

MARKWEST RESOURCES, INC.
FULLERTON FEDERAL #15-41 FRTC
A Sec. 15 – T27N – R11W, San Juan County, N.M.
790' FNL & 790 FEL

GENERAL

* Prior to rig-up and commencement of operations, review the attached general wellsite stipulations.

* All information concerning the workover operations of this well shall remain **confidential** and shall not be released without the written consent of MarkWest Resources.

1. MOL & RU, test anchors, set pump, 1 frac tank & air equipment. **All water to be 2% KCL or filtered produced PC or FRTC water.**
2. Kill well w/ water or set blanking plug in 2-3/8" SN @ 1965'
3. ND WH, NU BOP. TIH to tag bottom & strap OH w/2-3/8" tbg.
4. If necessary, TIH w/4-3/4" bit & CO to 2098' w/air/mist. TOH.
5. Rabbit in hole w/2-3/8" tbg & land @ 2030' w/SN one jt above open ended bottom. Replace all bad tbg jts.
6. ND BOP, NU WH. Unload & blow well as needed & place on line.

EQUIPMENT & VENDORS LIST

ITEM:	VENDOR	PHONE #
RIG:	KEY ENERGY SERVICES	970-563-9053 505-327-0416
RIG SUPERVISOR:	MIKE CONFER	505-599-7461 505-330-2022
ENGR. CONSULTANT 4573	MIKE PIPPIN	505-327- 505-330-0495
DOWNHOLE TOOLS:	BAKER	505-325-0216
TRUCKING:	SUNCO	505-327-0416
WELLHEAD	CAMERON	505-327-3402

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FRTC CLEANOUT
Pertinent Data Sheet

Field: Basin Fruitland Coal

Elevation: 6310' GL

TD: 2143'

Spud Date: 12/16/90

KB=11'

PBTD: 2098'

FRTC Completion Date: 2/20/91

CASING PROGRAM:

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>TOC</u>
12-1/4"	8-5/8"	24# J-55	304'	210 sx	Circ. 40 sx Cmt
7-7/8"	5-1/2"	15.5# J-55	2143'	586 cf	Circ. 32 sx Cmt.
					TOC – Surface – CBL

Tubing Record:

2-3/8"	4.7# J-55	1966'	(Notched collar & SN on bottom) 63 Jts.
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Formation Tops:

Ojo Alamo	925'
Kirtland	1050'
Fruitland	1510'
Pictured Cliffs	2044'

Logging Record: Induction, Density-Neutron, Microlog, CBL - 1990

Stimulation: Perf Lower FRTC @ 1987'-89', 1991'-99', 2013'-16', 2026'-37' & fraced w/79,000# sand in 70Q foam.

Perfed Upper FRTC @ 1843'-47', 1871'-74' & fraced w/50,000# sand in 70Q foam.
IBHP=233psi @ 1830'.

Workover History: 7/27/94: Tagged fill @ 2094'. Landed tbg @ 2050'. 10/31/95: Pull tbg & land @ 1969'. 12/12/95: CO fill from 2091'. Acidize FRTC w/1000 gal 15% & landed tbg @ 1966'. 3/24/99: Repaired hole in wellhead.

Production History: PC cum = 587 MMCF. Very rapid decline in first 3 yrs of production from 330 MCF/D to 80 MCF/D.

FRTC CLEANOUT

PMP 5/15/01

2098' PBTD
2143' TD

MARKWEST RESOURCES, INC.
155 INVERNESS DRIVE WEST, SUITE 200
ENGLEWOOD, COLORADO 80112

PROSPECT: ANGEL PEAK
WELL NAME : FULLERTON FEDERAL #15-41FRTC
COUNTY :San Juan
STATE : New Mexico
LOCATION : A Sec.15 T27N R11W
OPERATOR : MarkWest

AFE #
WELL #: 15-41
PROPOSED DEPTH: 2143' FT
OBJECTIVE :Fruitland Coal
DATE : 5/15/01
COMMENCEMENT DATE : 6/16/01

OVERALL PLAN: CLEAN OUT FRTC & REPAIR TBG

STEPS

- 1 CHECK FOR FILL & PULL TBG
- 2 CLEAN OUT FRTC TO 2098'
- 3 RABBIT TBG IN HOLE & REPLACE ALL BAD JTS
- 4 RETURN WELL TO PRODUCTION

CURRENT PC PRODUCTION (FROM CSG)
ESTIMATED PC UPLIFT:

80 MCF/D
150 MCF/D

INCREMENTAL ECONOMICS
RATE OF RETURN
PAYOUT
P/I (\$/\$N @10%)

SUMMARY OF ESTIMATED COSTS

1980	INTANGIBLE WORKOVER COSTS		PICTURED CLIFFS
101	LOCATION		\$1,000
103	LABOR (WELDING, ETC.)		
104	ACIDIZING		
106	CASING CREW		
108	CEMENT		
109	PIPE INSPECTION		
201	WATER DISPOSAL		\$500
202	WORKOVER RIG (4 Days \$3,000/day)		\$12,000
203	PERFORATIONS		
203	CASED HOLE LOGS		
204	FUEL & WATER		\$500
205	FRAC WATER		
206	FRAC		
207	EQUIPMENT & TOOL RENTAL		\$500
209	FLOW TESTING		
210	TRANSPORTATION		\$500
212	COMPANY SUPERVISION		\$2,000
	COMPRESSION		\$4,000
217	ROUSTABOUT LABOR		\$500
218	MISC. (bits, float, strippers)		\$500
220	BATTERY CONSTRUCTION		
328	CONTINGENCIES (20%)		\$4,400
	SUBTOTAL INTANGIBLE WORKOVER		\$26,400
1910	TANGIBLE WORKOVER COSTS		
102	TUBING 200' OF 2-3/8" 4.7# J-55 EU @\$2.10/FT		\$420
102	TUBING 200' FO 3-1/2" 9.2# J-55 NUE @ \$3.85/FT		
152	WELLHEAD & VALVES		
208	DOWNHOLE VALVES & NIPPLES		
210	TREATER/SEPARATOR		
211	TANK BATTERY		
212	METERS		
213	SURFACE FITTINGS & FLOW LINE		
214	BUILDINGS		
215	FENCES-CATTLE GUARD		
216	OTHER (80 HP Wellhead Compressor)		
217	ANCHORS		
	CONTINGENCIES (15%)		\$63
	SUBTOTAL TANGIBLE WORKOVER		\$483
	TOTAL WORKOVER COSTS		\$26,883
	TOTAL AFE		\$26,883

PMP

APPROVALS:

MARKWEST RESOURCES, INC.

TITLE

MARKWEST RESOURCES, INC.

TITLE

MARKWEST HYDROCARBON, INC.

TITLE

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