



HS Resources
Evans Office
3939 Carson Ave
Evans, CO 80620
(970) 330-0614
Date: 04/17/2001

Authorization

J-Sand Completion Procedure

BARNEY LYMAN J 1

**NWSE Section 16 2N 66W
WELD COUNTY, CO**

AREA 2 ROUTE 216

Spud Date:

05/13/1971

KB: 4962

GL: 4949

SSI: 610080

TD: 8192

API #: 05-123-07321

PBTD: 8152

Approved: _____

Date: 4/17/01

Area Engineer

Approved: _____

Date: 4/18/01

Area Manager

Approved: _____

Date: 4/18/01

Drilling Manager

HS RESOURCES, INC.

BARNEY LYMAN J 1

NWSE Section 16 2N 66W

WELD COUNTY, CO

04/17/2001

AREA 2 ROUTE Spud: 05/13/1971 Orig AMOCO SSI: 610080 API #: 05-123-07321
GL: 4949 KB: 4962 MTD: 8192 TVD: 8192 PBMD: 8152 PBTVD: 8152

Directions: WCR 31 AND WCR 20, WEST 1/2 MILE, NORTH 1/4 MILE INTO LOCATION.

TUBULARS	Tool Type	Joints	Size	Weight	Grade	Thread	Condition	Top D	Btm D
SURFACE CASING	CASING	23	8-5/8	24	K-55	STC		13	708
PRODUCTION CASING	CASING	145	5-1/2	14	K-55	STC		13	4653
PRODUCTION TUBING	TUBING	245	2-1/16	3.25	J-55	10 RD II		13	8027
	ARROWSET I PACKER	1	3-1/2X1.66					8027	8030
DEEPENED LINER	LINER HANGER	1	3-1/2					4604	4608
	LINER	80	3-1/2	7.7	N-80			4608	8161
	FLOAT COLLAR	1	3-1/2					8161	8163
	LINER	1	3-1/2	7.7	N-80			8163	8182
	GUIDE SHOE	1	3-1/2					8182	8183
CEMENT	Stage	Sacks	Cement Type	Top D	Btm D	cbl	est	Comments	
SURFACE CEMENT	STAGE 1	700	REGULAR	13	709	No	Yes		
PRODUCTION CEMENT	STAGE 1	100	50/50 POZ-MIX	4000	4648	No	Yes		
	SQUEEZE 1	200	PREMIUM	4657	4687	No	Yes	SQUEEZE	
DEEPENED CEMENT	STAGE 1	90	35-65 POZMIX	4604	7400	Yes	No		
	STAGE 1 TAIL	100	G	7400	8192	Yes	No		

PERFORATIONS

Formation (Bench)	Top	Btm	spf	Shots	Date	Comments	Producing
SUSSEX	4657	4687	4	120	01/30/1981	Squeezed	No
SUSSEX	4657	4687	2	60	11/01/1980	Squeezed	No
DAKOTA	8089	8095	6	60	03/30/2001		No

Comments SUSSEX PERFS SQUEEZED, 4" LINER DRILLED OUT.

J-Sand Completion Procedure

1. MIRU Service unit. NUWH, NU BOP's.
2. Release packer and TOOHH and lay down 2-1/16" tubing string and packer.
3. RU ASAP to set 3-1/2" CIBP at 8039' KB.
4. Pick up and TIH with 2-7/8" frac string. Hydrotest tubing to 7000 psi while tripping in. Sting into liner hanger and pressure test CIBP and casing to 5500 psi.
5. RU ASAP and perforate as follows:

Zone	Interval	SPF	Phasing	Charge	Size	Holes
J-Sand	7915' - 7950'	3	120	6.5gram	0.26"	105

Use: 2-1/8" hollow carrier gun

6. ND BOP and NU wellhead and 2-7/8" frac valve. Tape and dope all threads on wellhead.
7. RU Service Company and Frac J-Sand Triple Entry w/ 250,000 gal and 500,000# sand at 24 BPM. Set Max PSI for 6500 psi. Use backside pump to maintain 500 psi on annulus.
8. Do Not Force Close. Flowback on 18/64" choke immediately after Service Company is off of the wellhead.
9. If well dies, RU slick line and tag for fill. If well does not die, put on production to sales line.
10. If fill exists or well dies off, NDWH, NU BOP's. Release stinger and TOOHH, laying down frac string.
11. Pick up 2-1/16" tubing string and clean out to top of CIBP.
12. Land tubing at ±7915'. Swab well to production.

HS RESOURCES, INC..

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NWSE Section 16 2N 66W

WELD COUNTY, CO

AREA: 2 ROUTE 216 Spud: 05/13/1971
GL: 4949 KB: 4962 MTD: 8192

04/17/2001

Orig Operator: AMOCO

SSI 610080

TVD: 8192

PBMD: 8152

PBTVD: 8152

API #: 05-123-07321

Comments

Sussex perms squeezed, 4" liner drilled out.

Hole Data

Hole	Size	Top	Btm	Date
SURF	12-1/4	13	715	05/14/1971
PROD	7-7/8	715	4648	05/17/1971
DEEP	4-3/4	4648	8192	03/23/2001

SURFACE CASING

Tool Type	Jnts	Size	Weight	Grade	Top D	Btm D
CASING	23	8-5/8	24	K-55	13	708

SURFACE CEMENT

Stage	Sacks	Cement Type	cbl	Comments	Top D	Btm D
STAGE 1	700	REGULAR	No		13	709

PRODUCTION CASING

Tool Type	Jnts	Size	Weight	Grade	Top D	Btm D
CASING	145	5-1/2	14	K-55	13	4653

PRODUCTION CEMENT

Stage	Sacks	Cement Type	cbl	Comments	Top D	Btm D
STAGE 1	100	50/50 POZ-MIX	No		4000	4648
SQUEEZE 1	200	PREMIUM	No	SQUEEZE	4657	4687

PRODUCTION TUBING

Tool Type	Jnts	Size	Weight	Grade	Top D	Btm D
TUBING	245	2-1/16	3.25	J-55	13	8027
ARROWSET I PACKER	1	3-1/2X1.66			8027	8030

PERFORATIONS

Formation (Bench)	Top	Btm
SUSSEX	4657	4687
SUSSEX	4657	4687
DAKOTA	8089	8095

DEEPENED LINER

Tool Type	Jnts	Size	Weight	Grade	Top D	Btm D
LINER HANGER	1	3-1/2			4604	4608
LINER	80	3-1/2	7.7	N-80	4608	8161
FLOAT COLLAR	1	3-1/2			8161	8163
LINER	1	3-1/2	7.7	N-80	8163	8182
GUIDE SHOE	1	3-1/2			8182	8183

DEEPENED CEMENT

Stage	Sacks	Cement Type	cbl	Comments	Top D	Btm D
STAGE 1	90	35-65 POZMIX	Yes		4604	7400
STAGE 1 TAI	100	G	Yes		7400	8192

Date	Type	Method	Vendor	Avg Rate	Avg Press	ISIP	Max Sand
09/10/1977	FRAC	CASING		20	2000	1300	4
Comments							
Formations		Materials					
SUSSEX		Type	Volume	Units	Size	Material Name	
		FLUID	37,380	LBS		GEL FRAC	
		SAND	156,000	LBS	10/20	SAND	
		SAND	72,000	LBS	20/40	SAND	
Date	Type	Method	Vendor	Avg Rate	Avg Press	ISIP	Max Sand
01/02/2001	FRAC	2-7/8 TBG W/PKR		24			4
Comments							
PROPOSED							
Formations		Materials					
J SAND		Type	Volume	Units	Size	Material Name	
		FLUID	290,000	GALS		GEL FRAC	
		SAND	560,000	LBS	20/40	SAND	

HS RESOURCES, INC..

BARNEY LYMAN J 1

NWSE Section 16 2N 66W

WELD COUNTY, CO

AREA: 2

ROUTE 216

GL: 4949

04/17/01107

SSI 610080

API #: 05-123-07321

Spud: 05/13/1971

KB: 4962

MTD: 8192

TVD: 8192

PBMD: 8152

PBTVD: 8152

Comments: SUSSEX PERFS SQUEEZED, 4" LINER DRILLED OUT.

Date	History note
05/13/1971	SPUD
05/18/1971	RAN CASING
05/24/1971	DEEPENED OPEN HOLE TO SUSSEX
06/06/1974	PUMP CHANGE
07/02/1976	PUMP CHANGE
07/08/1976	PUMP CHANGE
09/12/1977	REFRAC SUSSEX
12/21/1977	PUMP CHANGE
01/12/1979	PUMP CHANGE
03/03/1979	CHANGED OUT TUBING AND RODS
02/22/1980	PUMP CHANGE
04/07/1980	PUMP CHANGE
06/03/1980	PUMP CHANGE
06/06/1980	PUMP CHANGE
06/11/1980	PUMP CHANGE
06/19/1980	PUMP CHANGE
06/24/1980	PUMP CHANGE
06/26/1980	PUMP CHANGE
06/30/1980	PUMP CHANGE
07/30/1980	PUMP CHANGE
11/20/1980	RAN AND CEMENTED 4" LINER
06/17/1981	PUMP CHANGE
04/24/1984	CLEANED OUT FILL
06/30/1986	PUMP CHANGE
08/15/1988	TUBING LEAK, JT 147,148
01/04/1989	PUMP CHANGE
03/14/1992	TUBING LEAK, JT 149
06/04/1993	PUMP CHANGE
02/02/1996	TUBING LEAK, JT 136
02/15/2001	LAY DOWN TUBING AND RODS
02/19/2001	SQUEEZE SUSSEX PERFS
03/14/2001	MILL OUT 4" LINER, START DRILLING NEW HOLE.
03/25/2001	TD BELOW DAKOTA, RUN 2-7/8" LINER
03/30/2001	PERFORATED DAKOTA AND BROKE DOWN
04/17/2001	DONE W/ DAKOTA, MINIMAL PRODUCTION.

Stimulation Data:

BARNEY LYMAN J 1

Date	Type	Method	Vendor	Avg Rate	Avg Press	ISIP	Max Sand
05/24/1971	FRAC	CASING		50	1900	1400	

Comments

Formations

SUSSEX

Materials

Type	Volume	Units	Size	Material Name
FLUID	36,036	GALS		GEL FRAC
SAND	18,000	LBS	10/20	SAND
SAND	4,000	LBS	20/40	SAND
SAND	2,000	LBS	12/20	SAND
SAND	1,000	LBS	8/12	SAND

3939 Carson Avenue
Evans, CO 80620
Office: 970-330-0614
Fax: 970-330-0431

HS Resources, Inc.

FAXtransmittal

To: ASAP: 970-381-1004
CC:
Fax: 970-356-2753
From: Greg McIntosh
Date: 4/17/2001
RE: Perforating design: BARNEY LYMAN J 1
Pages: 1, including this cover page

Comments

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Csq

PRODUCTION CASING

<u>Tool Type</u>	<u>Jnts</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Top D</u>	<u>Btm D</u>
CASING	145	5-1/2	14	K-55	13	4653

DEEPENED LINER

<u>Tool Type</u>	<u>Jnts</u>	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Top D</u>	<u>Btm D</u>
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Gun 2-1/8"

<u>Zone</u>	<u>Interval</u>	<u>SPF</u>	<u>Phasing</u>	<u>Charge</u>	<u>Size</u>	<u>Holes</u>
J-Sand	7915' - 7950'	3	120	6.5gram	0.26"	105

Will set 3-1/2" CIBP at about 8039'