Well Information

BHA # 1

ENSECO Directional Drilling

SDI Job #:	11255-159	FIELD:	Jacks Draw
COMPANY:	Wexpro Company	Sec-Twn-Rng:	
LOCATION:	Moffat Co., Colorado	PO #/ DISTRICT	
RIG NAME:	SST 88	Lead DD:	Vearl Tucker
STATE:	Colorado	Co. Man:	Rick Bush
COUNTY:	Moffat	BHA TYPE:	Steerable Assembly
WELL NAME:	Jacks Draw Unit # 20		

BHA Summary Information

TIME IN - OUT		Rotary Hours	6.00	Start Depth	110.00	RPM Range	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	10.58 / 1.58	End Depth	1535.00		
17-Oct-11 @ 22:30	19-Oct-11 @ 00:30	Slide Hours	3.00	Percent Rotary:	89.68	15 -45	307 -656
		Below Rotary Hrs.	26.00	Percent Slide:	10.32		

				Incl.		Azimuth	
Total Drilled:	1425.00	Avg. Total ROP:	158.33	IN	OUT	IN	OUT
Total Rotary Drilled:	1278.00	Avg. Rotary ROP:	213.00	.0	.0	.00	.00
Total Drilled Sliding:	147.00	Avg. Slide ROP:	49.00				

SPP	500 -2100	Weights	SO	60 -90	PU	60 -118	RAB	60 -98	Reason POOH	

Bit Data

SMITH	Hycalog E1038 w/ 6x12's
Type Bit	PDC
TFA	0.662

JETS					
	12	12	12	12	12
	12	0	0	0	0

Bit Coding		IADC#				
IR	OR	DL	Loc	BS	G	ODL
0	0					

Bit Drop: 832 PSI @ 656 GPM

Motor Data

8 inch Adj Motor

Model:	807840.17	Pad OD	
MFG.	Hunting	8.25	
Bend °	2.12	Stator/Rotor	7/8
Bit to Bend	8.6	Motor Diff	
Rev/GAL	0.17		
NB Stab	0		
Rotor Jet	0		

Sensor Offsets			
Sensor	69	Sonic	0
Gamma	0	DNSC	80
Restiv	0	GYRO	0

Mud Data

Type	LSND				
WT	9.2	GAS	0	Solids	5
Vis	42	SAND	0.1	T °	110
PV	8	PH	10.3	Chlor	100
YP	9	WL	10	Oil %	0
				BHT°	102.2

Pumps	PUMP1	PUMP1
NAME		
Model		
Type		
Liner	.00	.00
Stroke	.00	.00
Efficency	.00	.00

Comments

BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Hycalog E1038 w/ 6x12's	227389		12.25	1.50	1.50	6 5/8 REGP
2	8",7/8,4.0,.17	8009	1.75	8	29.93	31.43	6 5/8 REGB
3	Shock Sub	PW374406-9	2.75	8	13.24	44.67	6 5/8 REGB
4	UBHO	EDMS80064	2.875	8	2.80	47.47	6 5/8 REGB
5	NMDC Flex	801MER	2.8125	8.125	29.36	76.83	6 5/8 REGB
6	NMDC Flex	802MER	2.8125	8	30.22	107.05	6 5/8 REGB
7	XO	SD104025	2.875	7.9375	3.22	110.27	4 1/2 XHB
8	6" DC	Rig	2.25	6.375	30.67	140.94	4 1/2 XHB
9	24 Jnts HWDP	Rig 1	3	6.25	729.92	870.86	4 1/2 XHB

BHA # 2

ENSECO Directional Drilling

SDI Job #:	11255-159 Work Order:	FIELD:	Jacks Draw
COMPANY:	Wexpro Company	Sec-Twn-Rng:	Sec 28-T12N-R97W
LOCATION:	Moffat Co., Colorado	PO #/ DISTRICT	
RIG NAME:	SST 88	Lead DD:	Vearl Tucker
STATE:	Colorado	Co. Man:	Rick Bush
COUNTY:	Moffat	BHA TYPE:	Steerable Assembly
WELL NAME:	Jacks Draw Unit # 20	BHA WT:	57188 Wt @ Jars: N/A

Time and Depths

Date In:	20-Oct-11 @ 08:00
Date Out:	21-Oct-11 @ 09:35
Hrs In Hole:	25.58
Start Depth:	1535.00
End Depth:	2445.00
Total Drilled:	910.00
Avg. Total ROP:	52.75
Circ Hrs: Tot/Only	18.33 / 1.08
Percent Slide:	6.48
Percent Hrs:	8.21
Slide Hours:	1.42
Total Sliding:	59.00
Avg. Slide ROP:	41.65
Percent Rotary:	93.52
Percent Hrs:	91.79
Rotary Hours:	15.83
Total Rotary:	851.00
Avg. Rotary ROP:	53.75
Reason POOH:	

Motor Data

6 1/2 inch Adj. Motor	
MFG.:	Hunting
PAD OD:	6.75
NB Stab:	0
Bit to Bend:	5.96
Bent Hsg/Sub°:	1.83 /
Lobe/Stage:	7/8 / 3.5
Rev/GAL:	0.21
Rotor Jet:	0
Prop BUR:	9.8
Act BUR:	

Drilling Parameters

SO/PU:	90 - 90 / 118-118
Rot Strg Wt:	98-98
WOB:	0 - 20
TORQ:	0 - 0
SPP:	1050 - 1400
Motor RPM:	77 - 82
Rotary RPM:	35 - 45
Flow Rate:	328 - 389
Avg Diff:	200
Stall Pres.:	600
Off Bot Pres.:	100

Mud Data

Type	LSND		
WT:	9.5	GAS:	0
Vis:	43	PV:	10
WL:	10	PH:	10.4
SOL:	6	SAND	0.1
Oil %:	0	T °:	102.
Chlor:	100	YP:	11

Bit Record

	SMITH / Reed G11CP w/ 4x12's
Run #:	2
Type Bit:	ROCK
IADC#:	TFA: 0.442
JETS:	4-12
Bit Drop:	678 PSI @ 389 GPM
Cond.:	

MWD Spacing: Gamma: 0 Restiv: 0 Sensor: 58 GYRO: 0 DNSC: 1535 Sonic: 0

Last Casing O.D. Shoe @: Hanger @:

INC IN: .0 INC OUT: .0 AZM IN: .00 AZM OUT: .00

BHA Detail

Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn	MFG.
Reed G11CP w/ 4x12's	B 30858		7.875	1.00	1.00	4 1/2 REGP	REED
6 1/2 7/8 3.5 stg .21 rpg 1.83 deg	6037		6.5	29.15	30.15	4 1/2 XHB	Hunting
6 1/2" UBHO	5132	3.0	6.5	3.47	33.62	4 1/2 XHB	Enseco
6 1/2 NMDC Flex	SD 46165	2.8125	6 3/8	30.62	64.24	4 1/2 XHB	Stabil Drill
6 1/2 NMDC Flex	SD 44824	2.8125	6 3/8	30.48	94.72	4 1/2 XHB	Stabil Drill
24 Jnts HWDP	Rig 1	3	6.25	729.92	824.64	4 1/2 XHB	Rig

Well Information

BHA # 3

ENSECO Directional Drilling

SDI Job #:	11255-159	FIELD:	Jacks Draw
COMPANY:	Wexpro Company	Sec-Twn-Rng:	Sec 28-T12N-R97W
LOCATION:	Moffat Co., Colorado	PO #/ DISTRICT	
RIG NAME:	SST 88	Lead DD:	Vearl Tucker
STATE:	Colorado	Co. Man:	Steve Laws
COUNTY:	Moffat	BHA TYPE:	Steerable Assembly
WELL NAME:	Jacks Draw Unit # 20		

BHA Summary Information

TIME IN - OUT		Rotary Hours	52.33	Start Depth	2445.00	RPM Range	Flow Rate
Start Time	End Time	Circ Hrs Tot/Only	62.17 / 1.75	End Depth	7023.00		
21-Oct-11 @ 09:35	24-Oct-11 @ 24:00	Slide Hours	8.08	Percent Rotary:	94.91	0 -60	348 -389
		Below Rotary Hrs.	80.92	Percent Slide:	5.09		

				Incl.		Azimuth	
Total Drilled:	4578.00	Avg. Total ROP:	75.77	IN	OUT	IN	OUT
Total Rotary Drilled:	4345.00	Avg. Rotary ROP:	83.03	.0	.0	.00	.00
Total Drilled Sliding:	233.00	Avg. Slide ROP:	28.82				

SPP	1400 -1775	Weights	SO	90 -130	PU	118 -195	RAB	98 -165	Reason POOH	

Bit Data

Security	FX55D, 7x9's					
Type Bit	PDC					
TFA	0.435					
JETS	9	9	9	9	9	
	9	9	0	0	0	
Bit Coding	IADC#					
IR	OR	DL	Loc	BS	G	ODL
0	0					

Bit Drop: 707 PSI @ 389 GPM

Motor Data

6 1/2 inch Adj Motor			
Model:	657835.21	Pad OD	
MFG.	Hunting	6.75	
Bend °	1.83	Stator/Rotor	7/8
Bit to Bend	5.96	Motor Diff	200
Rev/GAL	0.21		
NB Stab	0		
Rotor Jet	0		

Sensor Offsets			
Sensor	58	Sonic	0
Gamma	0	DNSC	2445
Restiv	0	GYRO	0

Mud Data

Type	LSND						
WT	9.6	GAS	0	Solids	8		
Vis	46	SAND	0.1	T °	115		
PV	15	PH	9.1	Chlor	100		
YP	10	WL	6.3	Oil %	0		
				BHT°	131		

Pumps	PUMP1	PUMP1
NAME	Gardner Denver	Gardner Denver
Model	PZ-10	PZ-10
Type	Triplex	Triplex
Liner	6.50	6.50
Stroke	10.00	10.00
Efficency	95.00	95.00

Comments

Company Man (Steve Laws) has told us not to slide on occasions when we needed to and after persuading him to let us slide he has limited us to sliding only 10 feet or less. If we end up not hitting the target, we cannot take responsibility for that when we are not allowed to do what needs to be done.

BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	FX55D, 7x9's	11745782	1.75	7.875	1.00	1.00	4 1/2 REGP
2	6 1/2 7/8 3.5 stg .21 rpg 1.83 deg	6037		6.5	29.15	30.15	4 1/2 XHB
3	6 1/2" UBHO	5132	3.0	6.5	3.47	33.62	4 1/2 XHB
4	6 1/2 NMDC Flex	SD 46165	2.8125	6 3/8	30.62	64.24	4 1/2 XHB
5	6 1/2 NMDC Flex	SD 44824	2.8125	6 3/8	30.48	94.72	4 1/2 XHB
6	24 Jnts HWDP	Rig 1	3	6.25	729.92	824.64	4 1/2 XHB

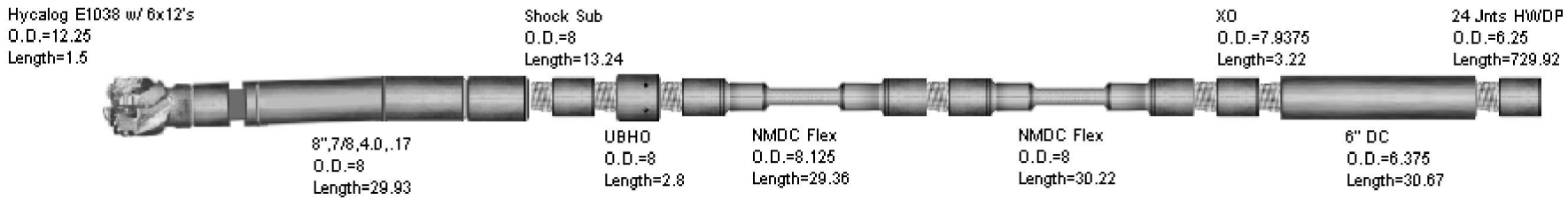
SDI Job #:	11255-159	FIELD:	Jacks Draw
COMPANY:	Wexpro Company	Sec-Twn-Rng:	Sec 28-T12N-R97W
LOCATION:	Moffat Co., Colorado	AFE# & District	
RIG NAME:	SST 88		
STATE:	Colorado		
COUNTY:	Moffat		
WELL NAME:	Jacks Draw Unit # 20		

COMMENT

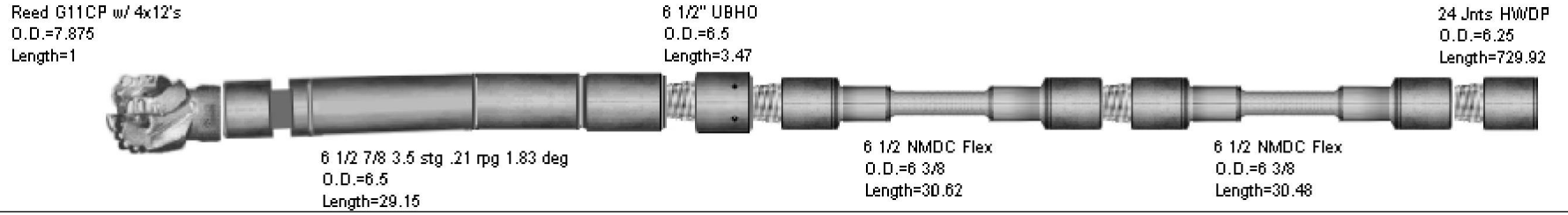
Company man has told us not to slide on occasions when we needed to. After much discussion with him he agreed to let us slide but limited slides to 10 feet or less.

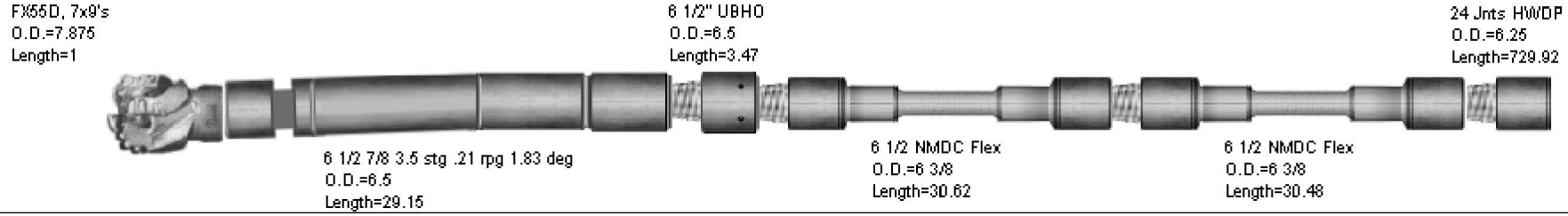
BHA Summary Report for JOB

#	TIME IN - OUT			DEPTHs		Footage			ROP			RPM	FLOW	Incl.		Azimuth		Weight Ranges		
	Time IN	Time Out	Hrs.	IN	OUT	Rotary	Slide	Total	AVG.	Rotary	Slide		Rate	IN	OUT	IN	OUT	SO	PU	RAB
1	17-Oct-11 @ 22:30	20-Oct-11 @ 08:00	57.50	110.0	1535.0	1278.0	147.0	1425.0	158.33	213.0	49.0	15-45	307-656	.0	.0	.0	.0	60-90	60-118	60-98
				Hours>		6.00	3.00	9.00												



#	TIME IN - OUT			DEPTHs		Footage			ROP			RPM	FLOW	Incl.		Azimuth		Weight Ranges		
	Time IN	Time Out	Hrs.	IN	OUT	Rotary	Slide	Total	AVG.	Rotary	Slide		Rate	IN	OUT	IN	OUT	SO	PU	RAB
2	20-Oct-11 @ 08:00	21-Oct-11 @ 09:35	25.58	1535.0	2445.0	851.0	59.0	910.0	55.15	56.4	41.6	0-45	328-389	.0	.0	.0	.0	90-90	118-118	98-98
				Hours>		15.08	1.42	16.50												



BHA Summary Report for JOB

#	TIME IN - OUT			DEPTHs		Footage			ROP			RPM	FLOW	Incl.		Azimuth		Weight Ranges		
	Time IN	Time Out	Hrs.	IN	OUT	Rotary	Slide	Total	AVG.	Rotary	Slide		Rate	IN	OUT	IN	OUT	SO	PU	RAB
3	21-Oct-11 @ 09:35	24-Oct-11 @ 24:00	86.42	2445.0	7023.0	4345.0	233.0	4578.0	75.77	83.0	28.8	0-60	348-389	.0	.0	.0	.0	90-130	118-195	98-165
				Hours>		52.33	8.08	60.42