CROWN CAPITAL ENTERPRISE LIMITED

WANCHAI, HONG KONG

Demonstration of Rejuvaseal™ Highway G112, Bazhou, Hebei, Peoples Republic of China

June 2002

TS^2 Consulting Inc.
Lamma, Hong Kong

TS² CONSULTING INC. <

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中国云南昆明市人民中路丰园大厦2607室

July 9th, 2002

Crown Capital Enterprise Limited
B5, Centre Point Building
181 – 185 Gloucestor Road,
Wanchai, Hong Kong.

Attn: Charence Chiang
General Manager

Dear Charence

Re: Demonstration of RejuvaSeal™ on Highway G112, Bazhou, Hebei.

This is the final report on the demonstration of RejuvaSeal™ on Highway G112, just east of the City of Bazhou on June 12th, 2002. A demonstration strip, some 212.5 metres in length and covering both the eastbound lane and westbound lane on this two-lane National Highway was undertaken along with the paved shoulders. A very smooth asphalt surface was encountered on this street and the initial results of the RejuvaSeal™ application appear quite satisfactory. Several major cracks that had been previously filled with bitumen were encountered and these were also incorporated into the demonstration strip. Copper Slag from Kunming was also applied to the entire 212.5 metres of this demonstration strip on an experimental basis at an application rate of approximately 0.46 kgs/square metre. The hot weather and the traffic on the road drove most of the slag into the rejuvenated surface, so it would appear that more slag should have been used to provide a rougher surface that would discourage hydroplaning and improve skid resistance.

Yours Sincerely

Anthony G. Speed, P.Eng. (Ontario, Canada)

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中国云南昆明市人民中路丰园大厦2607室

July 22 2002

Crown Capital Enterprise Limited
B5, Centre Point Building,
181-185 Gloucestor Road,
Wanchai, Hong Kong

Attn: Charence Chiang
General Manager

Dear Charence

Re: Inspection of RejuvaSeal Demonstration Strips near Bazhou and Cangzhou

On July 13, I inspected the RejuvaSeal demonstration strips near Bazhou and Cangzhou in Hebei Province, that had been undertaken on June 12 and June 14, 2002 respectively.

I was accompanied by "John" Chu Jiang from the Beijing Office of Crown Capital and "Leo" Lee Lyung, from Crown Capital's office in Jinan, Shandong Province. We were accompanied by four individuals from the Hebei Highways Maintenance Department (names unknown). The first strip inspected was near Bazhou, where a section of Highway G112, some 8 kilometres west of Bazhou had been treated with RejuvaSeal on 212.5 metres of the east bound lane and similarly for 212.5 metres on the adjoining west bound lane, for a combined distance of 425 metres. Copper slag had been applied to the RejuvaSeal treated section immediately after the surface started to dry.

The slag in all instances, had been pressed into the asphalt pavement by the wheels of the vehicles traveling over the RejuvaSeal treated section and was barely perceptible. Running the palm of ones hand over the pavement showed it was very smooth. The outflow meter was used at three locations on the test strip, two on the shoulder of the eastbound lane and one on the shoulder of the

westbound lane. Results from the outflow meter corroborated the fact, that the pavement was still not acceptable from a water hydroplaning perspective, as both readings in the eastbound lane were in excess of 50 seconds, whereas a reading of 8 seconds was achieved on the shoulder of the westbound lane at one of the few places, where the road surface was rough.

The RejuvaSeal had penetrated to a depth of approximately 10 to 12 mm and the asphalt pavement surface was easy to dig with a pocketknife. Water poured onto the road surface didn't penetrate the asphalt pavement. Although this cannot be an objective comparison as this section of highway already had the bitumen flushing to the surface in many areas, prior to the treatment with RejuvaSeal. In general, the fact that the client did not permit the RejuvaSeal treated road surface to completely dry, prior to re-opening it for traffic should be considered detrimental to the RejuvaSeal application. This is probably why the slag was "massaged" into the road surface. This test strip can be considered to be a marginal advertisement for RejuvaSeal/Slag treatment, although the RejuvaSeal aspect may prove to be a "winner" in the long run. A sheen was still evident on the pavement surface, although experience indicates that this should disappear in the next month or two.

The next strip inspected was on Highway G104, some 35 kilometres north of Cangzhou. Here a demonstration strip, some 465 metres long on the southbound lane of this two lane highway was treated with RejuvaSeal and then followed up with an application of copper slag. The client in this instance allowed adequate time for the RejuaSeal to dry, before allowing traffic to resume on this section. The copper slag was still quite evident. No supplementary readings were taken with the Outflow Meter, as results from testing on June 15 were quite acceptable (5 to 15 second range). The road surface appeared quite respectable considering it was a second overlay, circa 1996 and there was a prior overlay from 1989 or thereabouts and the original pavement was approximately 1989 vintage.

The RejuvaSeal had penetrated to a depth of around 12 to 15 mm in the test holes dug with a pocketknife. Some mottling of the surface indicated that the reaction between the RejuvaSEal and the bitumen in the asphalt pavement was not uniform, however this may be an apparition, as the sheen was still evident on the pavement surface. This sheen should slowly disappear and perhaps the mottling will disappear.

This summarizes the inspection of the two test strips that was undertaken On July 13, 2002. A photographic record of the inspection follows:

Sincerely,

Anthony G. Speed (P.Eng. Ontario, Canada)

LICENSED PROFESSIONAL ENGINEER
A. G. SPEED
PROVINCE OF ONTARIO

CROWN CAPITAL ENTERPRISE LIMITED

Demonstration of RejuvaSeal
Highway G112, Bazhou, Hebei,
Peoples Republic of China

June 2002

TABLE OF CONTENTS

FIGURES

TABLES

CROWN CAPITAL ENTERPRISE LIMITED

Demonstration of RejuvaSeal
Highway G112, Bazhou, Hebei,
Peoples Republic of China

June 2002

APPENDICES

No.	Description
A	Rejuvaseal™ – Technical Seminar, Ping-Gu (Beijing) China, August 2001
B	Rejuvaseal Descriptive Literature
C	Kunming Copper Slag – Technical Data

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Lamma, Hong Kong

CROWN CAPITAL ENTERPRISE LIMITED

Demonstration of RejuvaSeal™
Highway G112, Bazhou, Hebei
Peoples Republic of China

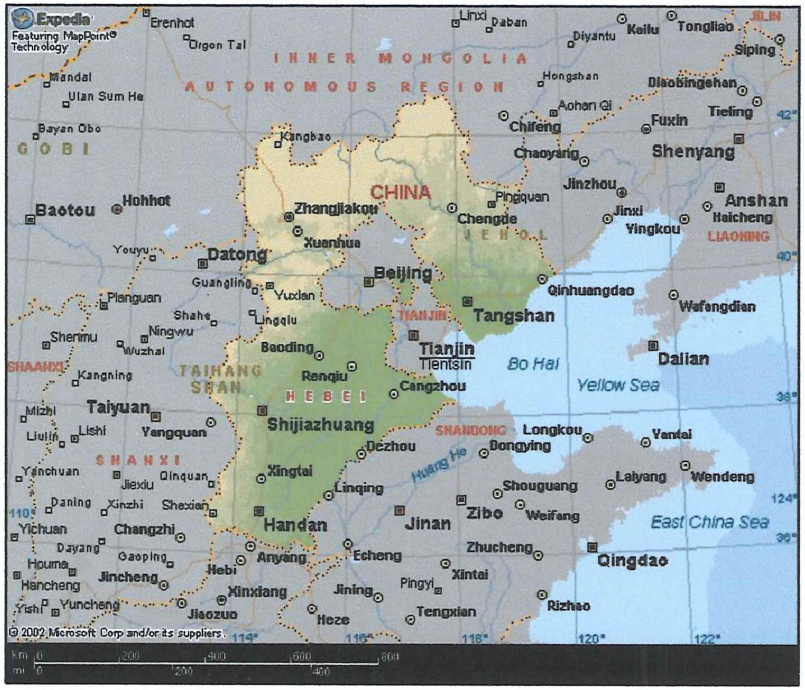
June 2002

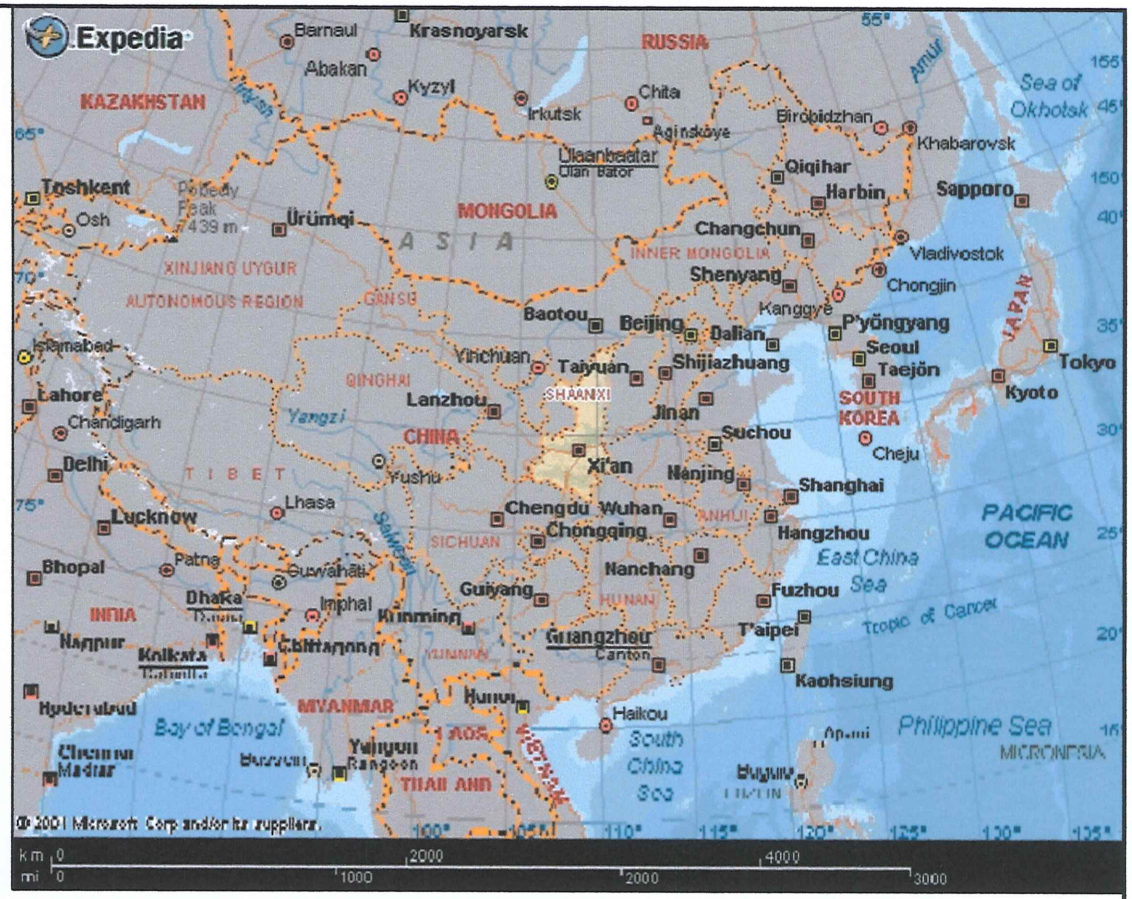
1.0 INTRODUCTION

Crown Capital Enterprise Limited of Hong Kong entered into an arrangement with the Highway Administration Department of Hebei Province, China in May 2002. This arrangement calls for the analysis of the performance of RejuvaSeal™, a sealer/rejuvenator for asphalt pavement on highways within Hebei Province.

Hebei Province is situated to the north of the Yellow River (HuangHe) at it's confluence with the Bohai Sea. Hebei is bordered by Henan, Shanxi, Shandong and Liaoning Provinces as well as Mongolia. Furthermore, Beijing and TianJin and their independently administered Municipalities are hosted by Hebei Province Hebei has seen a major growth in the highway system, in recent years, due to a government drive to build national highways linking Beijing and TianJin with major cities in the adjoining provinces and the massive increase in the world export trade. Bazhou, lies some 50 kilometres west of TianJin and 100 kilometres south of Beijing. The capital city of Hebei Province is ShiJiaJiang with a population of approximately 3 million. See figure 1.0 for a map showing the location of Bazhou and Hebei Province. The majority of the area lies at 10 to 20 metres in elevation, on the extensive plain that borders the Sea of Bohai. The regions' latitude (39 degrees north), mean that there are four seasons, with temperatures ranging from 45 Celsius in the long, hot summer to minus 5 Celsius in the short winter. Their is no rainy season per-se, just thunderstorms and these occur primarily in June thru August, but can extend into September.

In the immediate Bazhou area, a significant unconsolidated sedimentary sequence predominates and this is due to the site adjoining the delta of the Yellow River. The silt from the flooding that has occurred in the last millennium or two, now obscures all outcrops. Drainage channels feeding into the Yellow River also afford no opportunities to see the bedrock. The asphalt in the area is manufactured from imported materials, which is comprised of crushed and screened sandstone and diorites hauled in from quarries elsewhere in Hebei Province, as well as washed gravels from the various rivers. The bitumen binder for the asphalt is sourced from various locations. Since Hebei Province borders the Sea of Bohai, the possibility of bitumen being sourced from offshore is a distinct possibility so refineries in Singapore and the like should not be forgotten.





TS2 Consulting Inc.
Lamma, Hong Kong

DESIGNED BY	TS2	02/08/20	SCALE: As Shown	
DRAWN BY	Bb	02/08/20	PROJECT NO. B023G	

REJUVASEAL DEMO

CROWN CAPITAL ENTERPRISE LIMITED

HEBEI PROVINCE

GENERAL LOCATION MAP

DRAWING NO. FIGURE 1.0

REV. A

2.0 CO-OPERATIVE PROGRAM

The intent of the arrangement with Hebei Province is to demonstrate RejuvaSeal™ at different locations selected by the Highways Administration Bureau. The demonstration will subsequently allow analysis of the performance of Rejuvaseal™ on a variety of asphalt surfaces. A demonstration was undertaken on Highway G112, just east of the city of Bazhou, on June 12, 2002. The portion of the highway that was treated was composed of asphalt pavement of 1996 vintage. No details are known about the subgrade, but inspection of the shoulders show a sandy-silty material. Knowing construction techniques in highways in China in general, minimal gravel would be used for an immediate coarse base, beneath the asphalt pavement. The surface of the asphalt is quite smooth and concern had been expressed about hydroplaning during heavy rains and also water percolating through cracks in the asphalt pavement and softening the sub-grade. Furthermore, this asphalt pavement is approaching the end of its useful life and keen interest was expressed in having the life extended.

3.0 REJUVASEAL™

RejuvaSeal™ is a proprietary product that is supplied by Crown Capital Enterprise Limited of Wanchai, Hong Kong. Rejuvaseal™ has been proven in numerous applications in North and South America to rejuvenate asphalt pavement at various stages of its life and economically extend the life of the pavement. Rejuvaseal™ is a three component, asphalt sealer rejuvenator that is comprised of Coal Tar, Coal Tar Oils and Petroleum Solvents.

3.1 PRIOR EXPERIENCE

Refer to Appendix A for a copy of the brochure provided to participants at a seminar held in Ping-Gu (Beijing Municipality) in August 2001. This outlines the experience with Rejuvaseal™ at various locations in North America and South America. Further information is available from Crown Capital Enterprise Limited. Rejuvaseal™ has been used at numerous airports in North and South America, as well as highways in Alberta, Canada; Cearo State, Brazil and North Dakota and Texas, as well as other locations in the U.S.A.

4.0 TEST PROGRAM

Since Hebei Province is located in a semi-tropical climate (Latitude: 39 North) at a low altitude (10 to 20 metres), it's a demanding setting for asphalt, given the year round warm climate (extremes of 45 Celsius in summer and minus 5 Celsius in the winter) and intense exposure to ultraviolet radiation, all which contribute to the oxidation and breakdown of the asphalt binder.

Hebei has the second greatest concentration of highways in China, with some 10,000 kms of National and Provincial highway. Laifung County, centred about the City of Bazhou is responsible for 600 kilometres of National Highway, and 700 kilometres of Provincial Highway, within it's jurisdiction (distances as of year-end 2000) and approximately 300 kms of streets in Bazhou and other communities

In view of this extensive network of roads and the relatively short life of the asphalt surface, Hebei is definitely interested in determining how to economically extend the life of the asphalt road surface. To this end, Hebei has agreed to try RejuvaSeal™ on Highway G112, adjacent to the city of Bazhou. The arrangement led to a committee being struck to suggest appropriate locations for the testing of RejuvaSeal™. See Figure 4.0, showing the location of this street with respect to Bazhou and Hebei

On June 11, three test patches in the eastbound lane of Highway G112 (two lane highway with shoulders for bicycles, were treated with RejuvaSeal™. The test patches were at the following geographic location:

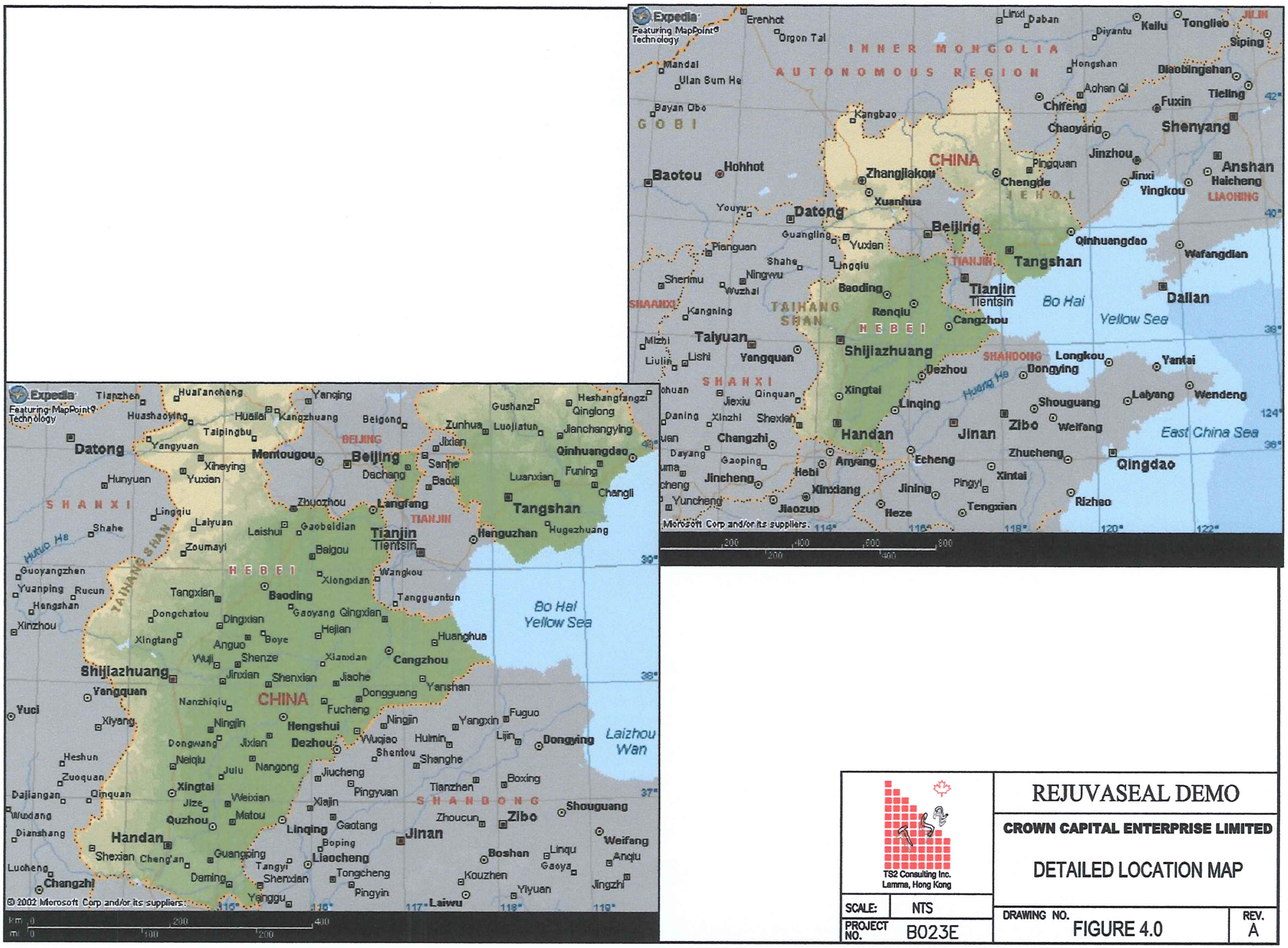
Table 4.1	**Geographic Location of Test Patch Site**	
System	**Northing**	**Easting**
Geographic (deg, min)	39^0 05.470'	116^0 26.774'
Universal Transverse Mercator Grid (50S) (metres)	0452111	4327055

See Figure No 4.1 for a photo showing the test patches as implemented. Particulars of the test patches are as follows:

Table 4.2				**Particulars of the test patch**						
Test Patch Number	**Patch Width (m)**	**Patch Length (m)**	**Total Area m^2**	**Total Area ft^2 approx**	**RejuvaSeal™ Applied**		**Application Rate**			
					US gals	**Litres**	**US Gal /yd^2**	**Litres /m^2**	**m^2 /Litre**	**m^2 /Kg**
One	1.00	1.00	1.00	11	0.07	0.25	0.055	0.25	4.0	3.64
Two	1.00	1.125	1.125	12	0.07	0.25	0.049	0.22	4.5	4.09
Three	1.00	1.250	1.250	13	0.07	0.25	0.044	0.20	5.0	4.55

Subsequent inspection of the test patches on June 12, showed that the application rate of 5.0 m^2/litre (test patch three) was appropriate for the asphalt pavement at this location and could be used as a guide for other locations with similar physical characteristics.

The 212.5 metre long demonstration section on Highway G112 is located some 5 kilometres east of the City of Bazhou. This strip is entirely asphalt pavement. See figure 4.0, which follows, for a location of the general locale. The location of the test patch with respect to the demonstration portion of the street is graphically shown in figure 4.1, which follows.



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Lamma, Hong Kong

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REJUVASEAL DEMO

CROWN CAPITAL ENTERPRISE LIMITED

DETAILED LOCATION MAP

DRAWING NO.	REV.
FIGURE 4.0	A

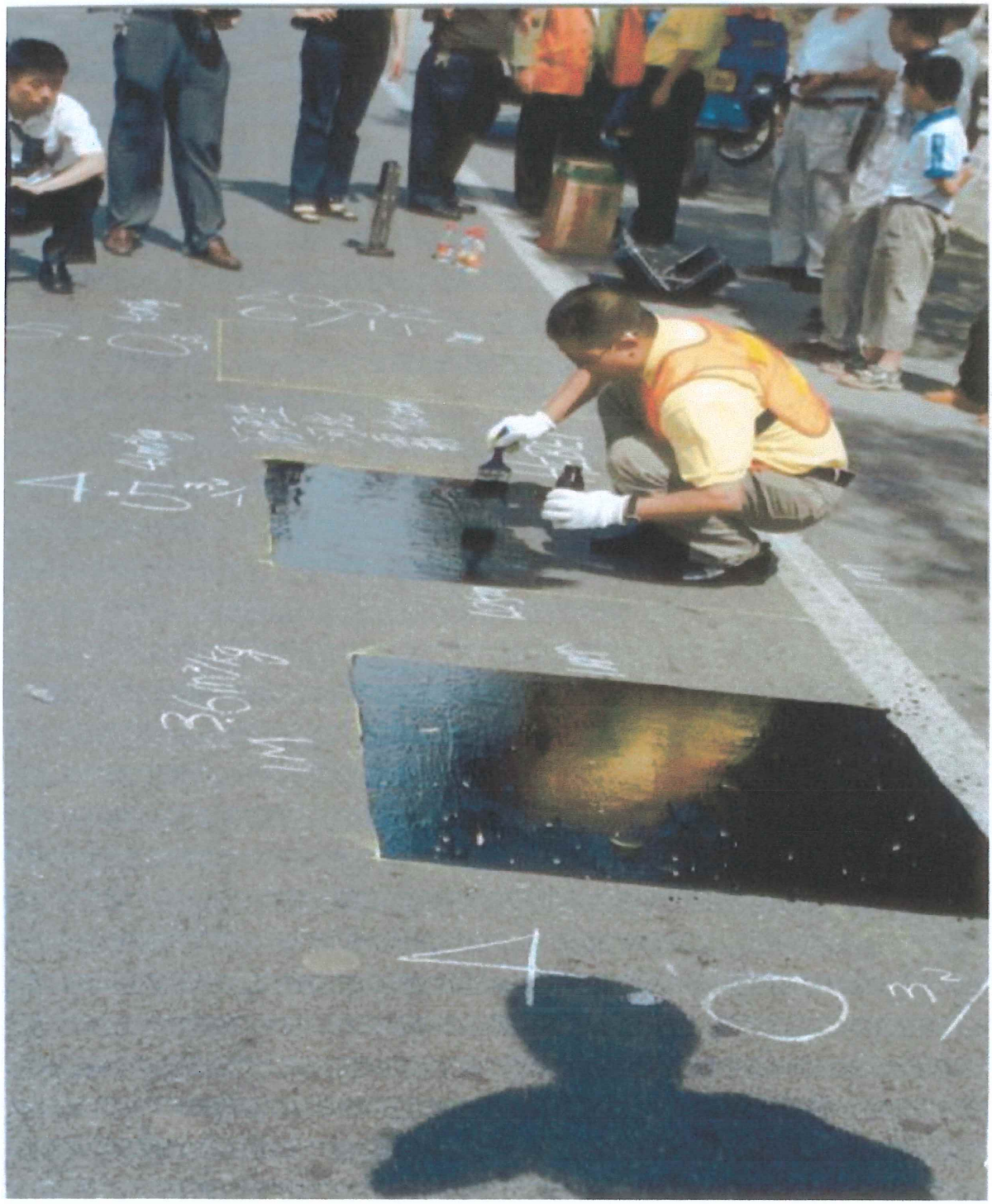

Figure 4.1
Test Patches at Demonstration Site.

the demonstration section, on Highway G112 was selected by the Bazhou City Highway Management and is geographically located as follows:

Table 4.3	Location of Demo Site	
System	**Northing**	**Easting**
Geographic (deg, min)	39^0 05.470'	116^0 26.774'
Universal Transverse Mercator Grid (metres) 50S	0452111	4327055

This is at the same location as the test patch. Refer to Figure 4.0 for the location. Work commenced on the demonstration section at 8:00 am on June 12, on a warm, sunny day, where the mid-day temperature reached 31 Celsius. A strip, 212.5 metres long, on both lanes of this two-lane highway was treated. The test section is located on a straight section. There is a slight camber to the road, which causes water to run off toward the shoulder, rather than puddle on the road. The asphalt surface on the section treated, was reputedly 6 years old (1996 vintage). No significant oil spills were observed, just the occasional drop of transmission oil, crankcase oil or hydraulic fluid. The asphalt pavement surface was not appreciably worn with no rutting due to traffic wear. There was aging and oxidation of the bitumen, which extended to a depth of several millimetres. There were no longitudinal cracks, although there were some lateral cracks. The entire portion of the treated highway section was on a compacted silty-clay, sub-grade

On the morning of June 12, twelve segments (panels), on the eastbound lane were marked off in 17 metre increments. A final panel of 8.5 metres was added to make the distance some 212.5 metres. The width of the lane is 3.6 metres between the painted centre line and the shoulder marker line, whilst the paved shoulder is 1.9 metres wide. A five U.S. gallon (17.9 litres) pail of RejuvaSeal^{TM} was assigned to each panel. The RejuvaSeal^{TM} was applied to each of the panels, including the paved shoulder, using paint rollers to ensure uniformity in the application.

In the afternoon, commencing at 2:00 pm, the adjoining westbound lane was similarly marked off and RejuvaSeal^{TM} and the traffic was directed onto the recently completed eastbound lane. The hot day and inadequate time for the RejuvaSeal to dry, meant that the surface was quite soft due to the tires kneading the asphalt pavement. No doubt this inadequate drying time and tire kneading action was detrimental to the RejuvaSeal application.

Details of the application are summarized in the table that follows:

Table 4.4				Details on RejuvaSeal™ Demonstration Section on Highway G112						
Work Schedule	Work Time (hrs)	No. of Panels	Test Length (m)	Total Area m^2	Total Area yd^2	RejuvaSeal™ Applied		Application Rate		
						US gals	litres	US Gal /yd2	m2/litre	M2 /kg
8:00 - 9:20	1.33	12	204	1122	1,341	60	227	0.045	4.95	4.50
9:20 – 9:25	0.08	1	8.5	47	56	2.5	9	0.045	4.95	4.50
2:00 – 2:05	0.08	1	204	47	56	2.5	9	0.045	4.95	4.50
2:05 – 2:50	0.75	12	8.5	1122	1,341	60	227	0.045	4.95	4.50
Totals	2.25	26	425	2,338	2,794	125	493	0.045	4.95	4.50

In view of concern expressed by the Bazhou City Highway Department that the RejuvaSeal™ treated road gave the appearance of a slippery surface, Copper Slag from a smelter in Kunming was applied to the road surface immediately following the application of RejuvaSeal™. The application rate was approximately 0.46kgs/sq metre (1.0 lbs/sq yard). This was applied to the entire section treated. Further information on this copper slag is contained in technical data sheets in Appendix C. The approximate size consist for copper slag is as follows: >98% passing #8 mesh (2.5 mm) and <5% passing #30 mesh (0.5mm). A 14 tonne, pneumatic-tired roller was used following the slag application to roll the slag into the softened asphalt pavement surface

Ambient temperatures at the time of the application were in the 26 to 31 degree Celsius range, with humidity in the 55% range. The application ceased at 2:55 pm and the westbound lane remained closed until 8 pm on June 13, when it was re-opened for traffic. Photos showing the test application of RejuvaSeal™ follow in figures 4.2, 4.3 and 4.4. on the following pages.

The site was visited on June 13 around 9:14 pm and a difference was readily perceived between the RejuvaSeal™ treated section and the adjoining untreated lanes. A screwdriver was used to dig two small holes in the asphalt pavement, to a depth of 3 centimetres, some 45 metres west of the extreme east end of the demonstration section, to determine the penetration of the RejuvaSeal™. This was one day after the application of RejuvaSeal™ and at these two locations the newly rejuvenated surface was evident, by the black resilient surface layer, which was now approximately 1 millimetre thick. Below that depth, the grey, oxidized layer of asphalt was evident. The copper slag was embedded in surface of the road, and most had become invisible. Little carryover of the RejuvaSeal™ was observed from vehicle tires at the west end of the westbound lane, so it can be presumed that the surface was dry shortly after the site was vacated at 8 pm on June 13.

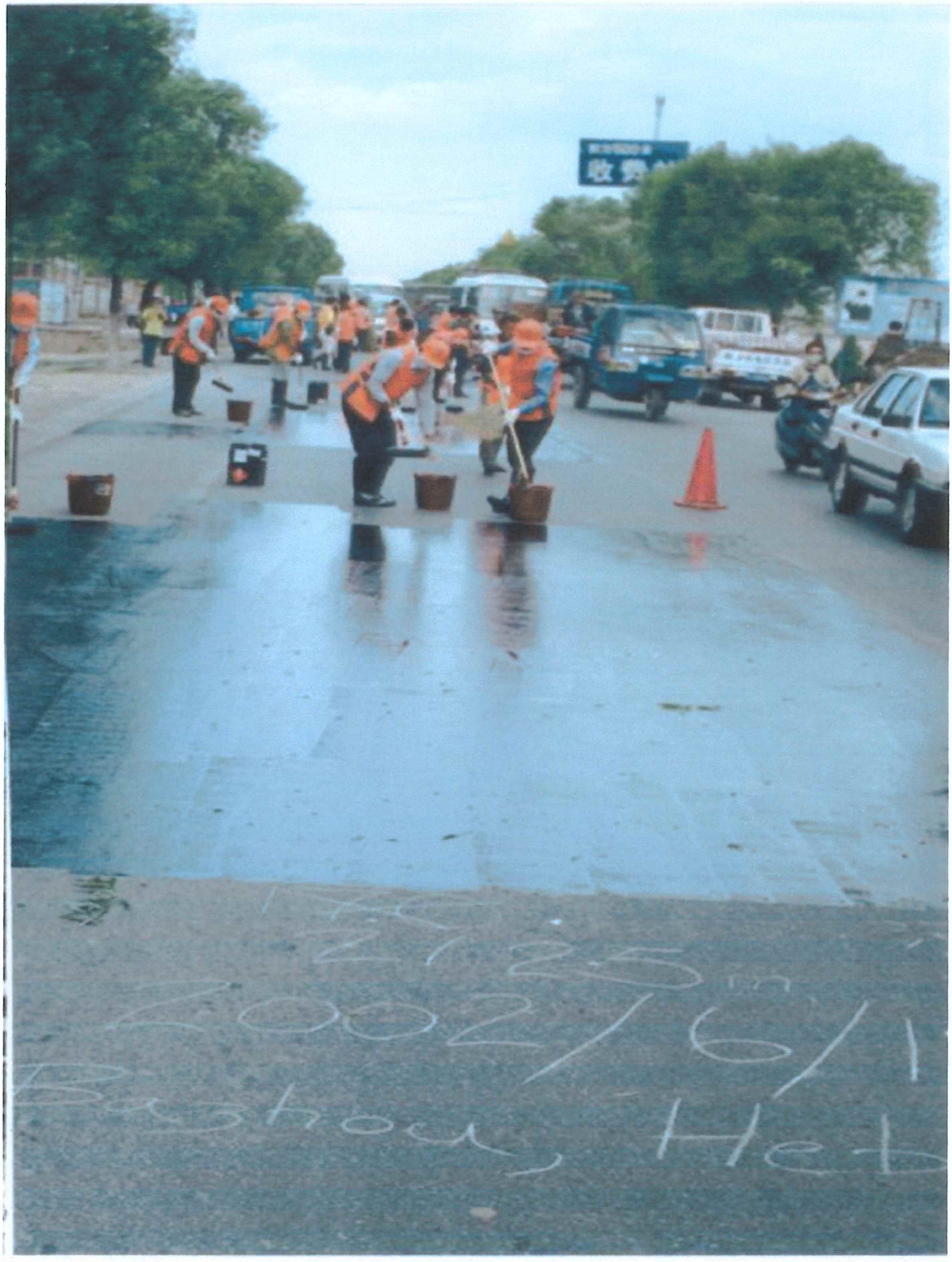

Figure 4.2
Typical Application Procedure.

Figure 4.3 Application of Kunming Copper Slag to RejuvaSeal Surface.

Figure 4.4 Finished Surface on Right Hand Side of Photo.

4.1 RejuvaSeal™ Testing

To date the comparison of the asphalt treated with Rejuvaseal™ has been compared on a subjective basis over a very short period at the test site on Highway G112. Testing equipment brought to the site for comparison on a more disciplined, objective basis solely consisted of an Outflow meter manufactured by Humble Equipment Co. of Reston, Louisiana, U.S.A. This was to establish the Water Dissipation (Hydroplaning Comparison).

Testing equipment will be brought to the site for comparison on a more disciplined, objective basis in the future, and to this end, the following tests will be undertaken.

- Fuel Resistance Comparison
- Elasticity/Ductility Testing

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4.2 Water Dissipation

An "Outflow Meter" manufactured in the U.S.A. by Humble Equipment Company of Ruston, Louisiana and sold under the trademark "Outflow Meter" (see figure 4.5) was used to measure the asphalt pavement's capability to dissipate water, as concern has been expressed about hydroplaning on the RejuvaSeal™ treated surface, versus the untreated surface. The Outflow Meter gives readings in seconds for the dissipation of a known quantity of water. It is suggested that any readings between 3 and 10 seconds are satisfactory results for an asphalt surface, if hydroplaning is to be minimized. Initially readings were taken with this aforesaid Outflow Meter at four locations on the portion of the highway selected for the test, in proximity to the test patches. These initial readings were taken at 4:00 am on June 12,. A further two readings were taken when the site was revisited on June 13 at 8.30 pm and an additional 6 readings were taken on the morning of June 14 at 8:45 am. The results are shown in the table that follows:

Table 4.5		**Outflow Meter Readings**		
Test Date	Location relative to highway centerline	Location relative to west end of test section	Before RejuvaSeal™ (secs)	After RejuvaSeal™ (secs)
June 11	2.6m s of centre	5 metres west	11	n/a
June 11	1.1m s of center	4 metres west	50	n/a
June 11	4.6m s of center	2 metres west	11	n/a
June 12	atop 5.0 m patch	4 metres west	n/a	9
June 12	atop 5.0 m patch	4 metres west	n/a	9
June 12	1m east of patch	3 metres east	+50	n/a
June 12	atop 4.0 m patch	9 metres west	n/a	21
June 13	1 metre north	160 m east	n/a	37
June 13	1 metre north	161 m east	n/a	24
June 13	1 metre north	162 m east	n/a	28
June 13	1 metre north	162 m east	n/a	28
June 13	2.5 metre south	165 m east	n/a	28
June 13	2.5 metre south	166 m east	n/a	28

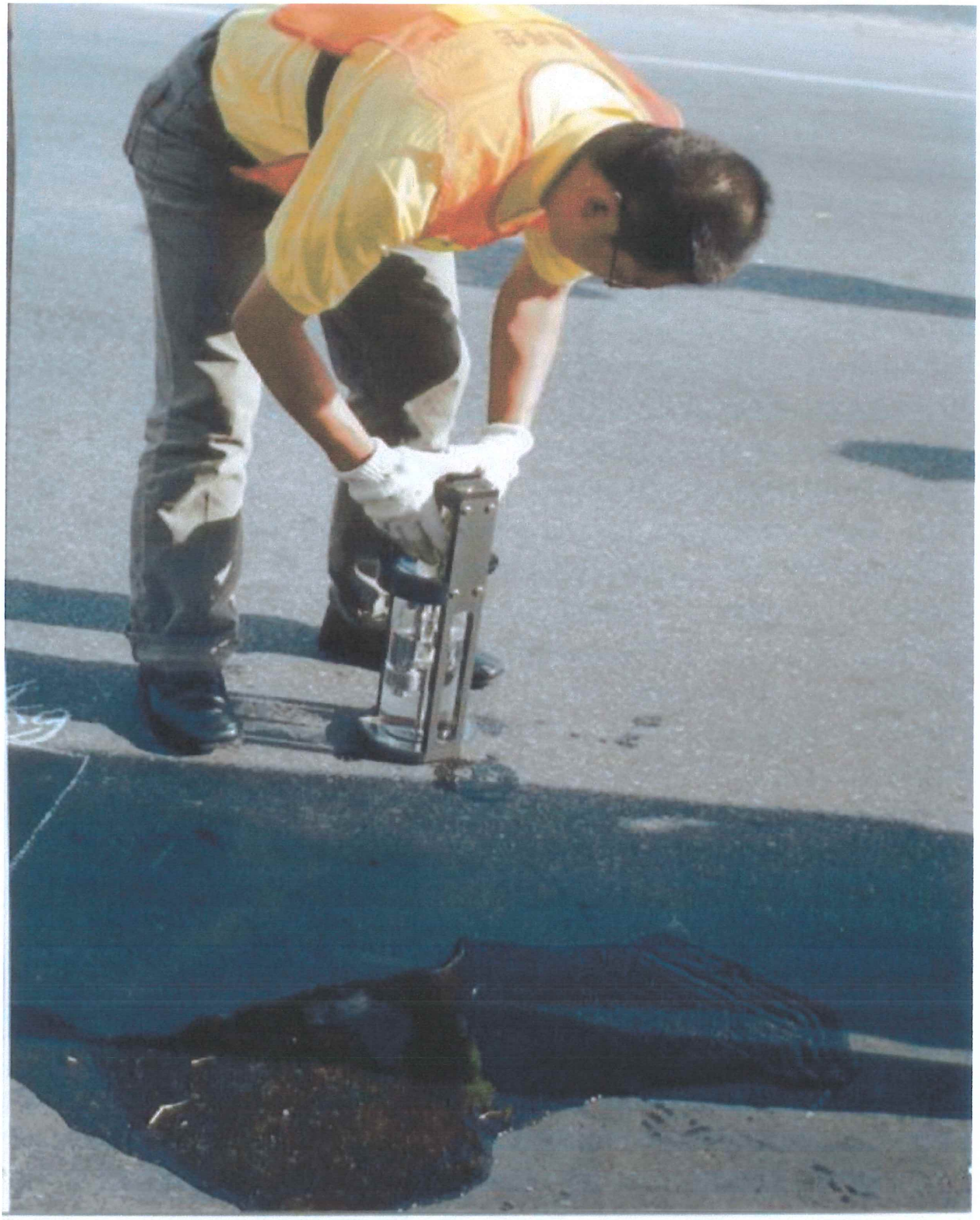


Figure 4.5
Humble Equipment Co. Outflow Meter

4.3 Fuel Resistance Comparison

Fuel Resistance Comparison will be undertaken on several sections of the untreated and RejuvaSeal™ treated sections in close proximity to the Outflow meter tests in the near future. This comparison will consist of pouring about a cupful of diesel fuel onto the road surface and then later checking the penetration of the fuel. If the fuel readily penetrated the asphalt pavement surface, then resistance to this form of chemical attack was presumed to be lower than if the fuel pooled on the surface of the asphalt pavement and slowly evaporated.

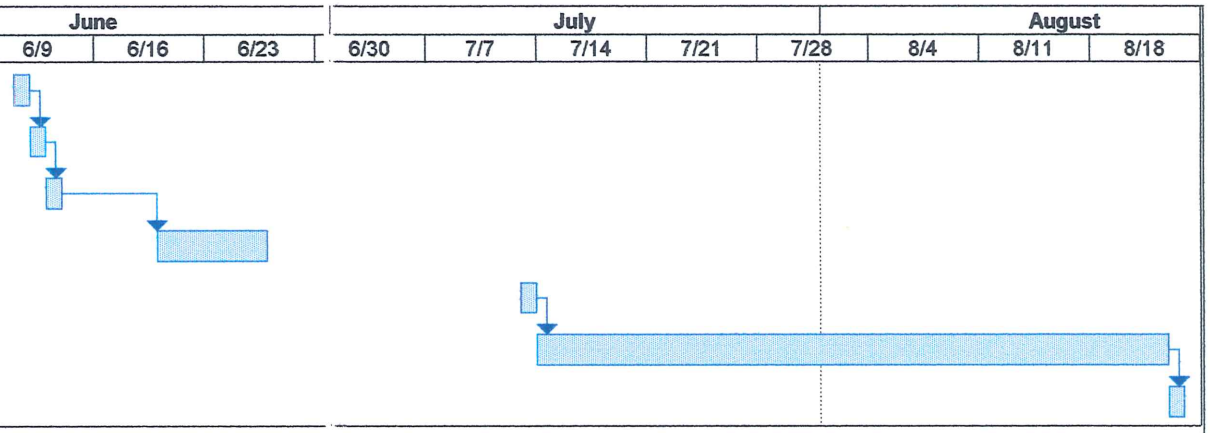
4.4 Elasticity/Ductility Testing

This aspect of the testing is beyond the capabilities of the field equipment available to both Crown Capital Enterprise Limited and RejuvaSeal™ personnel and as such, external assistance has been sought from outside experts in the field of Asphalt Testing. To this end, Dr John Emery in Toronto, Canada has been contacted for advise on independent testing.

5.0 Test Completion Schedule

The team of technicians from the Hong Kong office will be dispatched to undertake further testing on the trial section in the near future. The projected completion of this testing is scheduled as shown in the following chart.

ID	Task Name	Duration
1	Travel to Bazhou	1d
2	Demonstration Section - Highway G112	1d
3	Testing of Asphalt Surface on Hwy G112	1d
4	Prepare draft report on RejuvaSeal Demo and Testi	5d
5	Visit to site to record status of demo	1d
6	Prepare final report	30d
7	Submit final report	1d



Project: ChongQingsched
Date: Sun 10/13/02

Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Milestone
Rolled Up Progress

Crown Capital Enterprise Limited.
RejuvaSeal Demo
Hebei - Bazhou - Hwy G112

Demo Date	12-Jun-02
Prepared by	A.G. Speed
Updated by	A.G. Speed
Updated	14-Jun-02

Assumptions

Eastbound Lanes

Panel 1-12 Length	17.0	Metres
Panel Width	5.50	Metres
Panel Area	93.5	Sq Metres
Panels 13 Length	8.5	Metres
Panel Width	5.50	Metres
Panel Area	46.8	Sq Metres

Westbound Lanes

Panel 1 Lengt	8.5	Metres
Panel Width	5.50	Metres
Panel Area	46.8	Sq Metres
Panels 2-13 I	17.0	Metres
Panel Width	5.50	Metres
Panel Area	93.5	Sq Metres

Conversion Factors

US Gallon=	3.78	Litres
Sq Metre=	10.76	Sq Feet
Sq Metre=	1.20	Sq Yds
RejuvSeal	1.10	S.G.

Crew Consist	**No**
Labourers	16
Equipment Operator	2
Supervisor	2
Total	20

Work Schedule am/pm	Work Time (hrs)	No. of Panels	Test Length (m)	Total Area m^2	Total Area yd^2	RejuvaSeal Applied US gals	litres	kilogram	Application Rate USGal /yd^2	Litres /m^2	m^2 /Litre	m^2 /kg	20 Man Crew m^2 /man hr	yd^2 /man hr
8:00-9:20	1.33	12	204.0	1,122	1,341	60	227	249	**0.045**	**0.20**	**4.95**	**4.50**	42.1	50.3
9:20-9:25	0.08	1	8.5	47	56	3	9	10	**0.045**	**0.20**	**4.95**	**4.50**	28.1	33.5
2:00-2:05	0.08	1	8.5	47	56	3	9	10	**0.045**	**0.20**	**4.95**	**4.50**	28.1	33.5
2:05-2:50	0.75	12	204.0	1,122	1,341	60	227	249	**0.045**	**0.20**	**4.95**	**4.50**	74.8	89.4
Totals	2.25	26	425.0	2,338	2,794	125	473	520	**0.045**	**0.20**	**4.95**	**4.50**	51.9	62.1

Test Patches
Hebei-Bazhou
Highway G112

Test Patch Date
11-Jun-02

Test Patch Number	Patch Width (m)	Patch Length (m)	Total Area m^2	Total Area ft^2 approx	RejuvaSeal Applied US gals	litres	kilograms	Application Rate USGal /ft^2	USGal /yd^2	Litres /m^2	m^2 /Litre	m^2 /kg
One	1.00	1.00	1.00	11	0.07	0.25	0.28	**0.006**	**0.055**	**0.25**	**4.00**	**3.64**
Two	1.00	1.13	1.13	12	0.07	0.25	0.28	**0.005**	**0.049**	**0.22**	**4.50**	**4.09**
Three	1.00	1.25	1.25	13	0.07	0.25	0.28	**0.005**	**0.044**	**0.20**	**5.00**	**4.55**

FlowMeter Readings	**Time (sec)**	**Location**	
Date	**Time**	**Location**	**Location**
June 11, 2002	**Seconds**	**relative**	**relative**
Untreated	**+50**	1 metre east of test patch	1.0 metre north of shoulder line
Untreated	**+50**	1 metre east of test patch	1.5 metre north of shoulder line
Untreated	**10**	2 metre east of test patch	0.5 metre south of shoulder line
June 12, 2002			
Treated	**9**	atop test patch - 5.0 m2/litre	
Treated	**9**	atop test patch - 5.0 m2/litre	
Untreated	**50**	1 metre east of test patch	
Treated	**21**	atop test patch - 4.0 m2/litre	
June 13, 2002			
Treated	**37**	Panel #6 of Westbound	1.0 metre north of centreline
Treated	**24**	Panel #6 of Westbound	1.0 metre north of centreline
Treated	**28**	Panel #6 of Westbound	1.0 metre north of centreline
Treated	**+50**	Panel #6 of Westbound	1.0 metre north of centreline
Treated	**+50**	Panel #7 of Eastbound	2.5 metre south of centreline

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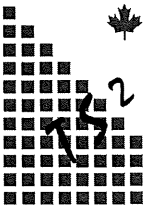
WANCHAI, HONG KONG

Demonstration of Rejuvaseal™ Highway G112, Bazhou, Hebei, Peoples Republic of China

June 2002

APPENDICES

No.	Description
A	Rejuvaseal™ – Technical Seminar, Ping-Gu (Beijing) China, August, 2001
B	Rejuvaseal™ Descriptive Literature
C	Kunming Copper Slag - Technical Data



TS² Consulting Inc.
Lamma, Hong Kong

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Appendix A

Rejuvaseal™ – Technical Seminar, Beijing, Peoples Republic of China, August 2001

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Appendix B

Rejuvaseal™ Descriptive Literature

TS^2 Consulting Inc.
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June 2002

Appendix C

Kunming Copper Slag

Technical Data

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Lamma, Hong Kong

Figure 1.0 General Location Plan

Figure 4.0 Specific Location Plan

Figure 4.1 Test Patches at Demonstration Site

4.2	Typical Application Procedure

4.3	Application of Copper Slag to RejuvaSeal™ .

Figure 4.4 Finished Surface

Figure 4.5 Humble Equipment Company, “Outflow Meter”

Figure 5.0 Project Completion Schedule

6.0 Qualifications

STATEMENT OF QUALIFICATIONS

I, Anthony G. Speed of Hong Kong in the Special Administrative Region of China, DO HEREBY CERTIFY.

I. THAT I am a Consulting Engineer, with offices at 2/F, 81 Po Wah Yuen, Lamma Island, Hong Kong

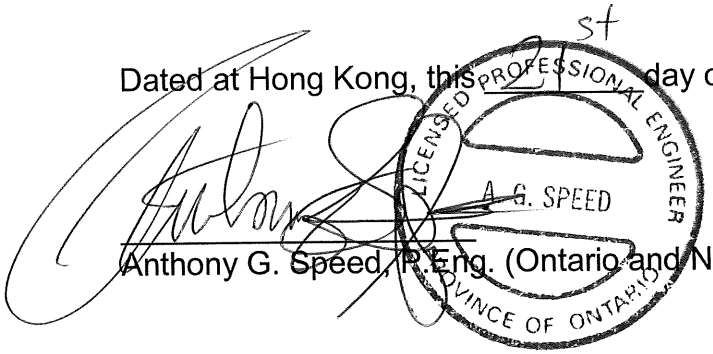
II. THAT I am a 1968 graduate of the University of Saskatchewan, Canada with a Bachelor of Science Degree in Mining Engineering.

III. THAT I am currently registered and in good standing as a Professional Engineer with the Association of Professional Engineers of Ontario, and New Brunswick, Canada

IV. THAT my 30 years of continuous experience in mining, major civil engineering works (earth moving, highway and mining construction) has exposed me to a broad knowledge of mining and heavy civil engineering construction and allowed considerable familiarization with road construction and asphalt pavement.

V. THAT this report is based on my visit on June 11-13, 2002 to Bazhou in Hebei Province, China to view the test section, described in this report

Dated at Hong Kong, this 21st day of June, 2002



Anthony G. Speed, P.Eng. (Ontario and New Brunswick, Canada)