The “Smith Bit Report” referenced here describes the characteristics and results of three (3) similar wells drilled in tight proximity in Canadian County Oklahoma in 2007-2008. All three wells were drilled with similar bits, in similar weather conditions, with similar surface conditions and with similar drilling characteristics. The only remarkable difference in the operation of these wells was the use of SLICKBORE54 as a drilling fluid additive!

The first record, document # QD000537, describes an 11,365 foot well drilled with standard mud formulations using SLICKBORE54 at 1% mud volume. This well was completed in 258 hours at an average drilling rate of forty-four (44) feet per hour.

The second record, document # QD000579, describes a 12,250 foot well drilled with standard mud formulations only. This well was completed in 405 hours at a drilling rate of 30 feet per hour.

The third record, document # QD000755, describes an 11,301 foot well drilled with standard mud formulations only. This well was completed in 456 hours at a drilling rate of 24 feet per hour.

SUMMARY:

•The average ROP increased dramatically with the use of SLICKBORE54, from 24 and 30 feet per hour respectively to 44 feet per hour with our product. This represents a minimum increase of 45% with SLICKBORE54!

•The difference between drilling times are notable indicating that the SLICKBORE54 additive well was completed more than 145 hours faster than the other two.

•145 hours is equivalent to over 6 days of operation. (145 hrs. ÷ 24 = 6.04 days)

•At a conservative average cost of $40,000.00 per day, SLICKBORE54 provided a cost savings of over than $230,000.00

Smith International

Standard Bit Record

Phone (800) 847-4646

Document Number: QD000537

PAGE 1 of 4

Tool Pushers: _____ Company Representatives: RON PORTER Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
QUESTAR E & P	BRONCO DRLG	53			DELORIS	1-22

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft)	/ EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NW	22	11 N	10 W	WTNG-CHCSH	11901	12200

LEGAL	RIG TYPE / DRIVE	DRILL PIPE SIZE (in)	WT (lbs/ft)	API WELL #	SPUD DATE
	LAND / KELLY			35-017-23944-00-00	11-Nov-2006

CONTRACT TYPE	RIG ELEVATION/ (ft) / WATER DEPTH (ft)	WELL CATEGORY	TOOL JOINT SIZE (in) / TYPE	UTM	LAT/LONG	UNDER SURF
DAYWORK		VERTICAL			35.41674N / 98.25099W	

FOOTAGE CONTRACT		WELL TARGET	DRILL COLLAR NO / O.D. / I.D. / LENGTH	PUMP NO 1. MAKE / MODEL / LINER	INT DATE
TO DEPTH (ft)	ONSHORE / __Tight Hole; COMPLETE Rec. / __ReEntry WELL RECORD	GAS			
		WELL TYPE: DEVELOPMENT	DRILL COLLAR NO / O.D. / I.D. / LENGTH	PUMP NO 2. MAKE / MODEL / LINER	TD DATE: 07-Dec-2006

Well Comments:

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS On Bot Hrs	ROP (ft/hr) On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (ppm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE: I O D L	BEARING: 1 2 3	REMARKS: G O R	FORMATIONS/ RUN DATE
1	12.25	HTC	GT1	6041431 / 116	14. x 3 14. x 1cj / 0.601	1500	1439	24.0	24.0	60.0		110 / 120	20.0 / 20.0		1.0	WATER / 8.80	550.00	800 / 32		1.9 / 733	3 3 WT A	E E E	IN NO TD	
	BHA:																							
	Comments: RUN 8 5/8" CSG.																							12-Nov-2006
2	7.875	HTC	HC506Z	7113536 / PDC	13. x 3 / 0.389	2051	551	34.5	10.5	52.5		60 / 60	6.0 / 10.0		1.5	GEL / 9.10	371.00	1300 / 32	5.0 / 7	3.4 / 533	2 3 BT SM	X X X	IN WT PR	14-Nov-2006
						2897	1397	45.5	21.5	65.0		60 / 90	6.0 / 10.0		.5	GEL / 8.90	371.00	1600 / 41	5.0 / 7	3.3 / 522				15-Nov-2006
						4257	2757	83.5	59.5	46.3		70 / 90	10.0 / 10.0			GEL / 9.20	371.00	1250 / 34	4.0 / 7	3.4 / 539				16-Nov-2006
						5245	3745	106.0	82.0	45.7		70 / 90	10.0 / 12.0			GEL / 9.00	371.00	1360 / 38	5.0 / 15	3.4 / 527				17-Nov-2006
						6177	4677	128.5	104.5	44.8		70 / 90	10.0 / 10.0		1.0	GEL / 9.10	371.00	1400 / 37	6.0 / 19	3.4 / 533				18-Nov-2006
						7028	5528	151.0	127.0	43.5		70 / 90	10.0 / 15.0			GEL / 9.40	371.00	1500 / 38	8.0 / 15	3.5 / 551				19-Nov-2006

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Document Number: QD000537

Tool Pushers _____ Company Representatives RON PORTER Smith Representative KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
QUESTAR E & P	BRONCO DRLG	53			DELORIS	1-22

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NW	22	11 N	10 W	WTNG-CHCSH	11901 / 12200

BIT NO. / RUN CD	BIT SIZE (inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS / On Bot Hrs	ROP (ft/hr) / On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE I O D L	BEARING 1 2 3	REMARKS G O R	FORMATIONS / RUN DATE
						7973	6473	173.5	149.5	43.3		70	15.0			GEL	371.00	1500	9.0	3.5				
												90	15.0			9.50		38	15	557				20-Nov-2006
						8298	6798	196.0	172.0	39.5		60	10.0		1.0	GEL	350.00	1500	14.0	3.0				
												75	10.0			9.50		41	8	495				21-Nov-2006
						8373	6873	205.5	181.5	37.9		60	10.0			GEL	350.00	1500	13.0	2.9				
												80	15.0			9.40		45	5	490				
BHA:																								
Comments: BHA-BIT, BS, 18-6"DC,																								22-Nov-2006
3	7.875	HTC	EP5699	5104513	15. x 3	8539	166	221.5	16.0	10.4		55	35.0			GEL	371.00	1550	14.0	2.0	2 2 WT A	E E E	IN BT PR	
				527X	0.518							70	40.0			9.50		43	4	418				24-Nov-2006
						8791	418	245.0	39.5	10.6		60	30.0			GEL	371.00	1700	14.0	2.0				
												70	45.0			9.50		47	10	418				25-Nov-2006
						8834	461	250.0	44.5	10.4		60	30.0			GEL	371.00	1700	14.0	2.0				
												70	45.0			9.40		51	11	414				
BHA:																								
Comments: BHA-BIT, BS, 18-6.5"DC, TBHA=564.54																								26-Nov-2006
4	7.875	HTC	EP5872	5094271	15. x 3	9104	270	273.5	23.5	11.5		55	30.0			GEL	371.00	1750	12.0	2.0	3 3 WT A	E E E	IN WT PR	
				527X	0.518							70	40.0			9.30		46	8	409				27-Nov-2006
						9291	457	298.0	48.0	9.5		65	40.0			GEL	371.00	1750	17.0	1.9				
												65	40.0			9.20		59	15	405				
BHA:																								
Comments: BHA=SAME																								28-Nov-2006
5	7.875	HTC	HC506ZX	7009447	13. x 6	9511	220	306.5	8.5	25.9		50	8.0			GEL	362.00	1300	20.0	0.8	3 3 BT SM	X X X	IN WT PR	
				M323	0.778							70	16.0			9.30		57	13	259				29-Nov-2006

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Document Number: QD000537

Tool Pushers

Company Representatives: RON PORTER

Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
QUESTAR E & P	BRONCO DRLG	53			DELORIS	1-22

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NW	22	11 N	10 W	WTNG-CHCSH	11901 / 12200

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS / On Bot Hrs	ROP (ft/hr) / On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg) / GEL	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE (I O D L)	BEARING (1 2 3)	REMARKS (G O R)	FORMATIONS / RUN DATE
						10172	881	330.0	32.0	27.5		60	10.0			GEL	362.00	1400	17.0	0.8				
												70	15.0			9.20		49	10	257				30-Nov-2006
						10772	1481	353.5	55.5	26.7		60	10.0			GEL	362.00	1500	17.0	0.8				
												70	15.0			9.20		54	10	257				01-Dec-2006
						11170	1879	374.0	76.0	24.7		50	15.0			GEL	362.00	1500	17.0	0.8				
												70	18.0			9.20		54	10	257				02-Dec-2006
						11430	2139	392.5	94.5	22.6		50	10.0			GEL	362.00	1500	16.0	0.8				
												60	18.0			9.20		53	12	257				
BHA:																								
Comments:																								03-Dec-2006
6	7.875	HTC	EP5705	5084855 / 537X	18. x 3 / 0.746	11640	210	419.0	26.5	7.9		50	40.0			GEL	366.00	1350	20.0	0.9	2 2 WT A	E E E	IN BT TD	
												65	40.0			9.20		56	11	274				05-Dec-2006
						11800	370	441.5	49.0	7.6		50	40.0			GEL	366.00	1350	17.0	0.9				
												65	40.0			9.20		46	8	274				06-Dec-2006

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PAGE 4 of 4

Tool Pushers: _____ Company Representatives: RON PORTER Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
QUESTAR E & P	BRONCO DRLG	53			DELORIS	1-22

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NW	22	11 N	10 W	WTNG-CHCSH	11901 / 12200

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS On Bot Hrs	ROP (ft/hr) On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP (lb/100ft2)	HSI / Impact (lbs)	CUTTING STRUCTURE I O D L	BEARING 1 2 3	REMARKS G O R	FORMATIONS / RUN DATE
						11901	471	455.0	62.5	7.5		60	40.0			GEL	366.00	1560	15.0	0.9				
												70	40.0			9.20		52	15	274				07-Dec-2006

BHA:

Comments:

EXPLANATION OF THE IADC DULL BIT GRADING SYSTEM

TOOTH CONDITION

I = All inner rows, not cutting gage

O = Gage row, all teeth cutting gage of hole

Measure of total cutting structure reduction due to loss, breakage and wear.

0 = No loss, wear or breakage.
8 = All lost, worn or broken.

DULL CHARACTERISTICS

D = MAJOR DULL CHAR. O = OTHER DULL CHAR.

BC = Broken cone
BF = Bond failure
BT - Broken teeth/cutters
BU - Balled Up
CC - Cracked cone
CD - Cone dragged
CI - Cone interference
CR - Cored
CT - Chipped teeth
ER - Erosion
FC - Flat crested wear
HC - Heat checking
JD - Junk damage
LC - Lost cone
LN - Lost Nozzle
LT - Lost teeth/cutters
OC - Off center wear
PB - Pinched bit
PN - Plugged nozzle
RG - Rounded gage
RO - Ring out
SD - Shirttail damage
SS - Self-sharpening wear
TR - Tracking
WO - Washout on bit
WT - Worn teeth/cutters
NO - No major/other dull Characteristics

SHOW CONE NUMBER(S) UNDER LOCATION

DULL CODE DEFINITIONS

L = Location codes

ROLLER CONE
N - Nose rows
M - Middle rows
G - Gage rows
A - All rows

FIXED CUTTER
C - Cone
N - Nose
T - Taper
S - Shoulder
G - Gage
A - All areas

B = BEARING DULL CODE

Grade non-sealed bearings based on estimate of remaining life.
0 = No life used
8 = All life used

SEALED BEARINGS
E - Seals effective
F - Seals failed
N - Not able to grade
X - Fixed cutter bits

G = GAGE WEAR
I - In gage
Measure in 1/16 inch undergage

R = REASON PULLED or RUN TERMINATED

BHA - Chg bottom hole assy.
DMF - Downhole motor failure
DSF - Drilling string failure
DST - Drill stem test
DTF - Downhole tool failure
CM - Condition mud
CP - Core point
DP - Drill plug
FM - Formation Change
HP - Hole problems
HR - Hours on bit
LIH - Left in hole
LOG - Run logs
PP - Pump pressure
PR - Penetration rate
RIG - Rig repairs
TD - Total depth/CGS depth
TW - Twist off
TO - Torque
WC - Weather conditions
WO - Washout drill string

CUTTING STRUCTURE				B	G	REMARKS	
Inner Rows (I)	Outer Rows (O)	Dull Char (D)	Location (L)	Bearing Seal (B)	Gage (G)	Other Dull (O)	Reason Pulled (R)

Drive Type

R = Rotary
D = Top Drive
H = Hammer
J = Jetting
M = Motor
S = Steerable
SH = Straight Hole Motor
SR = Rotary Steerable
ST = Steerable Turbine
SW = Rotary Steer W/Motor
T = Turbine

LITHOLOGY CODES

AN - Anhydrite
CG - Conglomerate
CH - Chert
CK - Chalk
CL - Clay
CO - Coal
CT - Cement
DO - Dolomite
EV - Evaporites
GR - Granite
GU - Gumbo
GW - Granite wash
GY - Gypsum
LS - Limestone
MA - Marl
MU - Mudstone
PY - Pyrite
QT - Quartzite
RB - Redbed
SA - Salt
SD - Sand
SH - Shale
SS - Sandstone
ST - SitStone

•The average ROP increased dramatically with the use of SLICKBORE54, from 24 and 30 feet per hour respectively to 44 feet per hour with our product.

This represents a minimum increase of 45% with SLICKBORE54!

•The difference between drilling times are notable indicating that the SLICKBORE54 additive well was completed more than 145 hours faster than the other two.

•145 hours is equivalent to over 6 days of operation. (145 hrs. ÷ 24 = 6.04 days)

•At a conservative average cost of $40,000.00 per day, SLICKBORE54 provided a cost savings of over than $230,000.00

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Standard Bit Record

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Document Number: QD000579

Tool Pushers: JASON KING; LEROY COYKENDAL

Company Representatives: GARY BOTTUMS

Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
NADEL & GUSSMAN	UNIT DRLG	03			STATE	2-33

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NE	33	11 N	10 W	WTNG-CHCSH	12250 / 12300

LEGAL	RIG TYPE / DRIVE	DRILL PIPE SIZE (in)	DRILL PIPE WT (lbs/ft)	API WELL #	SPUD DATE
	LAND / KELLY	4.5	16.6	35-017-23943-00-00	14-Mar-2007

CONTRACT TYPE	RIG ELEVATION/ (ft) / WATER DEPTH (ft)	WELL CATEGORY	TOOL JOINT SIZE (in)	TOOL JOINT TYPE	UTM	LAT/LONG	UNDER SURF
DAYWORK		VERTICAL	6.25	XH		35.38918N / 98.26207W	

FOOTAGE CONTRACT			WELL TARGET	DRILL COLLAR NO	O.D.	I.D.	LENGTH	PUMP NO 1. MAKE	MODEL	LINER	INT DATE
	ONSHORE	___Tight Hole	GAS	24	6.25	2.25	640.78	CONTINENTAL-EMS	F1000		

TO DEPTH (ft)			WELL TYPE	DRILL COLLAR NO	O.D.	I.D.	LENGTH	PUMP NO 2. MAKE	MODEL	LINER	TD DATE
	COMPLETE Rec.	___ReEntry WELL RECORD	DEVELOPMENT					IDECO	MM700		07-Apr-2007

Well Comments:

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS / On Bot Hrs	ROP (ft/hr) / On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE: I O D L	BEARING: 1 2 3	REMARKS: G O R	FORMATIONS / RUN DATE
1	12.25	JZ	GA114C	D16927	14. x 3 14. x 1cj	1520	1465	23.0	23.0	63.7		120	10.0	N		GEL	505.00	1100		1.5	3 3 WT A	E E E	IN NO TD	
				114	0.601							120	25.0			9.10		33		639				
	BHA:																							
	Comments: run 8 5/8" csg.																							17-Mar-2007
2	7.875	HTC	HC506Z	7113805	15. x 3	2700	1180	35.0	12.0	98.3		80	10.0	N		GEL	530.00	2100		5.3	4 2 BT NSM	X X X	IN WT PR	
				PDC	0.518							80	15.0			8.60		35		773				19-Mar-2007
						4364	2844	60.5	37.5	75.8		65	10.0		2.5	GEL	507.00	2200	4.0	4.8				
												80	20.0			8.90		35	12	732				20-Mar-2007
						6540	4020	79.0	56.0	71.8		65	10.0		1.9	GEL	502.00	1850	6.0	4.5				
												90	15.0			8.60		35	14	693				21-Mar-2007
						6835	5315	100.5	77.5	68.6		65	10.0		1.4	GEL	502.00	2000	4.0	4.6				
												90	18.0			8.80		40	12	709				22-Mar-2007
						7705	6185	119.0	96.0	64.4		65	10.0			GEL	457.00	2000	4.0	3.5				
												95	20.0			8.90		39	10	594				23-Mar-2007
						8333	6813	141.0	118.0	57.7		65	10.0		.5	GEL	432.00	2000	6.0	2.9				
												80	15.0			8.80		40	10	525				24-Mar-2007

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Document Number: QD000579

PAGE 2 of 3

Tool Pushers: JASON KING, LEROY COYKENDAL

Company Representatives: GARY BOTTUMS

Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
NADEL & GUSSMAN	UNIT DRLG	03			STATE	2-33

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NE	33	11 N	10 W	WTNG-CHCSH	12250 / 12300

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS / On Bot Hrs	ROP (ft/hr) / On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE (I O D L)	BEARING (1 2 3)	REMARKS (G O R)	FORMATIONS / RUN DATE
						8599	7079	163.5	140.5	50.4		47	15.0			GEL	474.00	2000	7.0	3.9				
												47	15.0			8.80		40	9	632				25-Mar-2007
						8613	7093	165.0	142.0	50.0		47	15.0			GEL	481.00	2000	7.0	4.1				
												47	15.0			8.90		40	11	659				
BHA:																								
Comments: bha-bit, bs, teledrift, 21-dc, tbha=650.63																								26-Mar-2007
3	7.875	HTC	HC506ZX+	7114978 / PDC	16. x 3 / 0.589	8724	111	175.0	10.0	11.1		50	15.0	N		GEL	481.00	2000	7.0	3.2	4 2 BT NM	X X X	IN WT PR	
												50	15.0			8.90		40	11	579				26-Mar-2007
						8900	287	197.5	32.5	8.8		65	15.0			GEL	481.00	2000	9.0	3.2				
												70	20.0			8.90		40	12	579				27-Mar-2007
						9086	473	219.5	54.5	8.7		55	15.0			GEL	481.00	2000	9.0	3.1				
												75	20.0			8.80		39	12	572				28-Mar-2007
						9255	642	242.5	77.5	8.3		75	10.0			GEL	462.00	2000	7.0	2.8				
												75	20.0			9.00		46	12	540				
BHA:																								
Comments: bha-bit, bs, t.drift, 21-dc, tbha=650.63																								29-Mar-2007
4	7.875	HTC	HC506ZX	7114313 / M323	18. x 3 / 0.746	9521	266	254.0	11.5	23.1		85	15.0	N		GEL	496.00	2000	8.0	2.1	4 3 BT NM	X X X	IN WT PR	
												85	20.0			8.80		37	7	481				30-Mar-2007
						10100	845	277.0	34.5	24.5		75	15.0			GEL	464.00	2000	10.0	1.8				
												75	20.0			9.00		39	6	430				31-Mar-2007
						10500	1245	298.0	55.5	22.4		75	15.0			GEL	464.00	2000	16.0	1.8				
												75	20.0			9.00		47	13	430				01-Apr-2007

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Document Number: QD000579

PAGE 3 of 3

Tool Pushers: JASON KING, LEROY COYKENDAL — Company Representatives: GARY BOTTUMS — Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
NADEL & GUSSMAN	UNIT DRLG	03			STATE	2-33

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NW	NE	33	11 N	10 W	WTNG-CHCSH	12250 / 12300

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS / On Bot Hrs	ROP (ft/hr) / On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE I O D L	BEARING 1 2 3	REMARKS G O R	FORMATIONS / RUN DATE
						11015	1760	321.0	78.5	22.4		75	15.0			GEL	456.00	2100	9.0	1.7				
												75	15.0			9.10		42	14	420				02-Apr-2007
						11542	2287	344.5	102.0	22.4		75	15.0			GEL	456.00	2100		1.7				
												75	15.0			9.10		44		420				03-Apr-2007
						11811	2556	369.0	126.5	20.2		65	15.0			GEL	456.00	2250	14.0	1.7				
												70	20.0			9.10		53	19	420				
BHA:																								04-Apr-2007
Comments: bha-bit, bs, teledrift, 21-dc, tbha=650.63																								
5	7.875	HTC	GX30	5114223 / 537X	14. x 3 / 0.451	11900	89	377.0	8.0	11.1		75	42.0	N		GEL	368.00	1800	14.0	2.6	2 3 WT A	E E E	IN NO TD	
												80	45.0			9.50		50	16	472				05-Apr-2007
						12184	373	400.0	31.0	12.0		75	45.0			GEL	363.00	1900	20.0	2.5				
												75	45.0			9.50		55	25	460				06-Apr-2007
						12250	439	405.5	36.5	12.0		75	45.0			GEL	363.00	1950	17.0	2.5				
BHA:												75	45.0			9.50		47	19	460				07-Apr-2007
Comments: bha-bit, bs, teledrift, 21-dc, tbha=650.53																								

EXPLANATION OF THE IADC DULL BIT GRADING SYSTEM

TOOTH CONDITION

I = All inner rows, not cutting gage.

O = Gage row, all teeth cutting gage of note

Measure of total cutting structure reduction due to loss, breakage and wear.

0 = No loss, wear or breakage.
8 = All lost, worn or broken

DULL CHARACTERISTICS

D = MAJOR DULL CHAR. O = OTHER DULL CHAR.

BC = Broken cone
BF = Bond failure
BT - Broken teeth/cutters
BU - Balled Up
CC - Cracked cone
CD - Cone dragged
CI - Cone Interference
CR - Cored
CT - Chipped teeth
ER - Erosion
FC - Flat crested wear
HC - Heat checking
JD - Junk damage
LC - Lost cone
LN - Lost nozzle
LT - Lost teeth/cutters
OC - Off center wear
PB - Pinched bit
PN - Plugged nozzle
RG - Rounded gage
RO - Ring out
SD - Shirttail damage
SS - Self-sharpening wear
TR - Tracking
WO - Washout on bit
WT - Worn teeth/cutters
NO - No major/other dull Characteristics

SHOW CONE NUMBER(s) UNDER LOCATION

DULL CODE DEFINITIONS

L = Location codes

ROLLER CONE
N - Nose rows
M - Middle rows
G - Gage rows
A - All rows

FIXED CUTTER
C - Cone
N - Nose
T - Taper
S - Shoulder
G - Gage
A - All areas

B = BEARING DULL CODE

Grade non-sealed bearings based on estimate of remaining life

0 = No life used
8 = All life used

SEALED BEARINGS
E - Seals effective
F - Seals failed
N - Not able to grade
X - Fixed cutter bits

G = GAGE WEAR
I - In gage
Measure in 1/16 inch undergage.

R = REASON PULLED or RUN TERMINATED

BHA - Chg bottom hole assy
DMF - Downhole motor failure
DSF - Drilling string failure
DST - Drill stem test
DTF - Downhole tool failure
CM - Condition mud
CP - Core point
DP - Drill plug
FM - Formation Change
HP - Hole problems
HR - Hours on bit
LIH - Left in hole
LOG - Run logs
PP - Pump pressure
PR - Penetration rate
RIG - Rig repairs
TD - Total depth/CGS depth
TW - Twist off
TQ - Torque
WC - Weather conditions
WO - Washout drill string

CUTTING STRUCTURE				B	G	REMARKS	
Inner Rows (I)	Outer Rows (O)	Dull Char (D)	Location (L)	Bearing Seal (B)	Gage (G)	Other Dull (O)	Reason Pulled (R)

Drive Type

R = Rotary
D = Top Drive
H = Hydraulic
J = Jetting
M = Motor
S = Steerable
SH = Straight Hole Motor
SR = Rotary Steerable
ST = Steerable Turbine
SW = Rotary Steerable W/Motor
T = Turbine

LITHOLOGY CODES

AN - Anhydrite
CG - Conglomerate
CH - Chert
CK - Chalk
CL - Clay
CO - Coal
CT - Cement
DO - Dolomite
EV - Evaporites
GR - Granite
GU - Gumbo
GW - Granite wash
GY - Gypsum
LS - Limestone
MA - Marl
MU - Mudstone
PY - Pyrite
QT - Quartzite
RB - Redbed
SA - Salt
SD - Sand
SH - Shale
SS - Sandstone
ST - Siltstone

•The average ROP increased dramatically with the use of SLICKBORE54, from 24 and 30 feet per hour respectively to 44 feet per hour with our product.

This represents a minimum increase of 45% with SLICKBORE54!

•The difference between drilling times are notable indicating that the SLICKBORE54 additive well was completed more than 145 hours faster than the other two.

•145 hours is equivalent to over 6 days of operation. (145 hrs. ÷ 24 = 6.04 days)

•At a conservative average cost of $40,000.00 per day, SLICKBORE54 provided a cost savings of over than $230,000.00

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PAGE 1 of 3

Tool Pushers: BRYON FISCHER / JEFF ODER

Company Representatives: CLIFF KING / BOB BAKER

Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
NADEL & GUSSMAN	UNIT DRLG	107			STATE	3-33

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NE	NE	33	11 N	10 W	WTNG-CHCSH	12300

LEGAL	RIG TYPE / DRIVE	DRILL PIPE SIZE (in)	DRILL PIPE WT (lbs/ft)	API WELL #	SPUD DATE
	LAND / KELLY	4.5	16.6	35-017-24028-00-00	10-Mar-2008

CONTRACT TYPE	RIG ELEVATION/ (ft) / WATER DEPTH (ft)	WELL CATEGORY	TOOL JOINT SIZE (in)	TOOL JOINT TYPE	UTM	LAT/LONG	UNDER SURF
DAYWORK		VERTICAL	6.25	XH		35.38836N / 98.25607W	

FOOTAGE CONTRACT / TO / DEPTH (ft)			WELL TARGET	DRILL COLLAR NO	O.D.	I.D.	LENGTH	PUMP NO 1. MAKE / MODEL / LINER	INT DATE
	ONSHORE	__Tight Hole	GAS	24	6.25	2.25	720	CONTINENTAL-EMS F1000	
	PARTIAL Well	__ReEntry WELL RECORD	WELL TYPE	DRILL COLLAR NO	O.D.	I.D.	LENGTH	PUMP NO 2. MAKE / MODEL / LINER	TD DATE
			DEVELOPMENT					CONTINENTAL-EMS F1000	

Well Comments: boom 19 drilled 12.25 surface hole and ran csg. decided rig was not big enough to drill well. Rig down. Unit # 107 rigged up on surface hole that Boom 19 drilled. Unit 107 drilled out from under surface 4-2-08.

BIT NO. / RUN CD	BIT SIZE (inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS On Bot Hrs	ROP (ft/hr) On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE: I O D L	BEARING: 1 2 3	REMARKS: G O R	FORMATIONS/ RUN DATE
1	12.25	VAR	CH1GJMS	117	14. x 3 0.451	1537	1537	17.0	17.0	90.4		90 / 120	10.0 / 25.0	N							2 2 WT A	E E E	IN WT TD	
BHA:																								
Comments: run 8 5/8" csg.																								11-Mar-2008
2	7.875	HTC	HC506Z	7114424 PDC	14. x 2 15. x 1 0.473	3060	1523	33.5	16.5	92.3	120	180 / 180	3.0 / 10.0	SH		WATER 8.50	384.00	1300 / 36		2.4 / 439	2 7 BT NSM	X X X	IN WT PR	
																								03-Apr-2008
						4287	2750	56.0	39.0	70.5	139	199	12.0			WATER 8.70	385.00	1300 / 31	1.0 / 6	2.5 / 451				
											139	199	20.0		1.0									04-Apr-2008
						5801	4264	77.5	60.5	70.5	139	199	12.0			WATER 9.00	400.00	1650 / 36	8.0 / 10	2.8 / 504				
											139	199	20.0		1.5									05-Apr-2008
						6550	5013	100.0	83.0	60.4	139	199	25.0			WATER 9.00	400.00	1800 / 36	8.0 / 10	2.8 / 504				
											139	199	25.0		.3									06-Apr-2008
						6593	5056	103.0	86.0	58.8	139	199	25.0			WATER 8.90	400.00	1800 / 38	6.0 / 6	2.8 / 498				
											139	199	25.0											
BHA:																								
Comments: bha-bit, mtr, 6.5"dc, stab, 6.5"dc, stab, 11-6.5"dc, jars, 3-6.5"dc, x0, tbha																								07-Apr-2008
3	7.875	SEC	FMX653ZZ	11061334 PDC	15. x 3 0.518	6885	292	112.0	9.0	32.4		90 / 90	10.0 / 15.0	N		WATER 8.90	400.00	1800 / 38	6.0 / 6	2.4 / 455	2 3 BT A	X X X	IN WT PR	
																								07-Apr-2008

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PAGE 2 of 3

Tool Pushers: BRYON FISCHER, JEFF ODER — Company Representatives: CLIFF KING, BOB BAKER — Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
NADEL & GUSSMAN	UNIT DRLG	107			STATE	3-33

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NE	NE	33	11 N	10 W	WTNG-CHCSH	12300

BIT NO. / RUN CD	BIT SIZE (inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS / On Bot Hrs	ROP (ft/hr) / On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS: TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP (lb/100ft2)	HSI / Impact (lbs)	CUTTING STRUCTURE I O D L	BEARING 1 2 3	REMARKS G O R	FORMATIONS / RUN DATE
						8290	1697	136.0	33.0	51.4		90	12.0			WATER	400.00	1800	5.0	2.4				
												90	20.0		.5	9.20		43	6	471				08-Apr-2008
						8511	2018	143.0	40.0	50.5		90	12.0			WATER	400.00	1800	8.0	2.4				
												90	20.0			8.90		42	12	455				
	BHA:																							
	Comments: bha-bit, bs, 14-6.5"dc, jars, 3-6.5"dc, tbha=550																							09-Apr-2008
4	7.875	HTC	HC506Z	7011881	12. x 6	9295	684	167.0	24.0	28.5		90	12.0	N		WATER	400.00	1800	6.0	1.4	2 3 BT A	X X X	IN WT PR	
				PDC	0.663							90	20.0			8.90		38	6	356				10-Apr-2008
						9739	1128	200.5	57.5	19.6		90	12.0			WATER	415.00	1800	13.0	1.6				
												90	20.0			9.00		46	16	387				11-Apr-2008
						9783	1172	210.0	67.0	17.5		70	12.0			WATER	371.00	1800	13.0	1.2				
												70	20.0			9.00		43	18	309				
	BHA:																							
	Comments:																							12-Apr-2008
5	7.875	HTC	HC306Z	7118239	18. x 3	10672	889	235.0	25.0	35.6		70	15.0	N		WATER	400.00	1800	14.0	1.2				
				PDC	0.746							70	25.0		1.0	9.10		46	16	323				13-Apr-2008

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PAGE 3 of 3

Tool Pushers: BRYON FISCHER / JEFF ODER

Company Representatives: CLIFF KING / BOB BAKER

Smith Representative: KENDALL R BAYLESS

OPERATOR	CONTRACTOR	RIG NO.	BLOCK	SUB-BLOCK	LEASE/WELL NAME	WELL #
NADEL & GUSSMAN	UNIT DRLG	107			STATE	3-33

COUNTRY	STATE/PROVINCE	COUNTY/DISTRICT	QQSEC	QSEC/LSD	SECTION	TOWNSHIP	RANGE	FIELD	WELL DEPTH (ft) / EST DEPTH (ft)
UNITED STATES	OKLAHOMA	CANADIAN	NE	NE	33	11 N	10 W	WTNG-CHCSH	12300

BIT NO. / RUN CD	BIT SIZE (Inches)	BIT MFR / Reamer MFR	BIT TYPE / ER Number	SERIAL NUMBER / IADC CODE	JETS (32nds) / TFA (in2)	DEPTH OUT (ft) / TVD OUT (ft)	DRILLED (ft)	CUM HRS	HOURS On Bot Hrs	ROP (ft/hr) On Bot (ft/hr)	MOTOR RPM LO / HI	TOTAL RPM LO / HI	WOB (klbs) LO / HI	DRIVE	DEV IN / OUT	MUD / HYDRAULICS TYPE / WT (ppg)	Flo-Mud (gpm) / Flo-Air (cu ft/hr)	Press (psi) / F.Vis	PV (mPas) / YP lb/100ft2	HSI / Impact (lbs)	CUTTING STRUCTURE I O D L	BEARING 1 2 3	REMARKS G O R	FORMATIONS/ RUN DATE
						11365	1582	258.0	48.0	33.0		75	15.0			WATER	400.00	1800	16.0	1.1				
												75	25.0		1.0	9.00		45	15	320				

BHA:

Comments: bha-bit, bs, 14-6.5"dc, jars, 3-6.5"dc, tbha=550

14-Apr-2008

EXPLANATION OF THE IADC DULL BIT GRADING SYSTEM

TOOTH CONDITION

1 = All inner rows, not cutting gage

O = Gage row, all teeth cutting gage of hole.

Measure of total cutting structure reduction due to loss, breakage and wear.

0 = No loss, wear or breakage.
8 = All lost, worn or broken.

DULL CHARACTERISTICS

D = MAJOR DULL CHAR. O = OTHER DULL CHAR.

BC = Broken cone
BF = Bend failure
BT - Broken teeth/cutters
BU - Balled Up
CC - Cracked cone
CD - Cone dragged
CI - Cone interference
CR - Cored
CT - Chipped teeth
ER - Erosion
FC - Flat crested wear
HC - Heat checking
JD - Junk damage
LC - Lost cone
LN - Lost Nozzle
LT - Lost teeth/cutters
CC - Off center wear
PB - Pinched bit
PN - Plugged nozzle
RG - Rounded gage
RO - Ring out
SD - Shirttail damage
SS - Self-sharpening wear
TR - Tracking
WO - Washout on bit
WT - Worn teeth/cutters
NO - No major/other dull Characteristics

SHOW CONE NUMBER(s) UNDER LOCATION

DULL CODE DEFINITIONS

L = Location codes
ROLLER CONE
N - Nose rows
M - Middle rows
G - Gage rows
A - All rows
FIXED CUTTER
C - Cone
N - Nose
T - Taper
S - Shoulder
G - Gage
A - All areas

B = BEARING DULL CODE

Grade non-sealed bearings based on estimate of remaining life
0 = No life used
8 = All life used
SEALED BEARINGS
E - Seals effective
F - Seals failed
N - Not able to grade
X - Fixed cutter bits

G = GAGE WEAR
I - In gage
Measure in 1/16 inch undergage.

R = REASON PULLED or RUN TERMINATED

BHA - Chg bottom hole assy
DMF - Downhole motor failure
DSF - Drilling string failure
DST - Drill stem test
DTF - Downhole tool failure
CM - Condition mud
CP - Core point
DP - Drill plug
FM - Formation Change
HP - Hole problems
HR - Hours on bit
LIH - Left in hole
LOG - Run logs
PP - Pump pressure
PR - Penetration rate
RIG - Rig repairs
TD - Total depth/CCS depth
TW - Twist off
TQ - Torque
WC - Weather conditions
WO - Washout drill string

CUTTING STRUCTURE				B	G	REMARKS	
Inner Rows (I)	Outer Rows (O)	Dull Char (D)	Location (L)	Bearing Seal (B)	Gage (G)	Other Dull (O)	Reason Pulled (R)

Drive Type

R = Rotary
D = Top Drive
H = Hammer
J = Jetting
M = Motor
S = Steerable
SH = Straight Hole Motor
SR = Rotary Steerable
ST = Steerable Turbine
SW = Rotary Steer W/Motor
T = Turbine

LITHOLOGY CODES

AN - Anhydrite
CG - Conglomerate
CH - Chert
CK - Chalk
CL - Clay
CO - Coal
CT - Cement
DO - Dolomite
EV - Evaporites
GR - Granite
GU - Gumbo
GW - Granite wash
GY - Gypsum
LS - Limestone
MA - Marl
MU - Mudstone
PY - Pyrite
QT - Quartzite
RB - Reefed
SA - Salt
SD - Sand
SH - Shale
SS - Sandstone
ST - Siltstone