

WELL COMPLETION NOTES

- 1) WELL COMPLETED ON: SEPTEMBER 13, 2002
- 2) WELL COMPLETED USING MUD ROTARY DRILL RIG; 1998 SCHRAMM T685WS
- 3) INTENDED WATER USE: MUNICIPAL WATER SUPPLY
- 4) WELL OWNED BY THE VILLAGE OF HAINES JUNCTION
- 5) LOCATION: E 0362215, N 6738404 (NAD 83) Zone 7 ELEVATION OF GROUND SURFACE: 608.5 MASL
- 6) WELL DRILLED BY MIDNIGHT SUN DRILLING OF WHITEHORSE YUKON.
(PRIMARY DRILLER: TRENT JAMIESON)

(SIGNATURE)

7) WELL ID: WELL #5

ALL DEPTHS SHOWN ARE RELATIVE TO THE GROUND SURFACE (ELEV. 0.00m)

LINER HANGER WITH PACKER

D LINER HANGER/PACKER
Product No. 293-02

The D Liner Hanger/Packer serves as both a liner hanger and packer when the liner is not to be cemented. As the slips hang the liner, the packing element is also compressed to seal against the casing ID. The D Liner Hanger/Packer is available with right- or left-hand set open-bottom J-cage.

The D Hanger/Packer may be utilized as the lower packer on a scab liner to isolate damaged casing. It is typically run below a compression-set liner packer such as a hylfo 3 Liner Packer with hold-down slips. The D is set by right- or left-hand rotation and weight is slacked off to hang and set the packer seal. The setting tool is then released, and the running string raised to expose the packer setting dogs. The upper packer is then set with set-down weight.

The D Hanger/Packer is also commonly used as an injection packer on disposal wells. The D provides the largest ID available for injection packer applications.

FEATURES/BENEFITS

- Economical, one-piece hanger and packer for uncemented liners
- Automatic J-cage allows hanger slips to return to the run-in position if desired
- Low profile slips reduce possibility of damage while running in
- T-slot bowsprings eliminate use of set screws in J-cage
- Ideal for use as lower packer of scab liner to isolate damaged casing
- Can also be run upside-down and pulled in tension for shallow scab liners
- Available with optional internal lock ring to maintain setting force



WELL COMPLETION DETAILS

CENTRALIZERS & CEMENT BASKETS ARE LOCATED AT THE FOLLOWING DEPTHS BELOW GROUND SURFACE::

ON THE 244 mm OD CASING ON THE 178 mm OD CASING

- | | |
|----------------------------|----------------------------|
| 1) CEMENT BASKET @ 3.23m | 1) CENTRALIZER @ 140.18m |
| 2) CENTRALIZER @ 40.17m | 2) CENTRALIZER @ 186.67m |
| 3) CEMENT BASKET @ 77.05m | 3) CENTRALIZER @ 246.16m |
| 4) CENTRALIZER @ 113.93m | 4) CENTRALIZER @ 300.48m |
| 5) CEMENT BASKET @ 150.81m | 5) CEMENT BASKET @ 321.74m |
| 6) CENTRALIZER @ 190.93m | 6) CEMENT BASKET @ 328.29m |
| 7) CEMENT BASKET @ 227.87m | 7) CENTRALIZER @ 356.66m |
| 8) CENTRALIZER @ 264.69m | |
| 9) CEMENT BASKET @ 301.57m | |

CENTRALIZERS:
TOPCO INDUSTRIES CENTRALIZERS - TYPE 300-WELDED BOW CENTRALIZERS

CEMENT BASKETS:
TOPCO INDUSTRIES BASKETS - TYPE 400-CEMENT BASKET

APPROXIMATE LENGTH OF CASING IN-HOLE

- 217.6m of 178mm
- 303.0m of 244mm
- 15.0m of 356mm

LEGEND

PORTLAND CEMENT SURFACE SEAL

SCALES

Not to Scale

Designed By: JK	Drawn By: JK
Checked By: JK	Approved By: JK
Date Issued: DECEMBER 2002	Project No.: 22-345

Village of Haines Junction
Box 5398, Haines Junction, Yukon
Y0B 1L0

**HAINES JUNCTION WELL No. 5
COMPLETION DIAGRAM**



FIGURE
5

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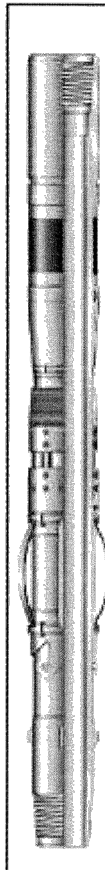
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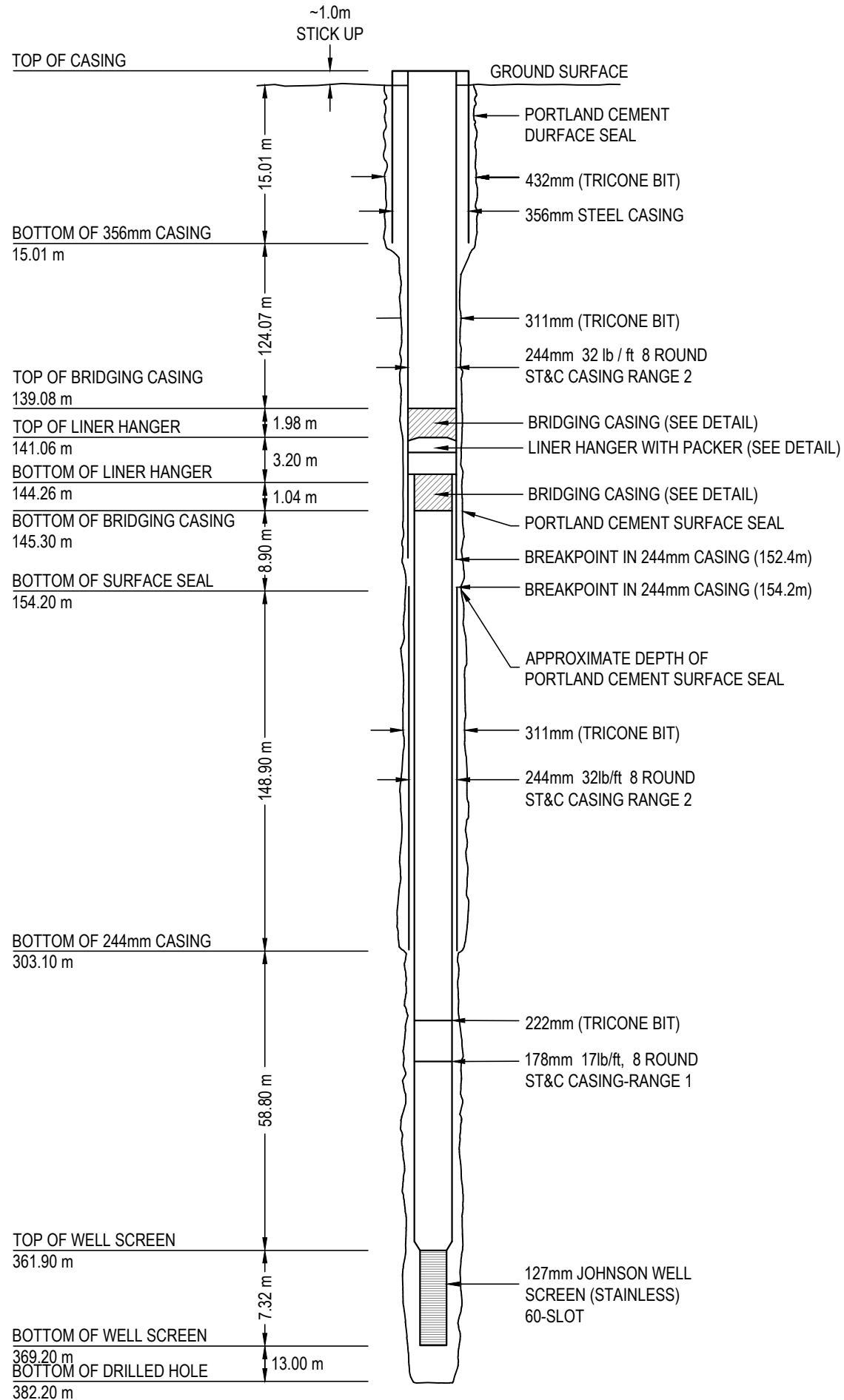
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AFTER GARTNER LEE, 2002



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BRIDGING CASING DETAILS					
ITEM	DESCRIPTION	ID (mm)	OD (mm)	LENGTH (m)	TOP DEPTH (m)
1	178mm SETTING COLLAR	190 mm	216 mm	.32 m	139.08
2	178 mm X 245 mm HYFLO III HANGER	161 mm	216 mm	1.6 m	139.40
3	178 mm ECP PACKER	161 mm	210 mm	2.30 m	141.00
4	178 mm X 114 mm CROSSOVER	194 mm	101 mm	.50 m	141.50
5	114mm CASING PUP	114 mm	101 mm	1.5 m	143.00
6	114 mm ECP PACKER	101 mm	146 mm	2.30 m	145.30
TOTAL DEPTH :					145.30

CLIENT OPUS DAYTON KNIGHT	HYDROGEOLOGICAL INVESTIGATION AND WELL REPAIR WELL #5 AND WELL #3 - HAINES JUNCTION, YUKON			
	WELL # 5 COMPLETION DIAGRAM			
	PROJECT NO. W23101375.001	DWN CB	CKD AJS	REV 0
	OFFICE EBA-WHSE	DATE October 5, 2011		
				Figure 7