1 spf, 120 deg phasing. Total 38 shots.
2. Acidize Blinebry w/3,000 gals 15% HCL w/ball sealers. Add 1 drum of corrosion inhibitor & 2 drums scale inhibitor to acid mix. RIH w/junk basket to knock off balls.
3. Frac the Blinebry interval w/160,000# 20/40 Ottawa sand (2-6 ppg ramp) and 40,000# 20/40 SLC resin coated sand (6 ppg hold) down 5-1/2" csg @ 40 BPM in 30# XL gel as per frac recommendation. Maximum treating pressure = 4500 psi.
4. RIH w/2-7/8" tbg and bit. Drill out plugs and clean out to PBTD.
5. RIH w/production tubing. Land SN @ +/-7170'. RIH w/1-1/2" pump & rods.
6. Hook up 640 PU.
7. Place well on test.

Prepared by:



Gary C. Timmermann

4/14/2011

**Weatherford**

PHOTO DENSITY
COMPENSATED NEUTRON
SPECTRAL GAMMA RAY

COMPANY APACHE CORPORATION

WELL DUKES #2

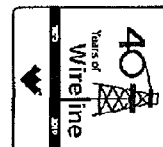
FIELD HOUSE

PROVINCE/COUNTY LEA

COUNTRY/STATE U.S.A. / NEW MEXICO

LOCATION 1650' FSL & 1650' FWL

SEC. 11, T20S, R38E



SEC 11 T20S R38E

API Number 30-025-40022

MICRO LATERLOG

Permit Number:

Permanent Datum GROUND LEVEL, Elevation 3567 feet

Log Measured From K.B. @ 11 FEET above Permanent Datum

Drilling Measured From K.B.

Elevations:
KB 3578.00
DF 3577.00
GL 3567.00

Date 09-APR-2011

Run Number ONE

Depth Driller 7352.00 feet

Depth Logger 7350.00 feet

First Reading 7314.00 feet

Last Reading 100.00 feet

Casing Driller 1684.00 feet

Casing Logger 1670.00 feet

Bit Size 7.875 inches

Hole Fluid Type CHEM.

Density / Viscosity 10.10 lb/USg 31.00 sec/cp

PH / Fluid Loss 11.00 7.00 ml/30Min

Sample Source FLOWLINE

Rm @ Measured Temp 0.054 @ 80.0 ohm-m

Rmf @ Measured Temp 0.04 @ 80.0 ohm-m

Rmc @ Measured Temp 0.067 @ 80.0 ohm-m

Source Rmf / Rmc CALC. CALC.

Rm @ BHT 0.038 @ 113.0 ohm-m

Time Since Circulation 7 HOURS

Max Recorded Temp 113.00 deg F

Equipment Name COMPACT

Equipment / Base 13239 ODESSA

Recorded By JOHN WELLS

Witnessed By ROBERT JOHNSON VIA E-MAIL

SO# 3527140

REMARKS

TOOLS RUN: MMR, MLE, MUG, MSS, MPD, MDN, MLK, SGS, MCG, MBE.

HARDWARE: TWO 0.5" STANDOFFS ON MLE.
ONE ECCENTERED BOWSPRING ON MDN.

2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY.

ANNULAR HOLE VOLUME CALCULATED USING 5.5" CASING.

ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

RIG: CAPSTAR #20

SERVICE ORDER#: 3527140

ENGINEER: JOHN WELLS

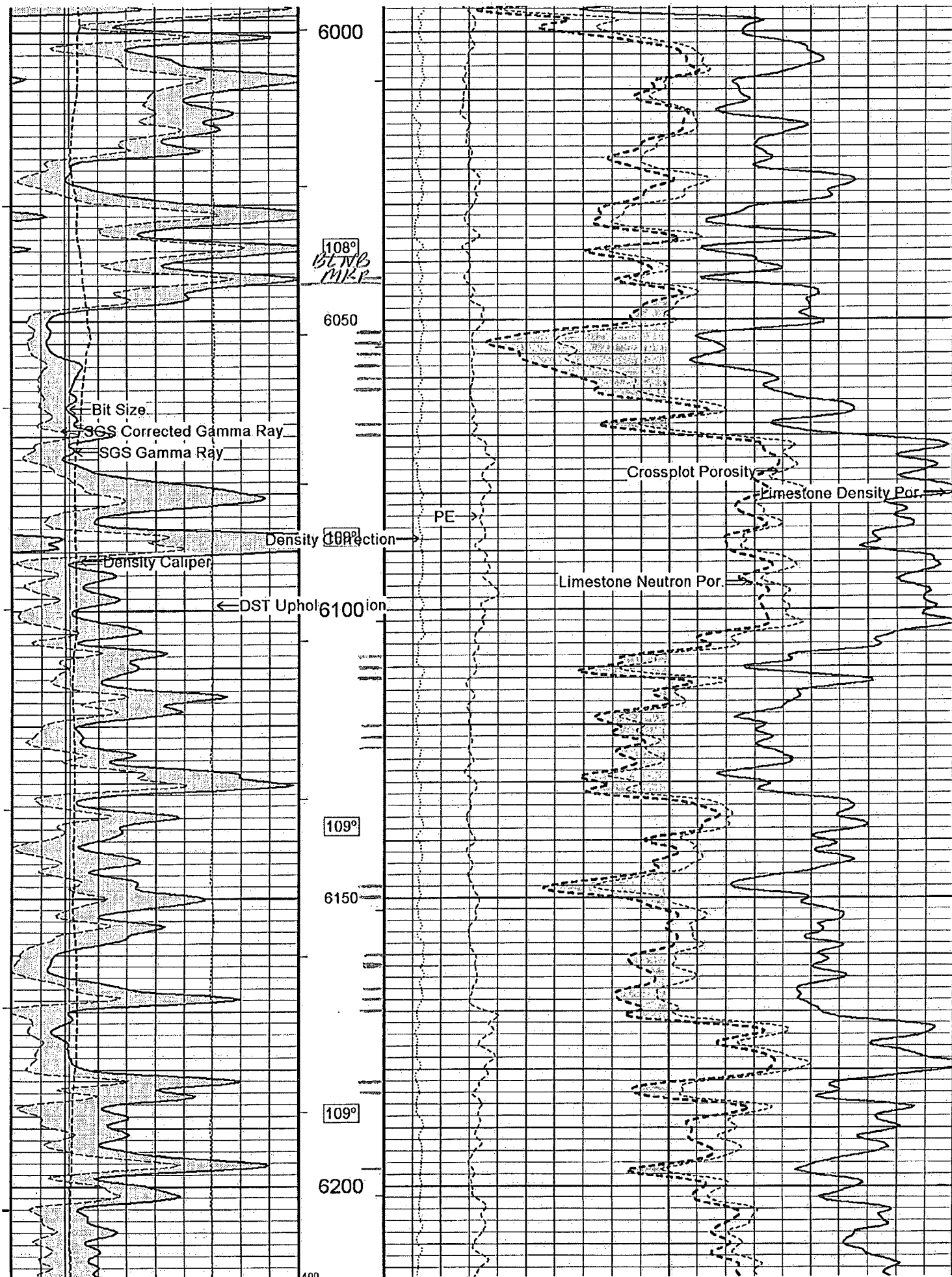
OPERATOR: JOSH PAZ
WILL DORETO

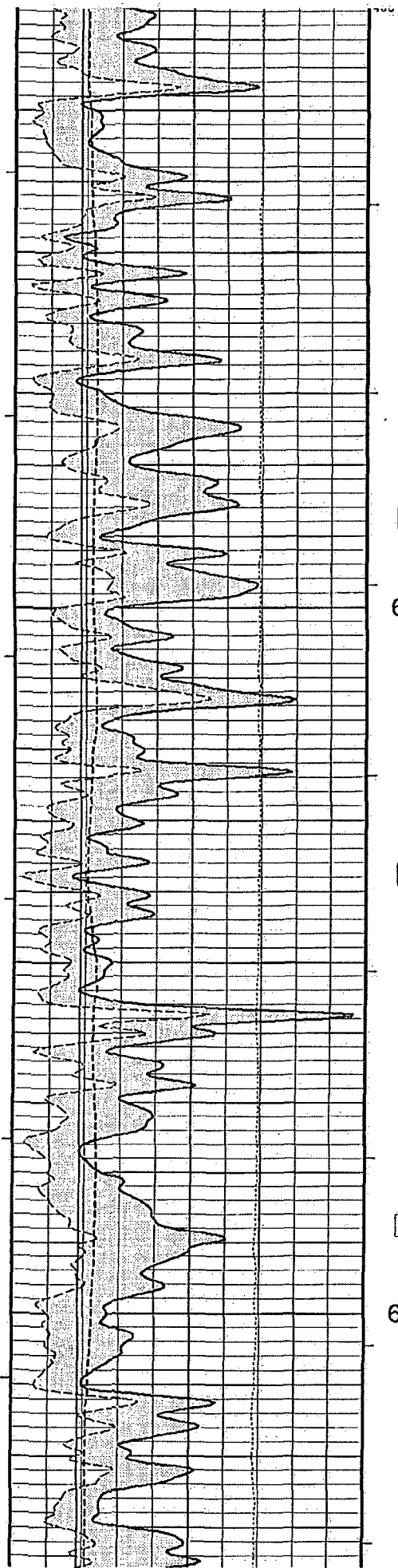
BOREHOLE SIZE AND RUGOSITY AFFECTING LOG QUALITY.

BOREHOLE RECORD

Last Edited: 09-APR-2011 02:11

Bit Size inches	Depth From feet	Depth To feet
12.250	0.00	1670.00
7.875	1670.00	7352.00





109°

6250

110°

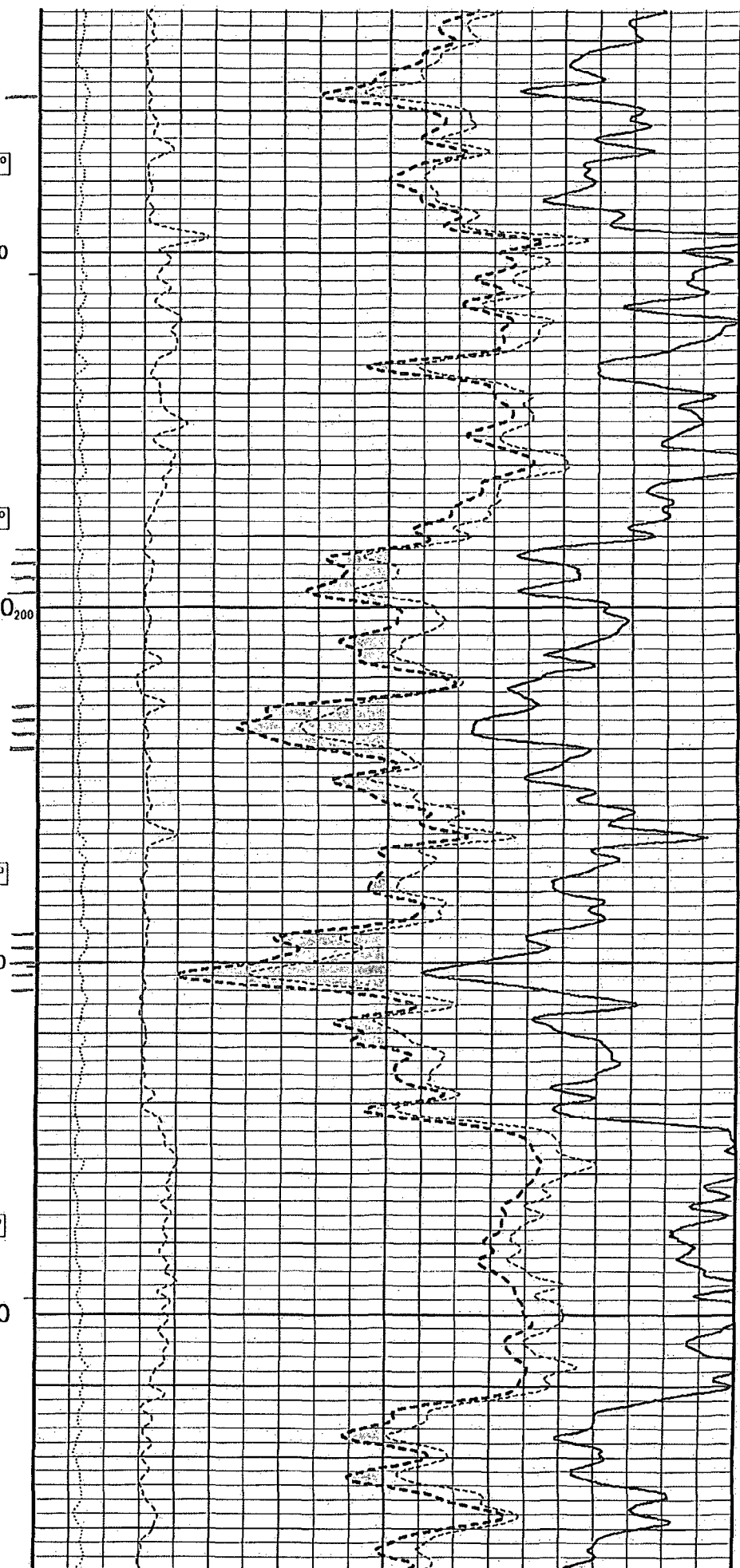
6300₂₀₀

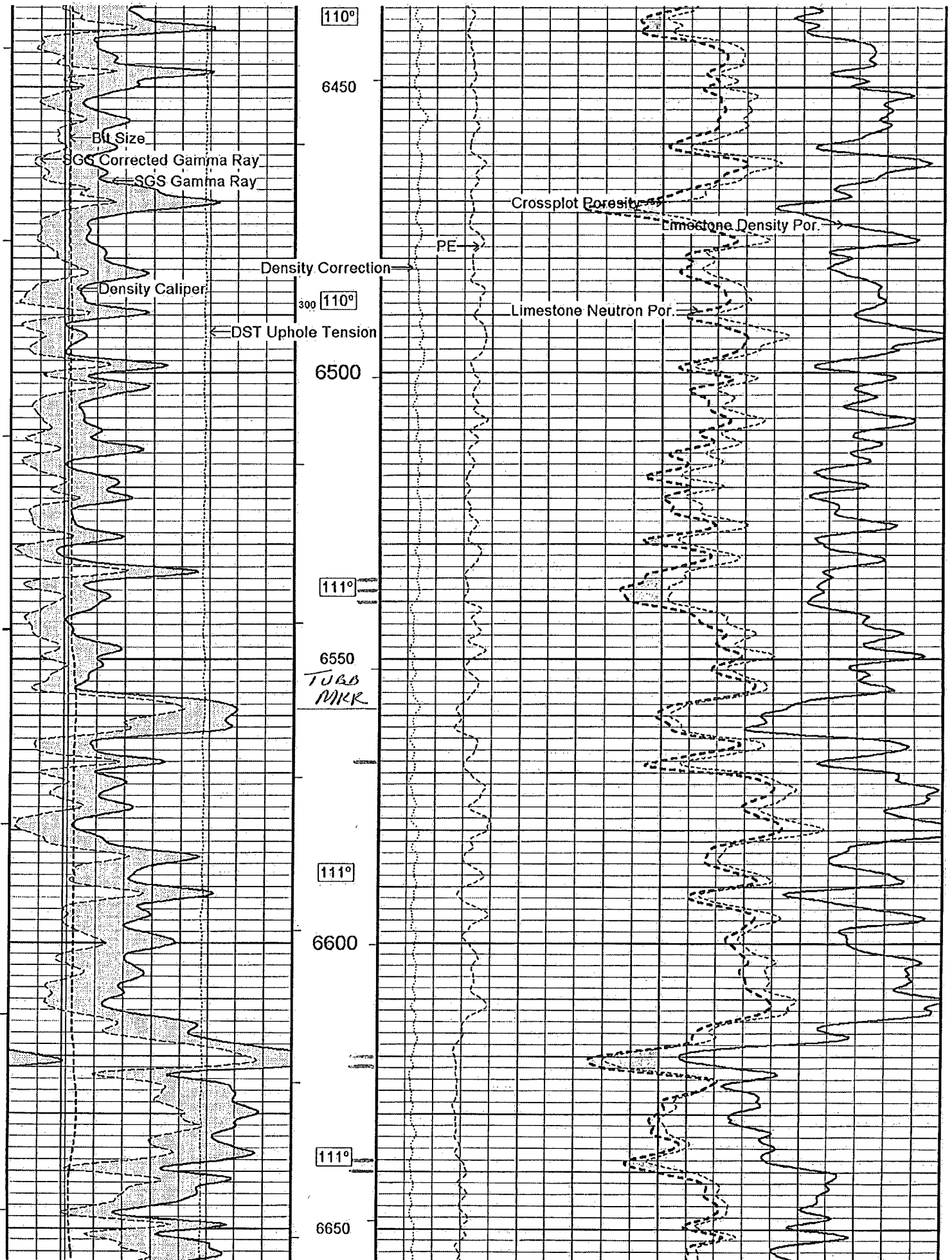
110°

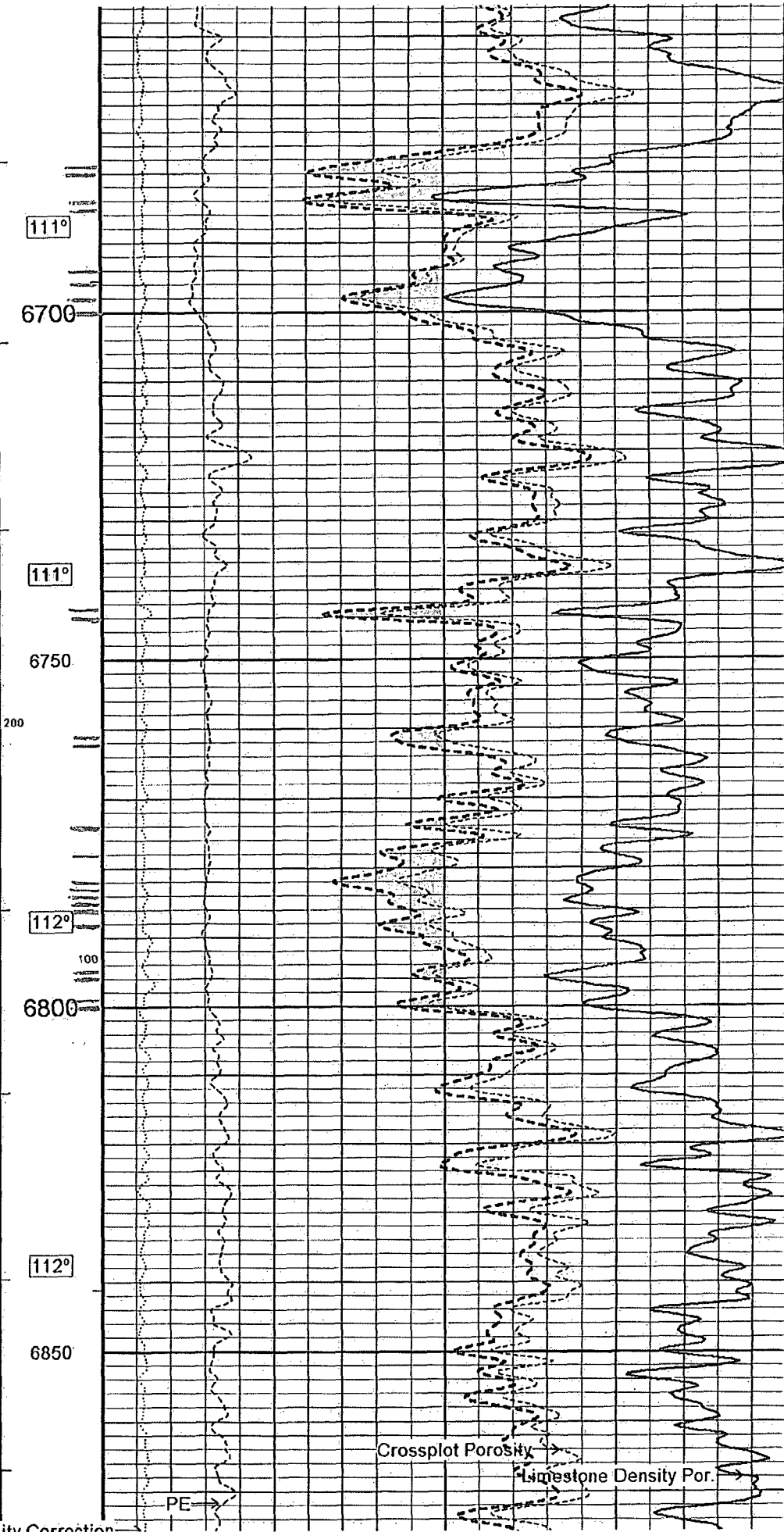
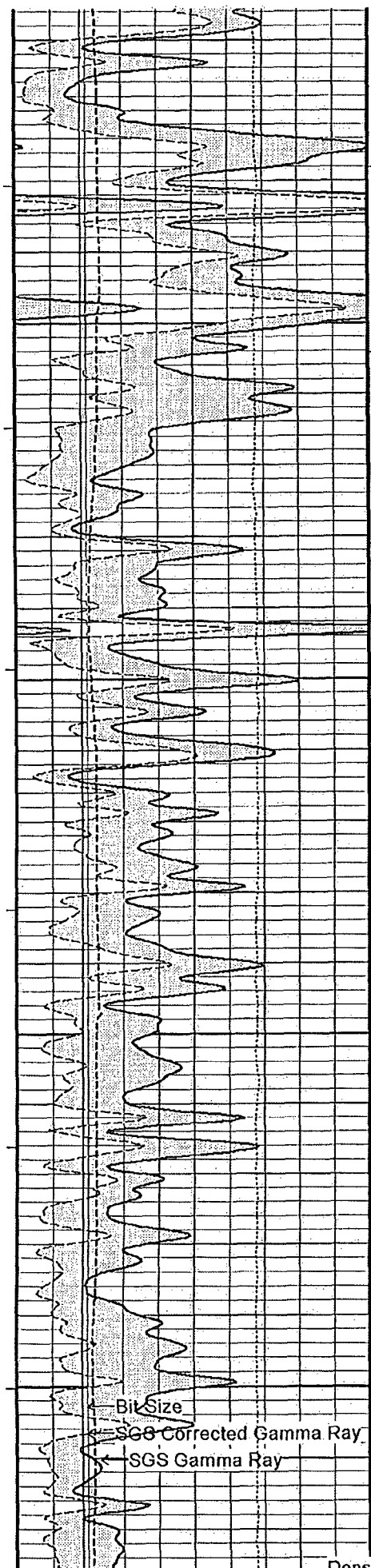
6350

110°

6400







111°

6700

111°

6750

200

112°

100

6800

112°

6850

Bit Size

SGS Corrected Gamma Ray

SGS Gamma Ray

Density Correction

PE

Crossplot Porosity

Limestone Density Por.

