

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

AMOCO PRODUCTION COMPANY
COMPANY
SOUTH HOBBS UNIT WELL NO. 178
WELL NAME
LEA COUNTY, NEW MEXICO BD2-146
LOCATION

JOB NUMBER	TYPE OF SURVE	Y
WT1184-S0109	MAGNETIC MULTI SHOT	SUF
WT1184-S0112	MAGNETIC MULTI SHOT	SUF

r survey T SURVEY MAGNETIC MULTI SHOT SURVEY

DATE 25-NOV-84 28-NOV-84 6-DEC-84

SURVEY BY GARY DeSPAIN STEVE COVINGTON TIM BURTON

MA-40133

OFFICE WEST TEXAS

RECEIVED 1984
DEC 19 1984
WORKS OFFICE

WT1184-S0112 (14687-31597) WT1184-S0109 (0-1468')BD2-146 AMOCO PRODUCTION COMPANY SOUTH HOBBS UNIT WELL NO. 178 NL SPERRY-SUN INC. MAGNETIC MULTI SHOT SURVEY SURVEYOR: TIM BURTON MAGNETIC MULTI SHOT SURVEY SURVEYOR: GARY DESPAIN MAGNETIC MULTI SHOT SURVEY SURVEYOR: STEVE COVINGTON EASTMAN WHIPSTOCK, INC. LEA COUNTY, NEW MEXICO NOVEMBER 24, 1984

MA-40133 (31597-43067)

VERTICAL SECTION CALCULATE IN PLANE F PROPERLY CONTINUED OF MIN. FOR

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

DEC 19 1984
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DEC 19 1984
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PRODUC	COMP		;			COMPL	COMPUTATION	PAGE NO.	(\
SCUTH HOBBS LEA COUNTY, N	UNIT WELL NO.	0. 178 BD2-146				TIME 11:58:27	DATE 11-DEC-84		Į.
MEASURED DEPTH	DRIFT	DRIFT DIRECTION	COURSE	TRUE VERTICAL DEPTH	VERTICAL SECTION	7	0 N U U U U U U U U U U U U U U U U U U	DOGLEG	:
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2962.	90	80	91.	2960.23	58.11	16	.12	0.43	
3054.	4 15	56	92.	3051.96	64.16	1.93	9.04		
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3881.	4 15	ŭ	92.	3875.99	130.96	ရှိ	31	0.37	
3974.		14	93.	3968.74	137.65	53	200	0.16	
4068.	4	10	94.	4062.49	144.18	88	27	0.41	
4162.	4 30	N 10 F	. 76	4156.23	150.84	124.72 N		0.53	
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HORIZONTAL PROJECTION AMOCO PRODUCTION COMPANY SOUTH HOBBS UNIT WELL NO LEA COUNTY, NEW MEXICO 178 802-146 SCALE & IN. . 20 FEET DEPTH/INDICATOR: MD ERSTHAN WHIPSTOCK, INC. 4162 3417 2779 ar San

FINAL STATION: DEPTH 4306 NO. 4299.75 TVD MORTH 136.26 EAST 69.51 CLUSURE 163.03 N 33 18 3 E

DEC 19 1984
DEC 19 OFFICE

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SURVEY CERTIFICATION SHEET

STATE OF TEXAS COUNTY OF MIDLAND

I,Gary DeSpain , in the employ o the days of Noember 24 ,1984	f Eastman Whipstock, I	Inc., did on . 19 84
conduct or supervise the taking of a Mag	metic Multi Shot	
by the method of magnetic orientation f	rom a depth of 0	survey
to 1468 feet, with recordings	of inclination and di	
being obtained at approximate intervals	of 93 f	lrection
boxing obtained at approximate intervals	OI 33	feet.
This survey was conducted at the reques for their South Hobbs Unit Well No. 178	t of Amoco Production	
	·	County,
State of New Mexico, in the	ne	field.
This data for this survey and the calcul by me according to standards and proced Whipstock, Inc. and is true and correct	ures as set forth by E	Eastman
	and lekson	Lu
D	irectional Supervisor/	Surveyor
The data for this survey has been examin	ned by me and ponfirms	s to
principles and procedures set forth by I	Eastman Whipstock, Inc	
<i>y</i>	//- //	
/ ox	1///	
		<u> </u>
Before me, the undersigned authority, or	this day some	<u></u>
Gary DeSpain , known to me to h	this day personally	appeared
subscribed to this instrument when the	be the person whose na	ime 18
subscribed to this instrument, who after	being by me duly swo	orn on
oath, states that he has knowledge of a	ll the facts stated ab	ove and
that this information is a true statemen	nt of facts therein re	cited.
Subscribed and sworn to before me on the	ls da	y of
	Notary Public in and f	Ke
	County of Midland, Tex	
(Jounty of Midiand, Tex	as
	Control of the Contro	

DEC 19 1984



SURVEY CERTIFICATION SHEET

STATE OF TEXAS COUNTY OF MIDLAND

I, STEVE COVINGTON, in the employ of Eastman Whipstock, Inc., did on
the days of NOVEMBER 28 ,1984 thru NOVEMBER 28 ,1984
conduct or supervise the taking of a MAGNETIC MULTI SHOT survey
by the method of magnetic orientation from a depth of 1468 feet
to 3159 feet, with recordings of inclination and direction
being obtained at approximate intervals of 91.7 feet.
This survey was conducted at the request of AMOCO PRODUCTION CO.
for their SOUTH HOBBS UNIT #178 LEA County,
State of NEW MEXICO, in the field
This data for this survey and the calculation were obtained and performed
by me according to standards and procedures as set forth by Restman
Whipstock, Inc. and is true and correct to the hest of my knowledge.
/Tat/ 10. \ /
/ Klan Vlin X
Directional Supervisor Surveyor
\
The data for this survey has been examined by me and confirms to
principles and procedures set forth by Eastman Whipstock, Inc.
Lany leman
Before me, the undersigned authority, on this day personally appeared
STEVE COVINGTON , known to me to be the person whose name is
subscribed to this instrument, who after being by me duly sworn on
oath, states that he has knowledge of all the facts stated above and
that this information is a true statement of facts therein recited.
the statement of facts therein recited.
Subscribed and sworn to before me on this / / The day of
DEC, 1984.
$\mathcal{L}_{\mathcal{L}}}}}}}}}}$
Lay le source
Notary Public in and for the
County of Midland, Texas
POV L STEINE

DEC 19 1984

STATE OF New M	lexico		•	•
COUNTY/PARISH OF_	Lea Co.		·	
I/We, Tim Burton				
James Rav			~	
	· · · · · · · · · · · · · · · · · · ·		•	
•				
			•	•
			Directional Surveying Dep	
Sperry-Sun Well Surveying	ng Company, did on the	day of -	- December	19.84_
	and the .	day of		19
•	and the	day of		19
respectively conduct or s dicated:			Shot Directional survey by	
	9 feet to 4300	5 feet hy	Gyroscopic/Magnetic/Orient	ed Survey
denth of	feet to	feet hy	Gyroscopic/Magnetic/Orient	ed Survey
depth of	feet to	feet by	Gyroscopic/Magnetic/Orient	ad Survey
depth of	feet to	feet by	Gyroscopic/Magnetic/Orient	ed Survey
with records of inclination	and direction of incline	ation being taken at	approximately every 92	feet.
	-		-	•
This survey was conducted	at the request of	moco Fronnefi	on Co.)
for their South	Hobbs Unit		Well No.	178
			·	
Magnetic Multi-	shot Surv	ey, <u>. Lea</u>	Coun	ty/Parish,
	•		Hobbs hat it affords a true and cor	
sentation of our findings a	s to the nature and cond	itions of the well at	the time the survey was/sur	veys were
made.			<u> </u>	
•			11	•
		1000	1 section	
			Buton	
		jun	1 June 1	
•				
				
STATE OF Texas				
COUNTY/PARISH OF	Ector			
·			•	
Before me the undersigned	authority/authorities, on	this day personally	appeared Tim Burton	
		_		
		· · · · · · · · · · · · · · · · · · ·		
by me duly sworn on oath,	states that he has/they h	ave knowledge of all	ibed to this instrument, who s the facts stated above and tha	
by me duly sworn on oath, is a true and correct staten	states that he has/they hent of the facts therein	nave knowledge of all recited.		
by me duly sworn on oath, is a true and correct staten Subscribed and sworn to be	states that he has/they hence the facts therein efore me this the11	nave knowledge of all recited.	the facts stated above and tha	t the same
by me duly sworn on oath, is a true and correct staten Subscribed and sworn to be SYI	states that he has/they hence of the facts therein efore me this the	nave knowledge of all recited.	the facts stated above and tha	t the same
s a true and correct staten Subscribed and sworn to be	states that he has/they hence of the facts therein efore me this the	nave knowledge of all recited.	the facts stated above and tha	t the same

Notary Public in and for Mctoc Co

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