

MAGNETIC DIRECTIONAL SURVEY  
FOR

13241186048

**SOUTH HOBBS UNIT #213**

LEA COUNTY, NEW MEXICO

21/10/86

G. MOODY

# THE RADIUS OF CURVATURE

CALCULATED USING PROPOSAL OF S 40-6 E

0'-3003' MAGNETIC MULTI SHOT  
BY SCIENTIFIC DRILLING INT'L.  
3003'-4339' SURVEY BY DATADRILL  
ALL ANGLES IN MINUTES

\*\*\*\*\*  
 \* THIS SURVEY IS CORRECT TO THE BEST OF MY \*  
 \* KNOWLEDGE AND IS SUPPORTED BY ACTUAL FIELD DATA. \*  
 \*  
 \* *Edward M. Ford* \*  
 \* \*\*\*\*\* \*  
 \* COMPANY REPRESENTATIVE \*  
 \*  
 \* \*\*\*\*\* \*

**RECEIVED**

**DEC 17 1986**

**OCD  
HOBBS OFFICE**

SCIENTIFIC DRILLING INT'L.  
MIDLAND, TEXAS

JOB NUMBER: 132H1186048

DATE: 11/10/86

## JMPH SURVEY

BY

## THE RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100
100.00	100.00	.47	.65	0-45 S	84- 0 E	.07 S .65 E	.75
191.00	190.99	.88	1.19	0-45 N	45- 0 E	.32 N 1.74 E	.71
283.00	282.98	1.16	1.41	1- 0 N	78- 0 E	.98 N 2.96 E	.60
374.00	373.97	1.43	1.19	0-30 N	49- 0 E	1.50 N 4.01 E	.67
466.00	465.97	1.40	.80	0-30 N	46- 0 E	2.05 N 4.60 E	.03
557.00	556.97	1.82	.59	0-15 S	15- 0 W	1.82 N 4.98 E	.80
649.00	648.96	2.32	.60	0-30 S	34- 0 E	1.25 N 5.08 E	.42
740.00	739.96	2.77	.79	0-30 S	56- 0 W	.55 N 4.94 E	.78
832.00	831.96	3.32	.80	0-30 S	76- 0 E	.08 S 5.05 E	.99
923.00	922.95	3.40	.59	0-15 N	13- 0 E	.20 N 5.51 E	.62
1015.00	1014.95	3.17	.40	0-15 N	18- 0 E	.58 N 5.61 E	.02
1106.00	1105.95	2.99	.40	0-15 N	26- 0 E	.95 N 5.76 E	.04
1198.00	1197.95	2.90	.20	0- 0	N / A	1.13 N 5.85 E	.27
1289.00	1288.95	2.90	.00	0- 0	N / A	1.13 N 5.85 E	.00
1381.00	1380.95	2.90	.00	0- 0	N / A	1.13 N 5.85 E	.00

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SCIENTIFIC DRILLING INT'L.  
MIDLAND, TEXAS

JOB NUMBER: 13201186048

DATE: 11/10/86

## TAPRO SURVEY

BY

## THE RADIIUS OF CURVATURE

HEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEG.	INC D	BEARING D	COORDINATES LATITUDE	DEPARTURE	D-LEG PER 100
1472.00	1471.95	3.10	.40	0-30	S 20- 0 W	.76 N	5.72 E	.55
1533.00	1532.95	3.30	.40	0-15	S 19- 0 W	.39 N	5.58 E	.41
1600.00	1599.95	3.33	.29	0-15	S 71- 0 W	.19 N	5.38 E	.33
1631.00	1630.95	3.26	.20	0-30	S 67- 0 W	.11 N	5.19 E	.81
1722.00	1721.94	3.26	.79	0-30	S 33- 0 W	.39 S	4.59 E	.32
1814.00	1813.94	3.42	1.01	0-15	S 48- 0 W	1.15 S	3.94 E	.32
1905.00	1904.93	3.01	.99	0-30	N 77- 0 W	1.39 S	3.02 E	.68
1997.00	1996.90	3.45	2.41	2-30	S 30- 0 E	2.92 S	1.89 E	3.11
2088.00	2087.67	9.77	6.35	5-30	S 47- 0 E	7.87 S	5.82 E	3.51
2180.00	2179.20	18.88	9.22	6- 0	S 51- 0 E	13.92 S	12.78 E	.70
2271.00	2269.52	29.75	11.09	8- 0	S 52- 0 E	20.82 S	21.46 E	2.20
2363.00	2360.48	43.17	13.80	9-15	S 55- 0 E	29.03 S	32.55 E	1.44
2454.00	2450.09	58.44	15.80	10-45	S 55- 0 E	38.09 S	45.49 E	1.65
2546.00	2540.28	75.89	18.15	12- 0	S 57- 0 E	48.24 S	60.53 E	1.42
2637.00	2629.17	94.28	19.50	12-45	S 62- 0 E	58.13 S	77.33 E	1.44

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MIDLAND, TEXAS

JOB NUMBER: 13201186048

DATE: 11/10/86

## THRUN SURVEY

BY

## THE RADIUS OF CURVATURE

NLAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING		COORDINATES		D-LEG PER 100					
					D	M	LATITUDE	DEPARTURE						
2729.00	2718.81	113.55	20.70	13-15	S	61-	0	E	68.00	S	95.52	E	.60	
2820.00	2807.43	132.98	20.67	13-	0	S	59-	0	E	78.34	S	113.41	E	.57
2912.00	2897.07	152.67	20.70	13-	0	S	57-	0	E	89.30	S	130.96	E	.49
3003.00	2985.79	171.97	20.28	12-45	S	59-	0	E	100.05	S	148.16	E	.56	
3037.00	3018.95	179.09	7.50	12-45	S	58-	0	E	103.97	S	154.56	E	.65	
3130.00	3109.83	198.57	19.73	11-45	S	34-	0	E	117.58	S	168.65	E	5.54	
3223.00	3200.84	217.36	19.14	12-	0	S	25-	0	E	134.22	S	178.06	E	2.01
3316.00	3291.81	236.03	19.34	12-	0	S	25-	0	E	151.74	S	186.23	E	.00
3409.00	3382.82	254.51	19.14	11-45	S	25-	0	E	169.08	S	194.32	E	.27	
3502.00	3473.95	272.37	18.54	11-15	S	24-	0	E	185.96	S	202.01	E	.58	
3595.00	3565.20	289.42	17.94	11-	0	S	20-	0	E	202.52	S	208.73	E	.87
3608.00	3656.49	306.03	17.75	11-	0	S	19-	0	E	219.32	S	214.65	E	.21
3781.00	3747.75	322.82	17.94	11-15	S	20-	0	E	236.23	S	220.64	E	.34	
3874.00	3838.92	340.30	18.34	11-30	S	25-	0	E	253.17	S	227.66	E	1.09	
3967.00	3930.09	358.34	18.34	11-15	S	35-	0	E	269.01	S	236.82	E	2.14	

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MIDLAND, TEXAS

JOB NUMBER: 132M1186048

DATE: 11/10/86

## JNRUN SURVEY

BY

## THE RADIUS OF CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	HEADING D	COORDINATES LATITUDE	DEPARTURE	D-LEG PER 100
4060.00	4021.30	376.41	18.14	11-15	S 35- 0 E	263.90 S	247.23 E	.00
4153.00	4112.48	374.66	18.34	11-30	S 34- 0 E	299.01 S	257.62 E	.34
4246.00	4203.44	413.89	19.34	12-30	S 34- 0 E	315.04 S	268.43 E	1.08
4339.00	4294.15	434.28	20.52	13- 0 S	33- 0 E	332.16 S	277.76 E	.59
4345.00	4300.00	435.62	1.35	13- 0 S	33- 0 E	333.29 S	280.49 E	.00

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THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF

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4345.00 FEET EQUALS 435.61 FEET AT S 40- 5 E.

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**OCD  
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SCIENTIFIC DRILLING CONTROLS

SURVEY CERTIFICATION

COMPANY Amoco Production Co. WELL NAME & NO. South Hobbs Unit #218  
DATE of CERTIFICATION 11/21/86 LOCATION Lea County, N.M.  
TYPE of SURVEY Magnetic Multi Shot FROM 00.00' TO 3003'  
JOB NUMEER 132M1186 TICKET NUMBER \_\_\_\_\_

THE ABOVE SURVEY WAS PERFORMED BY ME ON 11/10/86 & 11/13/86 19\_\_\_\_\_  
THE RESULTS OBTAINED FROM ACTUAL FIELD DATA CONFORM TO ESTABLISHED  
STANDARDS AND ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

Long M. ...  
SURVEYOR

FILM TRANSFER RECEIPT

I HEREBY ACKNOWLEDGE RECEIPT OF ORIGINAL FILM OBTAINED ON THE ABOVE  
SURVEY.

\_\_\_\_\_  
DATE RECEIVED 19\_\_\_\_

\_\_\_\_\_  
COMPANY REPRESENTATIVE

SURVEY CONFIRMATION

I HAVE EXAMINED THE ABOVE SURVEY AND FOUND THE DATA AND RESULTS  
ACCEPTABLE ACCORDING TO CURRENT SCIENTIFIC DRILLING CONTROLS STANDARDS.

...  
S.D.C. REPRESENTATIVE

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**DEC 17 1986**

**OCD  
HOBBS OFFICE**

SMITH DRILLING SYSTEMS

SURVEY CERTIFICATION

COMPANY FINCO PRODUCTIONS WELL NAME & NO. SOUTH HOPE UNIT #218  
DATE of CERTIFICATION 11/17/86 LOCATION LEA County, New Mexico  
TYPE of SURVEY MAGNETIC Multistat FROM 3003 TO 4339  
JOB NUMBER C8611046 TICKET NUMBER 5135

THE ABOVE SURVEY WAS PERFORMED BY ME ON 11/17 19 86  
THE RESULTS OBTAINED FROM ACTUAL FIELD DATA CONFORM TO ESTABLISHED STANDARDS AND ARE  
TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

[Signature]  
SURVEYOR

FILM TRANSFER RECEIPT

I HEREBY ACKNOWLEDGE RECEIPT OF ORIGINAL FILM OBTAINED ON THE ABOVE SURVEY.

DATE RECEIVED \_\_\_\_\_ 19 \_\_\_\_\_

COMPANY REPRESENTATIVE \_\_\_\_\_

SURVEY CONFIRMATION

I HAVE EXAMINED THE ABOVE SURVEY AND FOUND THE DATA AND RESULTS ACCEPTABLE ACCORDING  
TO CURRENT SMITH DRILLING SYSTEMS STANDARDS.

[Signature]  
S.D.S. REPRESENTATIVE

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NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator Amoco Production Company			Lessee South Hobbs (G-SA) Unit		Well No. 218
Unit Letter A	Section 4	Township 19 South	Range 38 East	County Lea	
Actual Footage Location of Well: 652 feet from the North line and 563 feet from the East line					
Ground Level Elev. 3617.9'	Producing Formation Grayburg - San Andres		Pool Hobbs GSA	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization


If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

NOTE: An area around the location was M-scoped & no buried pipelines were found.

BHL @ 4300.00' TVD  
333.29' SOUTH  
280.49' EAST  
OF SURFACE LOCATION

NOTE: This well to be directionally drilled. Bottom hole location will be 1000' F.N.L. and 270' F.E.L.



CERTIFICATION

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

Name John West  
Position Administrative Analyst

Company Amoco Production Company

Date September 5, 1986

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 knowledge and belief.

Date Surveyed July 11, 1986

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. JOHN W. WEST, 676  
RONALD J. EIDSON, 3239

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