

Order Number

456

API Number

30-025-39969

Operator

Apache Corporation

County

Lea

Order Date

4-26-11

Well Name

Magnolia

Number

4

Location

D

UL

11

Sec

20S

T (+Dir)

38E

R (+Dir)

Oil %

30%

Gas %

36%

Pool 1

33230

House Blinberry

Pool 2

78760

House Tobb

Pool 3

33250

House Drinkard

Pool 4

Wtr
45%

14%

41%

Comments:

Posted in RBOMS 4-26-11 BJA

DOWNHOLE COMMINGLE CALCULATIONS:

OPERATOR: Apache Corporation

30-025-39969

DHC-HOB-456

PROPERTY NAME: Maaralia

WNULSTR: 4-D-11-205-38E

SECTION I:

POOL NO. 1 House Blinebry

ALLOWABLE AMOUNT

142 284 MCF

POOL NO. 2 House Tubb

142 284 MCF

POOL NO. 3 House Drinkard

142 284 MCF

POOL NO. 4 _____

MCF

POOL TOTALS 426 852

SECTION II:

POOL NO. 1 House Blinebry

Oil
30%

Gas

36%

POOL NO. 2 House Tubb

9%

19%

POOL NO. 3 House Drinkard

$61\% \times 426 = 259.86$

45%

<260>

POOL NO. 4 _____

OIL

GAS

SECTION III:

$61\% \div 142 = 232.786$

<233>

SECTION IV:

$30\% \times 233 = 69.9$

<70>

$9\% \times 233 = 20.97$

<21>

$61\% \times 233 = 142.13$

<142>

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

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

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WELL API NO. 30-025-39969
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Magnolia
8. Well Number 004
9. OGRID Number 873
10. Pool name or Wildcat House;Blinebry/House;Tubb/House;Drinkard
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3585' GL

SUNDY 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 D : 990 feet from the North line and 330 feet from the West line
Section 11 Township 20S Range 38E NMPM County Lea

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
House; Tubb
House; Drinkard

33230
78760
33250

Perforations:

Blinebry 6052'-6372'
Tubb 6668'-6829'
Drinkard 6960'-7114'

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	9%	19%	14%
Drinkard	61%	45%	41%

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

Spud Date:

03/20/2011

Rig Release Date:

DHC- HOB- 0456

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):

✓

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State of New Mexico

Energy, Minerals & Natural Resources Department

CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-39969	² Pool Code 33230	³ Pool Name House; Blinebry
⁴ Property Code 36908	⁵ Property Name Magnolia	⁶ Well Number 004
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705	⁹ Elevation 3585' GL

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	20S	38E	990		North	330	West	Lea

¹¹ 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

¹² Dedicated Acres 40	¹³ 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 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>Reesa Holland</u> 04/20/2011 Signature Date Reesa Holland Printed Name
				¹⁸ 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. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

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State of New Mexico

Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

Form C-102

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-39969	² Pool Code 78760	³ Pool Name House; Tubb
⁴ Property Code 36908	⁵ Property Name Magnolia	⁶ Well Number 004
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705	⁹ Elevation 3585' GL

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	20S	38E		990	North	330	West	Lea

¹¹ Bottom Hole Location If Different From Surface

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¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
-------------------------------------	-------------------------------	----------------------------------	-------------------------

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				¹⁸ SURVEYOR CERTIFICATION <i>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.</i> Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-39969	² Pool Code 33250	³ Pool Name House; Drinkard
⁴ Property Code 36908	⁵ Property Name Magnolia	⁶ Well Number 004
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705	⁹ Elevation 3585' GL

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	20S	38E	990		North	330	West	Lea

¹¹ 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

¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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 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 hereafter entered by the division. <u>Reesa Holland</u> 04/20/2011 Signature Date Reesa Holland Printed Name
¹⁸ 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.				
Date of Survey Signature and Seal of Professional Surveyor:				
Certificate Number				



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April 20, 2011

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

RE: Application for Exception to Rule 303-C – Downhole Commingling
Magnolia #4 API 30-025-39969
Unit D, 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.

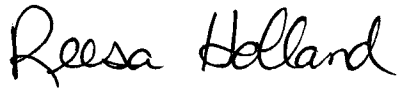
The allocation method used for this well was determined by analyzing the cumulative oil, gas and water production in a nine section area of review surrounding this well. Supporting documentation is shown on the attached spreadsheet. Production for active and inactive wells was grouped by pool in the 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)		
				Blinbry	Tubb	Drinkard	Blinbry	Tubb	Drinkard	Blinbry	Tubb	Drinkard
L D JONES	1	3002507722	1H 20S 38E SE NE	3476			186180			5043		
PHILLIPS HOUSE STATE	1	3002507725	2O 20S 38E			101875			481125			25440
STATE U	1	3002507727	2P 20S 38E			157611			97687			184324
ARNOLD A	1	3002507761	11F 20S 38E	1083	29526	670	3502	1366318		7287	5113	
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	2664	114	37126
BLANKENSHIP	3	3002507768	12M 20S 38E NE SW SW	5854	8772	39616	33275	47735	2435461	5515	15611	22235
CONE A	1	3002507770	12F 20S 38E		17024	206476		66408	237771		56554	84069
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 NW NW NE		9411	57149		43514	687081			11360
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	1012	9634	250	9593	130756	1129	1344	579	392
HOUSE	1	3002531006	13D 20S 38E NW NW	33222	237	36878	797827	9721	515800	15436		13278
SHARPS	1	3002534060	13M 20S 38E	38765			201447			43892		
SHARPS	2	3002534061	13N 20S 38E	32715			137967			31041		
JOE CAMEL	1	3002534160	13K 20S 38E	37585	266	479	65646	842	1017	69606		
BULL DURHAM	1	3002534187	14P 20S 38E S2 SE SE	46608	7901		1074151			41453	10425	
JOE CAMEL	2	3002534211	13F 20S 38E SW SE NW	18701	1994		64642	4135		40124	641	
DIAMONDBACK	1	3002534274	14J 20S 38E NW SE	30174			200317			41288		
PEARL	1	3002534275	13J 20S 38E NW SE	11460			36015			28083		
LUCKY STRIKE	1	3002534285	14I 20S 38E NE SE	79179			1061191			68515		
CAPPS FEDERAL	2	3002534289	13O 20S 38E SW SE	35684	6531		146069	41526		35634	9619	
BULL DURHAM	2	3002534363	14O 20S 38E SW SE	36202	199		324319	1526	830	57089		
CHESTERFIELD	1	3002534420	14H 20S 38E SE NE	26730	266	597	741277	63546	7193	36636		
BUGLER	1	3002534506	13L 20S 38E NW NW SW	74262	686		431112	101915		43652	628	
MOONEY	1	3002534569	13I 20S 38E NE SE			21755			31595			96197
PAIGE	1	3002534570	13P 20S 38E SE SE	7377		18743	14939		28741	18042		26466
VICEROY	1	3002534625	13E 20S 38E SW NW	31151			525962			75010		
PALL MALL	1	3002534634	14A 20S 38E NE NE	837	334	30287	1043	18164	340270	210	661	75257
KOOL	1	3002534642	14B 20S 38E NW NE	36426	553	3318	337485	2462	3942	34888	28	255
PICAYUNE	1	3002534734	11J 20S 38E C NW SE		14361	26692	1421	69324	382613			17895
ROITAN	1	3002534735	14G 20S 38E SW NE	23698	5642		574652	131721		53256		
DRESSSEN	1	3002534857	1G 20S 38E C SW NE	2199			7175			23039		
MARLBORO	1	3002534968	14C 20S 38E S2 NE NW	1359			11766					
HOWSER	1	3002534970	1J 20S 38E C NW SE	1371			28097			35934		
MERIT	1	3002535240	11O 20S 38E E2 SW SE		9513			597060			7380	
BEECHNUT	1	3002535241	14E 20S 38E SE SW NW	540			2239					
REDTAG	1	3002535333	2J 20S 38E NW NW SE	27129	4037	1133	73901	9920	9535	4764	2495	3351
MERIT II	1	3002535448	11G 20S 38E C SW NE	3456	16980	21816	15627	28441	151799		11887	19464
DUKES	1	3002535614	11K 20S 38E E2 NE SW		7818	32784		38544	139480		8390	26341
REDTAG	2	3002535630	2K 20S 38E NE NE SW	15566			870166			2596		
DIXIE QUEEN	1	3002536421	11P 20S 38E S2 SE SE		7394			517209				
WHITE OWL	1	3002536689	2 20S 38E NW NW NW	32868			122087			9450		
BIG KICK	1	3002536745	13C 20S 38E W2 NE NW	16121	1038	9415	235886	15060	64193	2410		2526
HESTER 12	6	3002536795	12N 20S 38E	26810	8095	12000	321996	182364	63501	28536	6751	5480
HESTER 12	4	3002536800	12O 20S 38E SW SW SE	15686	5185	4610	261423	122085	110725	42191		2688
SALEM	1	3002537316	3A 20S 38E SE NE NE	2954		8592	8535		25309	7032		3185
JOE CAMEL	3	3002538033	13F 20S 38E NW SE NW	4043	1812	1116	195465	163557	39889	6727	1828	1056
HESTER 12	8	3002538076	12K 20S 38E SW NE SW	12938	3926	3762	124569	88335	56020	9995	11277	4360
HESTER 12	5	3002538211	12P 20S 38E NW SE SE	18890	5669	11153	177646	79110	77564	38857	6211	481
HESTER 12	7	3002538369	12N 20S 38E NE SE SW	6328	7241	3148	57135	53793	32197	16097	8422	10379
MELOT	1	3002538370	11C 20S 38E SW NE NW	4895	6293	2792	45105	35080	20051	23409	22744	20737
BULL DURHAM	3	3002538379	14P 20S 38E NE SE SE	5608	7657		73748	54960		613		
BLANKENSHIP	4	3002538397	12L 20S 38E NE NW SW	2908	3129	6389	13057	21937	22245	12146	5023	3768
BLANKENSHIP	5	3002538399	12M 20S 38E SW SW SW	12393	4622	5787	42451	84653	254996	20446	4543	3409
BLANKENSHIP	6	3002538400	12L 20S 38E SW NW SW	6755	5428	1218	30669	1764	63545	8849	648	12080
KOOL	2	3002538439	14B 20S 38E SW NW NE	8123	1324	775	16436	29073		142	252	252
RHINO	2	3002538484	11N 20S 38E SE NE SW	9305	2576	5152	26295	17884				
MAGNOLIA	1	3002538660	11E 20S 38E NE SW NW	5510	5349	3981	80835	15727	16867	16978	2618	33554
DIXIE QUEEN	2	3002538661	11P 20S 38E NE SE SE	11334	3090	5222	58416	26604	52023			
HESTER 12	10	3002538662	12O 20S 38E NE SW SE	4254	446	3510	33452	9793	26121	26377	3753	9758
HESTER 12	11	3002538663	12P 20S 38E SW SE SE	1523	1408	2701	80703	80800	7794	6526	8770	5099
BIG KICK	2	3002538664	13C 20S 38E SE NE NW	8707	1462	3587	26616		69015	38655	16633	5543
HOUSE	2	3002538665	13D 20S 38E SE NW NW	4600	2050		33485	2533				
LUCKY STRIKE	2	3002538688	14I 20S 38E SW NE SE	4090	1400		26056	7285				
BUGLER	2	3002538689	13L 20S 38E SW NW SW	6726	1805		60872	23968		14204	5835	
MELOT	2	3002538700	11C 20S 38E NW NE NW	15029	4986	1960	42159	7569	22066	14693	19337	14502
HESTER 12	9	3002538791	12K 20S 38E NE NE SW	1908	1199	4536	46737	5588	5276	20019	5058	11525
MAGNOLIA	2	3002539090	11D 20S 38E NE NW NW	1741	555	4669	62616	34150	92974	15912	3409	3409
L & M	2	3002539450	2N 20S 38E	1185	849	6430	18698	23618	56095	9793	4895	17954
DIXIE QUEEN	3	3002539451	11I 20S 38E	1679	433	3303	6104	2595	6562			
CROWN	2	3002539457	13B 20S 38E	726	330	593	1579	806	974			
MELOT	3	3002539458	11B 20S 38E	1494	386	2941	6254	2658	6724	13100	2406	11228
BLANKENSHIP	7	3002539488	12E 20S 38E	169	46	368	2254	957	2422	11812	2461	10335
MAGNOLIA	3	3002539489	11E 20S 38E	1348	348	2653	22270	9465	23939	11919	2188	10217
ARNOLD A	2	3002539490	11F 20S 38E	980	247	1842	11166	4745	12004	7193	1468	6018
CONE A	2	3002539491	12F 20S 38E	936	258	2029	3332	1498	3499	4342	887	3634
PALL MALL	2	3002539530	14A 20S 38E	1284	583	1052	21181	11051	13812	7586	2363	2487
CHESTERFIELD	2	3002539573	14H 20S 38E	566	258	465	63888	33333	41666			
ARNOLD A	3	3002539636	11F 20S 38E NE SE NW	1644	411	3082	7445	3165	8005	9864	2015	8253

Lease Name	Well Number	10DIGITAPI	Location	Cum Oil (BBL)			Cum Gas (MCF)			Cum Water (BBL)		
				Blinebry	Tubb	Drinkard	Blinebry	Tubb	Drinkard	Blinebry	Tubb	Drinkard
BUGLER	3	3002539648	13L 20S 38E	386	212	508	1204	748	1301	2523	1081	1545
DIAMONDBACK	2	3002539649	14J 20S 38E NW SE	630	342	829	1209	751	1307			
DIXIE QUEEN	4	3002539650	11I 20S 38E	860	223	1693	4104	1743	4410			
L & M	3	3002539652	2N 20S 38E	457	326	2485	2705	3416	8114	2325	1125	4050
MERIT	2	3002539653	11O 20S 38E	610	196	1372	6572	3380	8824	887	268	908
REDTAG	3	3002539655	2J 20S 38E	314	370	2165	1350	3013	6026	2625	1811	4617
CHESTERFIELD	3	3002539721	14H 20S 38E	71	32	57	9202	4803	6002			
TOTALS				935,113	262,549	1,684,192	10,483,540	4,684,998	10,753,967	1,286,274	286,205	1,029,763
AVERAGES				12,468	3,919	25,518	137,941	72,077	168,031	20,746	6,360	18,723

Proposed Allocations	Oil	Gas	Water
Blinebry	30%	36%	45%
Tubb	9%	19%	14%
Drinkard	61%	45%	41%
TOTAL	100%	100%	100%



AFE No: PA- 11- 0036-C

Magnolia #4

API #: 30-025-39969

990' FNL & 330' FWL

Section 11, Township 20S, Range 38E
Lea County, New Mexico

Completion Procedure – Blinebry-Tubb-Drinkard

April 11, 2011

Recommended Procedure:

Note: 5-1/2", 17#, J-55 & L-80 csg @ 7291' w/1,495 sx cmt (circ).
(990' L-80 csg on top). Marker Joint @ 5474-5497'.

Drinkard:

1. MIRU PU. Install BOP. Pressure test csg.
2. MIRU wireline unit. Run GR/CCL/CBL log from PBTD $\pm$ 7245' to surface. Correlate to Baker Hughes Compensated Z-Densilog/Compensated Neutron/Digital Spectralog/Gamma Ray log dated 3/30/11.
3. Perforate Drinkard formation @ 6960', 6980', 6982', 7004', 7006', 7018', 7020', 7036', 7038', 7066', 7068', 7076', 7078', 7086', 7098', 7100' and 7114' w/2 spf, 120 deg phasing. Total = 34 shots.
4. RIH 2-7/8" tbg and pkr. Spot acid over perms. Set pkr @ $\pm$ 6860'.
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 perms 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 and 20,000# 20/40 SLC resin coated sand down 5-1/2" csg @ $\pm$ 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 6668' – 6829' during Drinkard frac flush.
10. RIH and set composite plug above the Drinkard interval @ $\pm$ 6900'. Pressure test CBP to 3000 psi.

Tubb:

1. Perforate Tubb formation @ 6668-6674', 6684-6686', 6718-6720', 6738-6740', 6756-6758', 6770-6772', 6774-6776', 6780-6782', 6812-6814', 6820-6822' and 6827-6829' w/1 spf, 120 deg phasing. Total = 37 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 and 20,000# 20/40 SLC resin coated sand 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' – 6372' during Tubb frac flush.

Picayune #2

5. RIH and set composite plug above the Tubb interval @ +/- 6600'. Pressure test CBP to 3000 psi.

Blinebry:

1. Perforate Blinebry formation @ 6052', 6054', 6056', 6058', 6060', 6104', 6106', 6108', 6116', 6118', 6142', 6144', 6146', 6190', 6192', 6198', 6200', 6256', 6258', 6288', 6290', 6292', 6294', 6302', 6304', 6316', 6318', 6350', 6352', 6354', 6370' and 6372' w/1 spf, 120 deg phasing. Total 32 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 and 40,000# 20/40 SLC resin coated sand 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 @ +/-7150'. RIH w/1-1/2" pump & rods.
6. Hook up 640 PU.
7. Place well on test.



Baker Atlas

COMPENSATED Z-DENSILOGSM
COMPENSATED NEUTRON LOG
DIGITAL SPECTRALOG[®]
GAMMA RAY LOG

FILE NO: MD8774	COMPANY WELL FIELD COUNTY	APACHE CORPORATION MAGNOLIA #4 DRINKARD LEA	STATE NEW MEXICO
API NO: 30-025-39969			
Ver. 3.87 FINAL PRINT	LOCATION: 990' FWL & 330' FWL	OTHER SERVICES DIL/MIL DAL	
	SEC 11	TWP 20S	RGE 38E
PERMANENT DATUM LOG MEASURED FROM DRILL MEAS. FROM	GL KB ELEVATION 11 FT ABOVE P.D.	ELEVATIONS: KB 3596 FT DF 3595 FT GL 3585 FT	
DATE	TRIP	30-MAR-2011	
SERVICE ORDER	1	1	
DEPTH DRILLER	600532		
DEPTH LOGGER	7291 FT		
BOTTOM LOGGED INTERVAL	7294 FT		
TOP LOGGED INTERVAL	7220 FT		
CASING DRILLER	200 FT		
CASING LOGGER	8.625 IN	1223 FT	
BIT SIZE	7.875 IN		
TYPE OF FLUID IN HOLE	BRINE		
DENSITY	10.10 LB/G	32 S	
PH	10	11.5 C3	
SOURCE OF SAMPLE	CIRCULATION TANK		
RM AT MEAS. TEMP.	.04 OHMM	72 DEGF	
RMF AT MEAS. TEMP.	.04 OHMM	72 DEGF	
RMC AT MEAS. TEMP.	—	—	
SOURCE OF RMF	RMC	MEASURED	—
RM AT BHT	.034 OHMM	112 DEGF	
TIME SINCE CIRCULATION	7 HOURS		
MAX. RECORDED TEMP.	112 DEGF		
EQUIP. NO.	LOCATION		
RECORDED BY	B. TELLER	MIDLAND	
WITNESSED BY	L. HICKS		

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT. BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

BOREHOLE RECORD		
BIT SIZE	FROM	TO
12.25 IN	0 FT	1140 FT
7.875 IN	1140 FT	7291 FT

CASING RECORD				
SIZE	WEIGHT	GRADE	FROM	TO
8.625 IN			0 FT	1140 FT
5.5 IN			0 FT	7291 FT

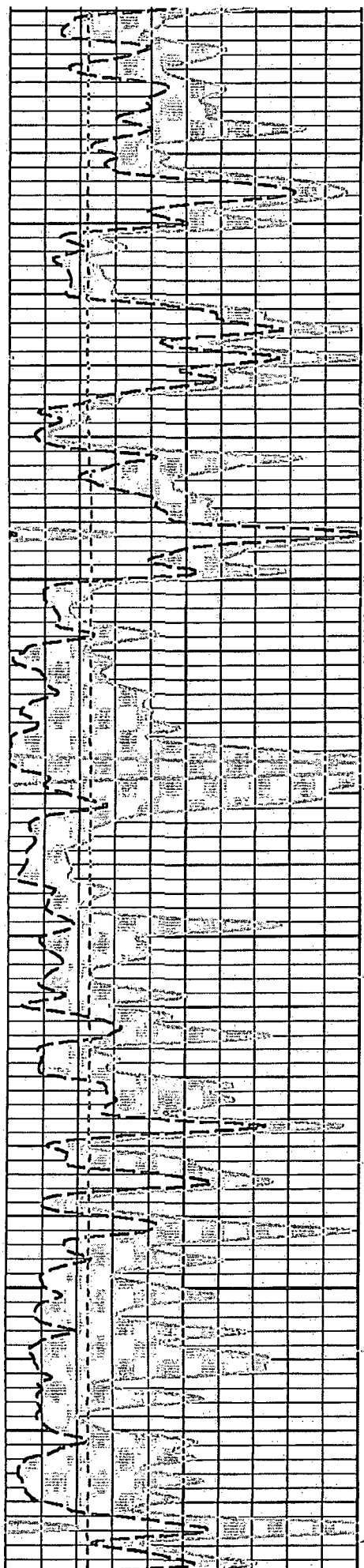
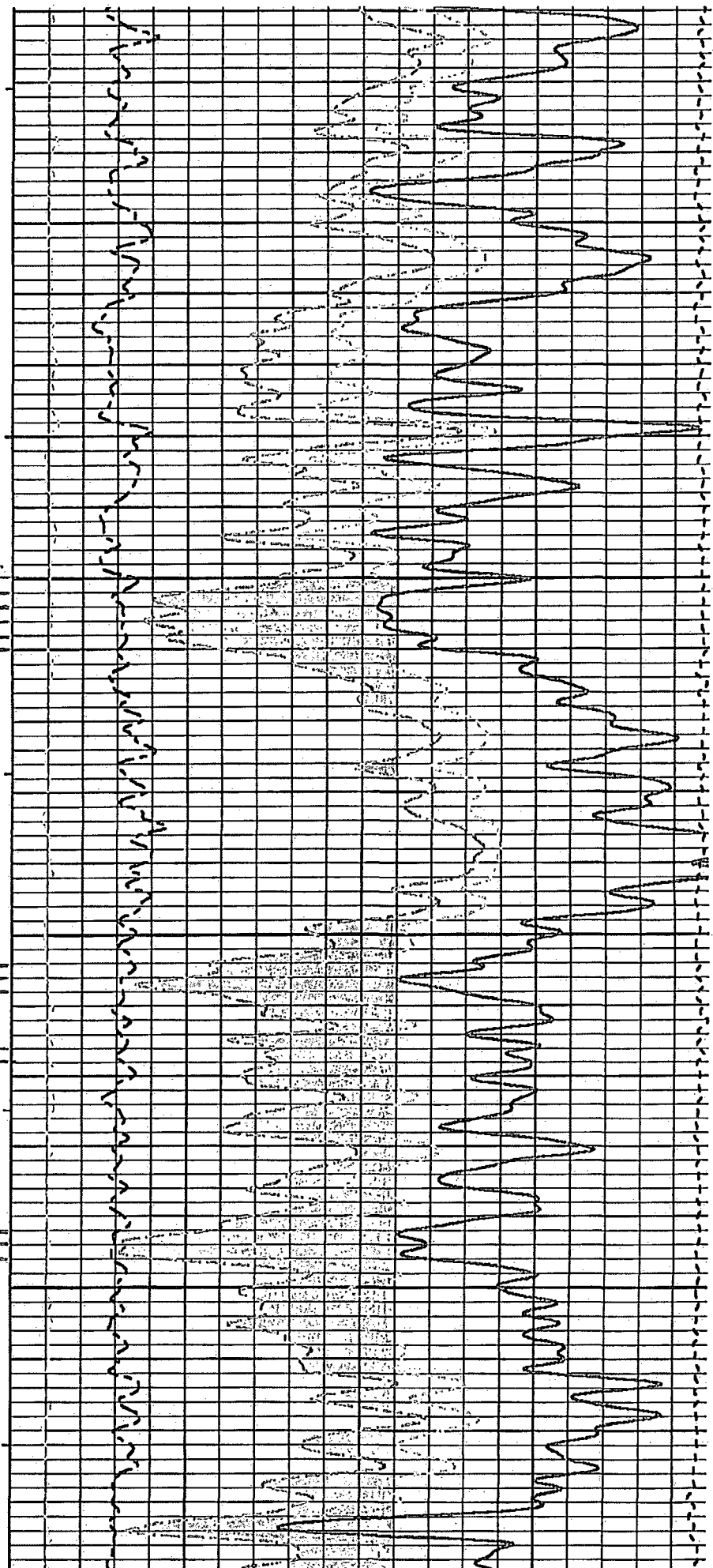
REMARKS

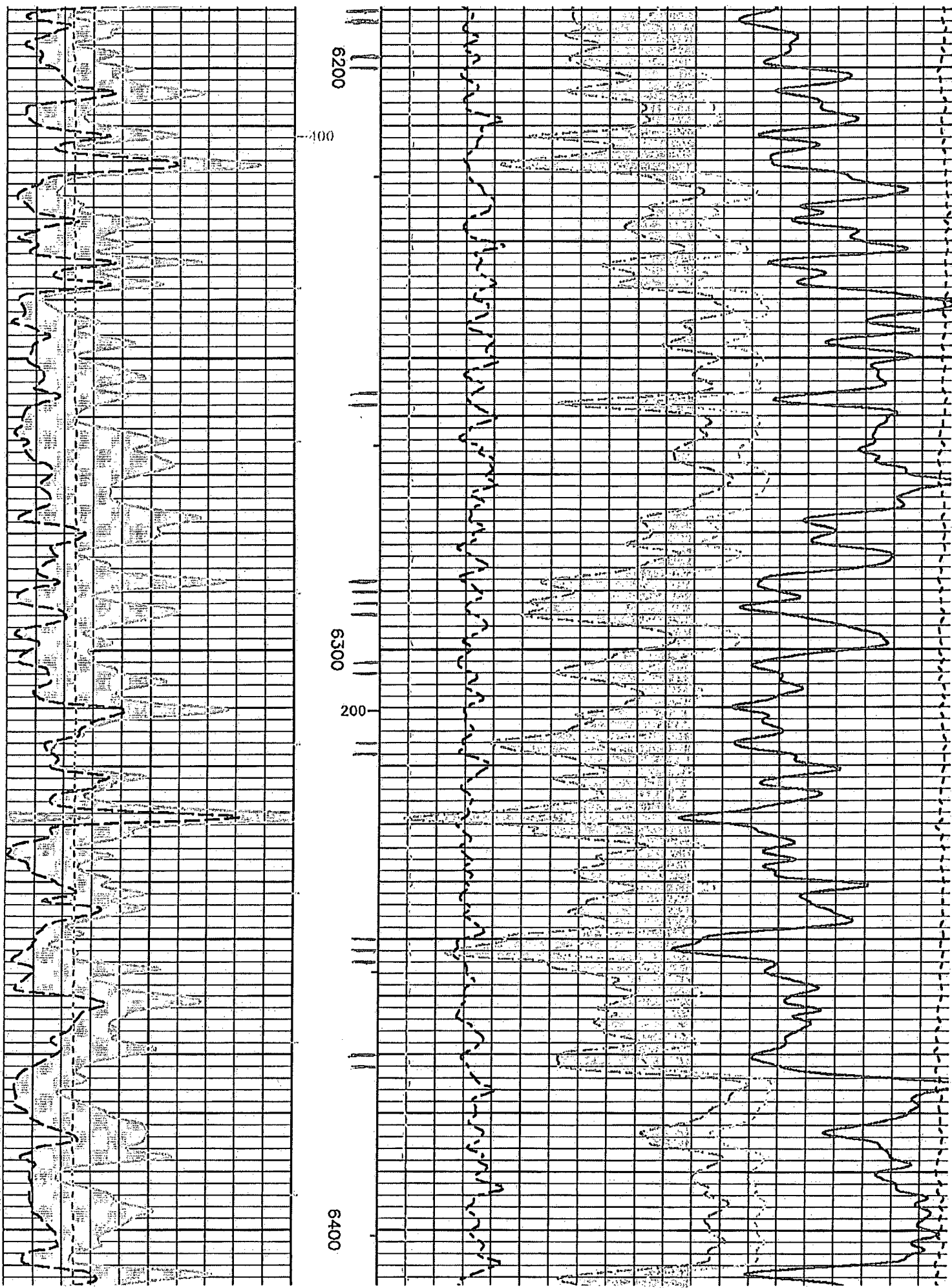
RUN 1 TRIP 1: NACL: 242945 PPM
CL: 147687 PPM

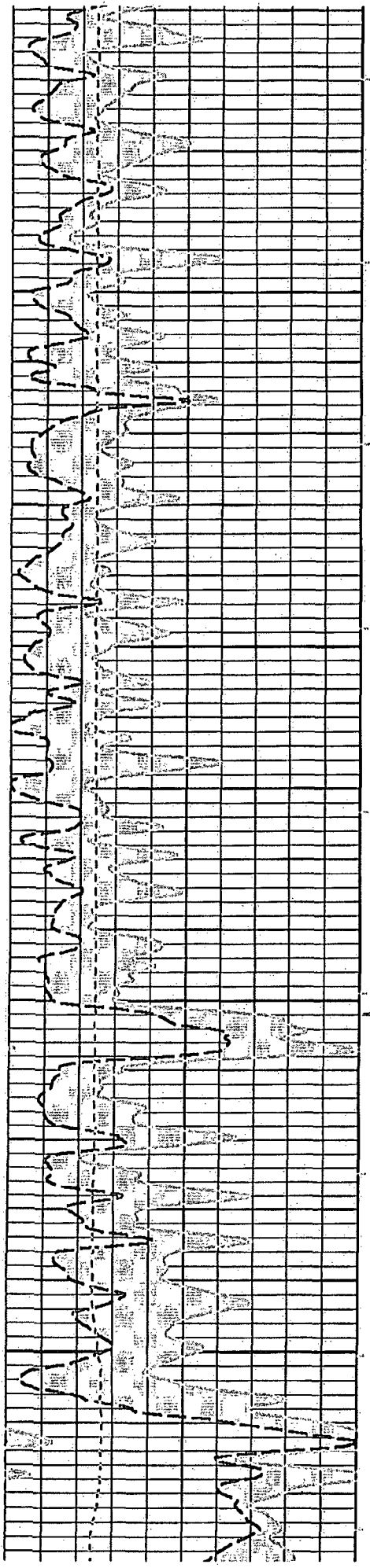
BOREHOLE & CEMENT VOLUMES PRESENTED (TOTAL VOLUME LESS 5.5 CSG.)
1 SMALL TICK = 10 CU. FT.
1 MEDIUM TICK = 100 CU. FT.
1 LARGE TICK = 1000 CU. FT.

PORZC & CNC RECORDED ON A LIMESTONE MATRIX
CNC IS CASING AND CALIPER CORRECTED

CREW: S. MCALPINE / J. MOSLEY / R. PATEL
RIG: CAPSTAR 20





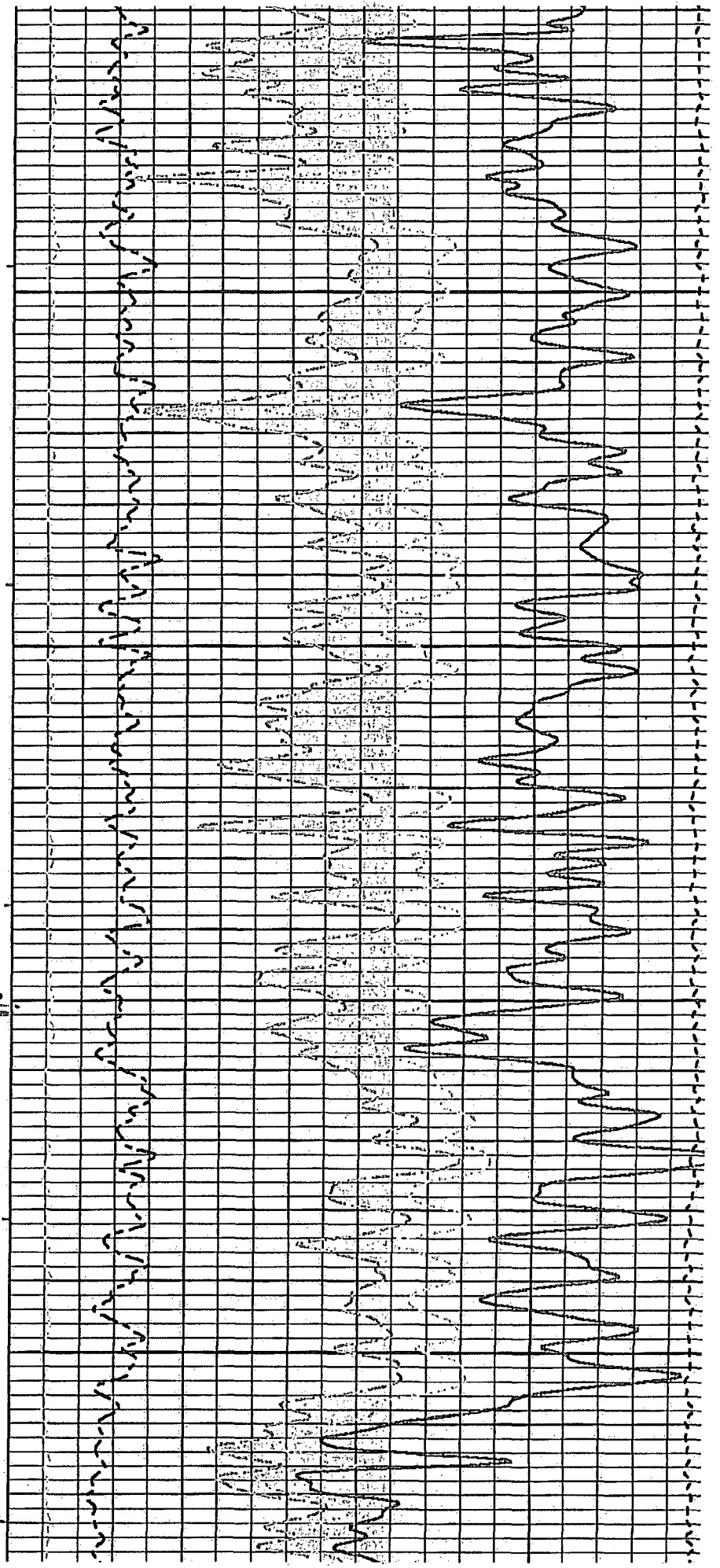


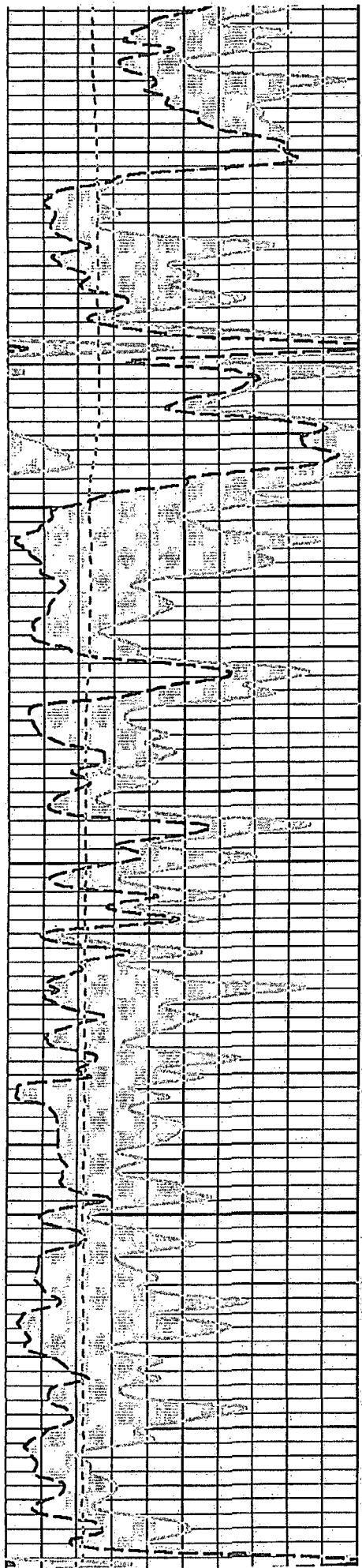
300

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TUBB
MKR

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6700

200

6800

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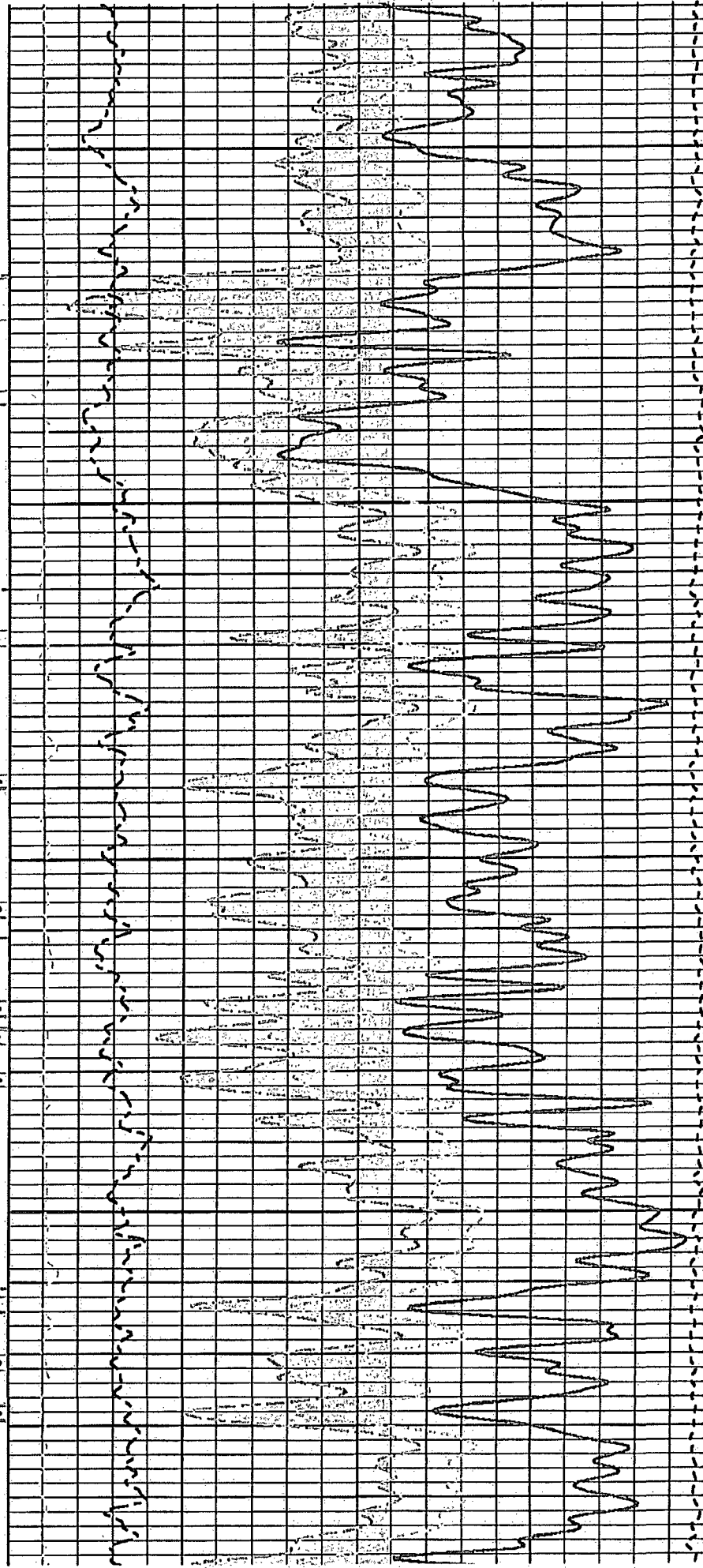
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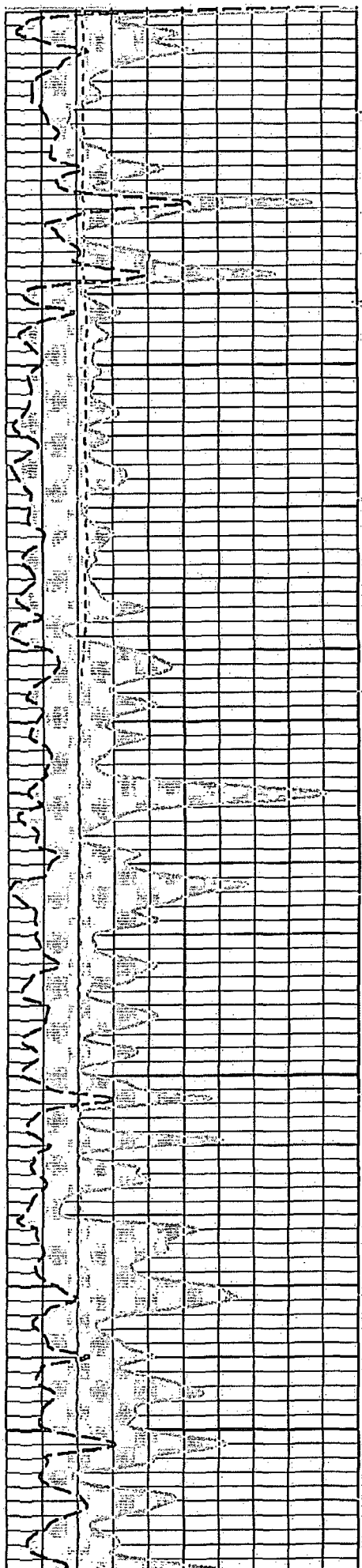
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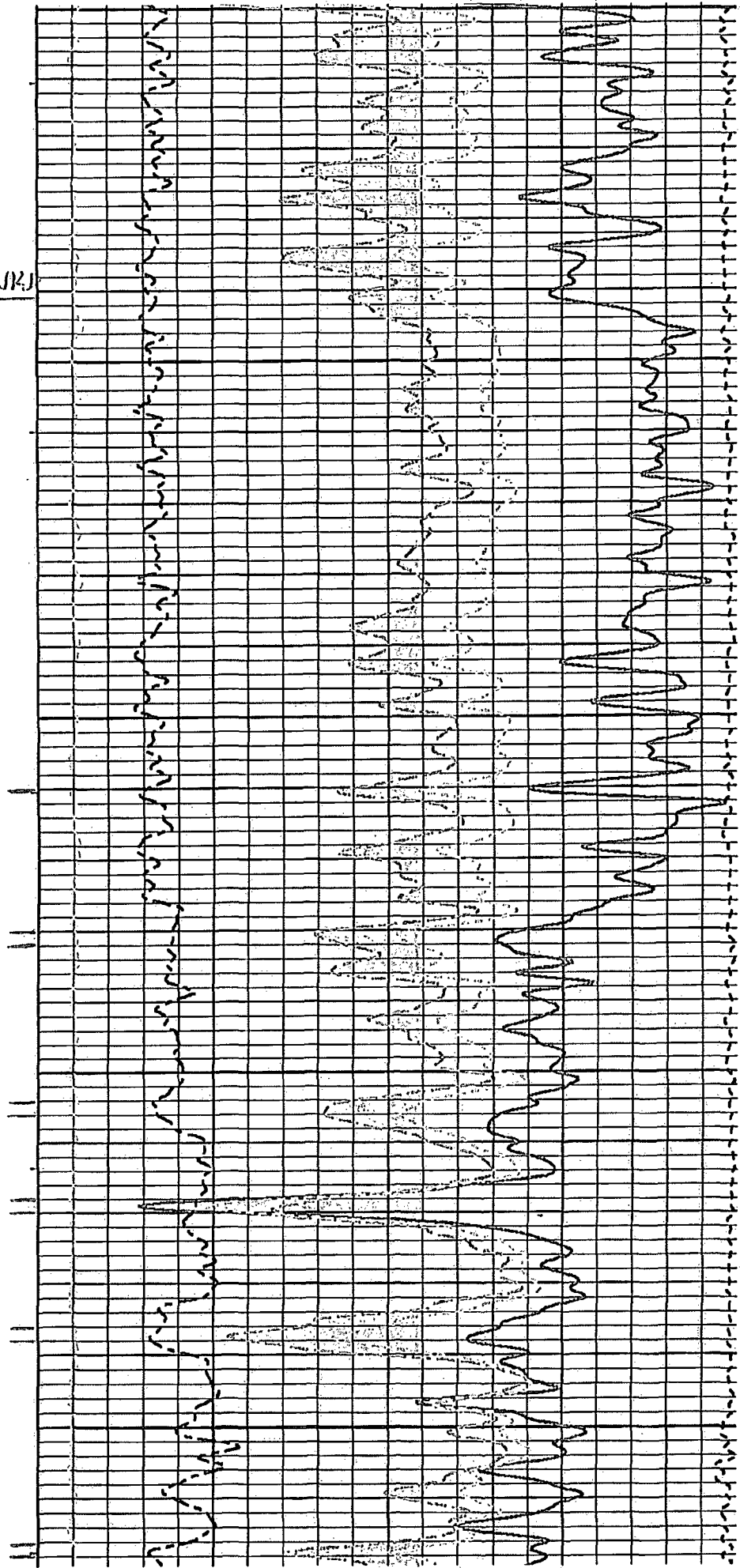


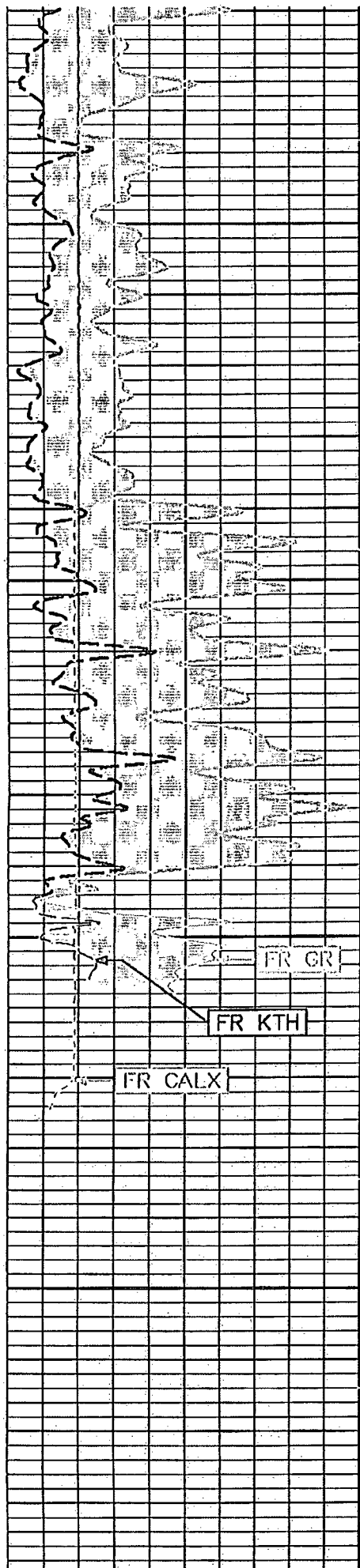


DRNKJ

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7100

Abo

Abo Dol

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