



STATE OF COLORADO



02055812

Andrews - DNR, David <david.andrews@state.co.us>

K Diamond 21-21 DOC ID 400451689 WBS to plug with added retainer

Carl Bowers <cbowers@qrinc.com>

Wed, Jul 31, 2013 at 11:54 AM

To: "Andrews - DNR, David" <david.andrews@state.co.us>

Cc: Cindy Keister <ckeister@qrinc.com>, Stuart Ellsworth - DNR <Stuart.Ellsworth@state.co.us>

Dave,

Per our discussion we would like to proceed per the below.

Follow the existing procedure with the plugs @ 5,100' and 2,600' using a retainer on both.

Cut and pull the 4 1/2 production casing from +/- 2,100'.

Run a CBL from below the DV tool @ 1,911' to surface to establish TOC.

At this point we will contact you to determine a perforation point.

If TOC is indeed below the Surface Toe as believed we will perforate and establish circulation.

Cement annulus of 9 5/8" Intermediate Casing.

Cement surface plug per procedure.

We would like to start moving in on the first plugs on Monday if possible.

Thanks for the help,

Carl

*Verbal approval granted.
David Andrews
7/31/2013*

From: Andrews - DNR, David [mailto:david.andrews@state.co.us]

Sent: Wednesday, July 31, 2013 8:10 AM

To: Carl Bowers

Cc: Cindy Keister; Stuart Ellsworth - DNR

[Quoted text hidden]

[Quoted text hidden]



STATE OF
COLORADO

Andrews - DNR, David <david.andrews@state.co.us>

K-Diamond Federal 21-21 Intermediate Log- Doc ID 400451689

Andrews - DNR, David <david.andrews@state.co.us>

Mon, Jul 29, 2013 at 9:48 AM

To: Tami Humphrey <thumphrey@qrinc.com>

Cc: "Barbara.Westerdale@state.co.us" <Barbara.Westerdale@state.co.us>, Cindy Keister <ckeister@qrinc.com>, Carl Bowers <cbowers@qrinc.com>

Tami,

Thanks for the log. This reinforces my concerns with the shallow intermediate casing interval below the surface casing. Several zones of gas crossover are apparent. I will resume processing the Form 6 when I receive Carl's email, which should include a revision to QRI's procedure for the plug at 2600', confirmation of the actual DV tool depth, and calculations for the TOC on the intermediate second stage of the cement job.

Another question just occurred to me: Is there any bradenhead (surface-intermediate annulus) pressure on this well?

Dave

[Quoted text hidden]



STATE OF
COLORADO

Andrews - DNR, David <david.andrews@state.co.us>

Fwd: K-Diamond Federal 21-21 - Doc ID 400451689

Carl Bowers <cbowers@qrinc.com>
To: "David.Andrews@state.co.us" <David.Andrews@state.co.us>
Cc: Cindy Keister <ckeister@qrinc.com>

Mon, Jul 29, 2013 at 9:41 AM

David,

Per our conversation:

The DV tools was in fact set @ 1,908-11' per the attached Casing Tally. I have contacted Halliburton to correct their Post Job Report. I also double checked the displacement volume on their report and calculates to 1,907' to verify.

The TOC indicated on form 5 was calculated based upon only the first stage of the Intermediate casing job and did not take into consideration the second stage through the DV tool. Based upon the 1,908' depth of the DV tool we should have circulated cement given we had over 3,200' of fill. Although we did not circulate cement we did have circulation. We can resubmit if needed indicating the second stage cement calculated top.

In regard to the plug to be set at 2,600' we will shoot perfs @ 2,600', set a retainer, and pump 30sx of cement behind the pipe and drop 10sx on top of the retainer. We will re-submit the application with the proposed WBS per the added retainer.

Cindy will get the Quad log loaded up in a pdf format as soon as she can.

We appreciate your time discussing this and if there is anything I missed or need to follow up on please let me or Cindy know.

Thanks,

Carl

Carl Bowers

Completions Superintendent

Quicksilver Resources, Inc.

Office Fort Worth - 817-665-4013

Office Craig – 817-665-4119

Cell – 817-964-7371

From: Cindy Keister
Sent: Friday, July 26, 2013 1:41 PM
To: Carl Bowers; Scott Latka
Subject: Fw: K-Diamond Federal 21-21 - Doc ID 400451689

Please see Davids comments below

Cindy Keister

Sent via Blackberry

(682) 429-3861

From: Andrews - DNR, David [mailto:david.andrews@state.co.us]
Sent: Friday, July 26, 2013 01:34 PM
To: Westerdale - DNR, Barbara <barbara.westerdale@state.co.us>; Cindy Keister
Subject: Re: K-Diamond Federal 21-21 - Doc ID 400451689

[Quoted text hidden]



K_Diamond Federal 21-21_Intermediate_Casing RIH Tally.rtf
324K

Quicksilver Resources Inc.

Quicksilver Resources Inc.

Report Date 8/31/2012

801 Cherry Street Suite 3700 Unit 19 801 Cherry Street Suite 3700 Unit 19
 Fort Worth, TX 76102 Fort Worth, TX 76102
 (817) 665-5000

(817) 665-5000

Casing

Run In Hole

Tally Report

Max. Casing Size: 7.000

Well Name: K-DIAMOND FEDERAL 21-21

Field Name:Field Name:WILDCAT WILDCATS/T/R: S/T/R: 21/6N/92W21/6N/92WCounty,State:
 County,State:MOFFAT, COMOFFAT, CO
 Operator:Operator:QUICKSILVER QUICKSILVER Location Location District: District: Colorado
 OperatedColorado Operated
 Date In: 7/13/2011 Casing Type 4. Intermediate Hole Diam: 8.75 TD: 5185
 KB/RT to Top Jt: 16 Joints Run: 136 Casing Ftg: 5164.60 Block Wt: 34
 Buoy Factor: 0.8594 Casing set at: 5185.58
 Tally Notes:

RIH #	Jt #	Length	Cum Leng	Description	MD	Air Wt	Buoy Wt	Pipe Disp	# Ct	# Sc	# Tur	Size	Weight	Grade
1		1.30	1.30	Float Shoe - SHOE	5185.58	68	63	0.01	0	0	0	7.000	26.00	N-80
2	1	37.92	39.22		5184.28	1054	910	0.37	1	0	0	7.000	26.00	N-80
3	2	38.13	77.35		5146.36	2045	1762	0.73	1	0	0	7.000	26.00	N-80
4		0.98	78.33	Float Collar - COLLAR	5108.23	2071	1784	0.74	0	0	0	7.000	26.00	N-80
5	3	36.99	115.32		5107.25	3032	2611	1.09	1	0	0	7.000	26.00	N-80
6	4	39.07	154.39		5070.26	4048	3484	1.46	1	0	0	7.000	26.00	N-80
7	5	37.63	192.02		5031.19	5027	4325	1.82	0	0	0	7.000	26.00	N-80
8	6	38.29	230.31		4993.56	6022	5180	2.18	0	0	0	7.000	26.00	N-80
9	7	37.90	268.21		4955.27	7007	6027	2.54	1	0	0	7.000	26.00	N-80
10	8	38.62	306.83		4917.37	8012	6890	2.90	0	0	0	7.000	26.00	N-80
11	9	37.95	344.78		4878.75	8998	7738	3.26	0	0	0	7.000	26.00	N-80
12	10	38.29	383.07		4840.80	9994	8593	3.62	1	0	0	7.000	26.00	N-80
13	11	38.80	421.87		4802.51	11003	9460	3.99	0	0	0	7.000	26.00	N-80
14	12	38.42	460.29		4763.71	12002	10319	4.35	0	0	0	7.000	26.00	N-80
15	13	38.31	498.60		4725.29	12998	11175	4.72	1	0	0	7.000	26.00	N-80
16	14	38.50	537.10		4686.98	13999	12035	5.08	0	0	0	7.000	26.00	N-80
17	15	38.26	575.36		4648.48	14993	12890	5.44	0	0	0	7.000	26.00	N-80
18	16	38.44	613.80		4610.22	15993	13749	5.81	1	0	0	7.000	26.00	N-80
19	17	37.67	651.47		4571.78	16972	14591	6.16	0	0	0	7.000	26.00	N-80
20	18	38.77	690.24		4534.11	17980	15457	6.53	0	0	0	7.000	26.00	N-80
21	19	37.98	728.22		4495.34	18968	16306	6.89	1	0	0	7.000	26.00	N-80
22	20	37.32	765.54		4457.36	19938	17140	7.24	0	0	0	7.000	26.00	N-80
23	21	38.34	803.88		4420.04	20935	17996	7.61	0	0	0	7.000	26.00	N-80
24	22	37.29	841.17		4381.70	21904	18829	7.96	1	0	0	7.000	26.00	N-80
25	23	37.34	878.51		4344.41	22875	19664	8.31	0	0	0	7.000	26.00	N-80
26	24	38.17	916.68		4307.07	23868	20517	8.67	0	0	0	7.000	26.00	N-80
27	25	37.53	954.21		4268.90	24843	21355	9.03	1	0	0	7.000	26.00	N-80
28	26	38.50	992.71		4231.37	25844	22216	9.39	0	0	0	7.000	26.00	N-80
29	27	37.70	1030.41		4192.87	26825	23058	9.75	0	0	0	7.000	26.00	N-80
30	28	38.32	1068.73		4155.17	27821	23914	10.11	1	0	0	7.000	26.00	N-80
31	29	38.50	1107.23		4116.85	28822	24774	10.48	0	0	0	7.000	26.00	N-80
32	30	39.11	1146.34		4078.35	29839	25648	10.85	0	0	0	7.000	26.00	N-80
33	31	38.48	1184.82		4039.24	30839	26508	11.21	1	0	0	7.000	26.00	N-80
34	32	37.06	1221.88		4000.76	31803	27336	11.56	0	0	0	7.000	26.00	N-80
35	33	37.66	1259.54		3963.70	32782	28178	11.92	0	0	0	7.000	26.00	N-80
36	34	36.99	1296.53		3926.04	33744	29004	12.27	1	0	0	7.000	26.00	N-80
37	35	38.27	1334.80		3889.05	34739	29859	12.63	0	0	0	7.000	26.00	N-80
38	36	37.62	1372.42		3850.78	35717	30700	12.98	0	0	0	7.000	26.00	N-80
39	37	37.95	1410.37		3813.16	36704	31548	13.34	1	0	0	7.000	26.00	N-80
40	38	38.09	1448.46		3775.21	37694	32399	13.70	0	0	0	7.000	26.00	N-80
41	39	37.57	1486.03		3737.12	38671	33238	14.06	0	0	0	7.000	26.00	N-80
42	40	37.38	1523.41		3699.55	39643	34074	14.41	1	0	0	7.000	26.00	N-80

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Quicksilver Resources Inc.

Quicksilver Resources Inc.

Report Date 8/31/2012

801 Cherry Street Suite 3700 Unit 19 Fort Worth, TX 76102
 801 Cherry Street Suite 3700 Unit 19 Fort Worth, TX 76102
 (817) 665-5000

(817) 665-5000

Casing

Run In

Hole Tally Report

Well Name:K-DIAMOND FEDERAL 21-21 Well Name:K-DIAMOND

FEDERAL 21-21

Field Name:Field Name:WILDCAT WILDCATS/T/R: S/T/R: 21/6N/92W21/6N/92WCounty,State:
 County,State:MOFFAT, COMOFFAT, CO
 Operator:Operator:QUICKSILVER QUICKSILVER Location Location District: District: Colorado
 OperatedColorado Operated

RIH #	Jt #	Length	Cum Leng	Description	MD	Air Wt	Buoy Wt	Pipe Disp	# Ct	# Sc	# Tur	Size	Weight	Grade
43	41	38.25	1561.66		3662.17	40637	34928	14.77	0	0	0	7.000	26.00	N-80
44	42	37.95	1599.61		3623.92	41624	35776	15.13	0	0	0	7.000	26.00	N-80
45	43	37.88	1637.49		3585.97	42609	36623	15.49	1	0	0	7.000	26.00	N-80
46	44	37.25	1674.74		3548.09	43577	37455	15.84	0	0	0	7.000	26.00	N-80
47	45	38.15	1712.89		3510.84	44569	38307	16.21	0	0	0	7.000	26.00	N-80
48	46	38.42	1751.31		3472.69	45568	39166	16.57	1	0	0	7.000	26.00	N-80
49	47	38.32	1789.63		3434.27	46564	40022	16.93	0	0	0	7.000	26.00	N-80
50	48	38.08	1827.71		3395.95	47554	40873	17.29	0	0	0	7.000	26.00	N-80
51	49	37.46	1865.17		3357.87	48528	41710	17.65	1	0	0	7.000	26.00	N-80
52	50	37.91	1903.08		3320.41	49514	42557	18.01	0	0	0	7.000	26.00	N-80
53	51	37.85	1940.93		3282.50	50498	43403	18.36	0	0	0	7.000	26.00	N-80
54	52	38.48	1979.41		3244.65	51499	44263	18.73	1	0	0	7.000	26.00	N-80
55	53	38.30	2017.71		3206.17	52494	45119	19.09	0	0	0	7.000	26.00	N-80
56	54	37.35	2055.06		3167.87	53466	45953	19.44	0	0	0	7.000	26.00	N-80
57	55	37.32	2092.38		3130.52	54436	46787	19.80	1	0	0	7.000	26.00	N-80
58	56	38.35	2130.73		3093.20	55433	47644	20.16	0	0	0	7.000	26.00	N-80
59	57	38.47	2169.20		3054.85	56433	48503	20.52	0	0	0	7.000	26.00	N-80
60	58	38.91	2208.11		3016.38	57445	49373	20.89	1	0	0	7.000	26.00	N-80
61	59	37.86	2245.97		2977.47	58429	50219	21.25	0	0	0	7.000	26.00	N-80
62	60	37.92	2283.89		2939.61	59415	51066	21.61	0	0	0	7.000	26.00	N-80
63	61	38.27	2322.16		2901.69	60410	51921	21.97	1	0	0	7.000	26.00	N-80
64	62	38.08	2360.24		2863.42	61400	52772	22.33	0	0	0	7.000	26.00	N-80
65	63	37.97	2398.21		2825.34	62387	53621	22.69	0	0	0	7.000	26.00	N-80
66	64	38.62	2436.83		2787.37	63392	54484	23.06	1	0	0	7.000	26.00	N-80
67	65	38.70	2475.53		2748.75	64398	55348	23.42	0	0	0	7.000	26.00	N-80
68	66	37.21	2512.74		2710.05	65365	56180	23.77	0	0	0	7.000	26.00	N-80
69	67	37.93	2550.67		2672.84	66351	57027	24.13	1	0	0	7.000	26.00	N-80
70	68	38.12	2588.79		2634.91	67343	57879	24.49	0	0	0	7.000	26.00	N-80
71	69	38.75	2627.54		2596.79	68350	58745	24.86	0	0	0	7.000	26.00	N-80
72	70	38.32	2665.86		2558.04	69346	59601	25.22	1	0	0	7.000	26.00	N-80
73	71	37.26	2703.12		2519.72	70315	60434	25.57	0	0	0	7.000	26.00	N-80
74	72	37.97	2741.09		2482.46	71302	61282	25.93	0	0	0	7.000	26.00	N-80
75	73	38.03	2779.12		2444.49	72291	62132	26.29	1	0	0	7.000	26.00	N-80
76	74	38.37	2817.49		2406.46	73289	62989	26.66	0	0	0	7.000	26.00	N-80
77	75	37.96	2855.45		2368.09	74276	63837	27.02	0	0	0	7.000	26.00	N-80
78	76	38.31	2893.76		2330.13	75272	64693	27.38	1	0	0	7.000	26.00	N-80
79	77	38.83	2932.59		2291.82	76281	65561	27.75	0	0	0	7.000	26.00	N-80
80	78	37.83	2970.42		2252.99	77265	66406	28.10	0	0	0	7.000	26.00	N-80
81	79	38.03	3008.45		2215.16	78254	67256	28.46	1	0	0	7.000	26.00	N-80
82	80	37.59	3046.04		2177.13	79231	68096	28.82	0	0	0	7.000	26.00	N-80
83	81	38.29	3084.33		2139.54	80227	68952	29.18	0	0	0	7.000	26.00	N-80
84	82	37.93	3122.26		2101.25	81213	69799	29.54	1	0	0	7.000	26.00	N-80
85	83	38.46	3160.72		2063.32	82213	70658	29.90	0	0	0	7.000	26.00	N-80
86	84	37.39	3198.11		2024.86	83185	71494	30.26	0	0	0	7.000	26.00	N-80
87	85	37.59	3235.70		1987.47	84162	72334	30.61	1	0	0	7.000	26.00	N-80
88	86	38.23	3273.93		1949.88	85156	73188	30.97	0	0	0	7.000	26.00	N-80
89		2.70	3276.63	Stage Tool - DV TOOL	1911.65	85226	73248	31.00	0	0	0	7.000	26.00	N-80
90	87	38.76	3315.39		1908.95	86234	74114	31.37	1	0	0	7.000	26.00	N-80

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Report Date 8/31/2012

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Casing

Run In

Hole Tally Report

Well Name:K-DIAMOND FEDERAL 21-21 Well Name:K-DIAMOND

FEDERAL 21-21

Field Name:Field Name:WILDCAT WILDCATS/T/R: S/T/R: 21/6N/92W21/6N/92WCounty,State:
County,State:MOFFAT, COMOFFAT, CO
Operator:Operator:QUICKSILVER QUICKSILVER Location Location District: District: Colorado
OperatedColorado Operated

Table with columns: RIH #, Jt #, Length, Cum Leng, Description, MD, Air Wt, Buoy Wt, Pipe Disp, # Ct, # Sc, # Tur, Size, Weight, Grade. Rows 91-138.

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801 Cherry Street Suite 3700 Unit 19 801 Cherry Street Suite 3700 Unit 19
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Casing

Run In

Hole Tally Report

Well Name:K-DIAMOND FEDERAL 21-21 Well Name:K-DIAMOND

FEDERAL 21-21

Field Name:Field Name:WILDCAT WILDCATS/T/R: S/T/R: 21/6N/92W21/6N/92WCounty,State:
County,State:MOFFAT, COMOFFAT, CO
Operator:Operator:QUICKSILVER QUICKSILVER Location Location District: District: Colorado
OperatedColorado Operated

RIH #	Jt #	Length	Cum Leng	Description	MD	Air Wt	Buoy Wt	Pipe Disp	# Ct	# Sc	# Tur	Size	Weight	Grade
139	136	21.16	5169.58		37.16	134866	115908	49.06	0	0	0	7.000	26.00	N-80