Innovative Energy Technologies Program
Project Annual Report Requirements

Quicksilver Resources Canada Inc. ("QRCI")
(Successor in interest to MGV Energy Inc. via name change)

MGV Mannville Horizontal NGC Project
Submitted June 30, 2006

1. Summary: Project status report, including a chronological report of all activities and operations conducted, and updated incremental reserves and production.

   QRCI's original plan, as outlined in its IETP application dated March 29 of 2005, was to drill up to 5 horizontal Manville wells in 2005, 12 in 2006 and 40 in 2007. In fact, QRCI drilled 2 horizontal Mannville wells in 2005, and now plans to drill up to 5 horizontal wells in 2006.

   The chronology of activities and operations conducted to date on the 2 wells drilled in 2005 is as follows:

   <u>100/01-11-047-24W4 - Wetaskiwin</u>
   2005/06/21 Spud
   2005/07/09 Rig Release
   2005/07/17 Equipped
   2005/07/18 Completed
   2005/07/20 On Production
   2006/01/29 Cleanout
   2006/06/22 Surgi Frac

   <u>100/13-04-048-21W4 – Bittern Lake</u>
   2005/07/11 Spud
   2005/07/30 Rig Release
   2005/08/26 Equipped
   2005/08/26 Completed
   2005/08/10 On Production
   2006/03/29 Wax Cleanout Workover

   QRCI has not yet booked any reserves or production (all gas is flared) from this project.

2. Pilot data
   a. Data submission.
      i. Geology and Geophysical data.

         To date, expansion on the Bittern lake vertical pilot by moving towards horizontal test wells has been facilitated in a two fold process:

         1) a large scale reconnaissance projected contracted to United Oil & Gas ("United"),
         2) identifying candidate locations that meet criteria for drillability, geological conditions, and surface access.

         The United study was commissioned to cover the greater area of QRCI's Mannville holdings, inclusive of Wetaskiwin, New Norway, Bittern Lake, and north Camrose areas. To date, reports are complete on the Wetaskiwin, New Norway, and Bittern Lake areas, with the north Camrose area pending. United was able to apply dedicated personnel and insight to the areas listed above and provided operationally usable results in a timely manner for the 2005 horizontal program.

         Geological parameters utilized in the regional study where taken from the core/log/production data of the vertical Mannville tests relevant to the areas of interest. Calibration of log signatures to the pilot data allowed large scale recognition of coals that where clean or ash free and of ideal rank, thus holding GIP values sufficient to be of interest. Attempts where made to recognize potential flexure of the coal seams that may accentuate inherent permeability, regionally wet coals or coals that where bounded by wet sands, and finally coal seams that where regional and thick enough to be low risk horizontal candidates. Once these factors distilled ideal geological

conditions, land position was considered and locations where selected where leases were currently held or surface lease problems could be minimized.

With the selection of final drilling location and well profile, existing 2D seismic data was reprocessed on a per-location basis. Utilizing lines that where proximal to the well trajectory, available, and of reasonable data quality, the seams where profiled for a final ideal horizontal well profile.

To date, QRCI has selected 15 locations as horizontal candidates, with drilling priorities shifting to optimize the drilling schedule throughout the remainder of 2006. As of the end of June 2006, QRCI has spudded the first horizontal in 20-44-22W4.

ii. Laboratory studies.

N/A

iii. Simulations.

QRCI has not updated any of its Mannville reservoir simulations since its IETP submission in 2005. QRCI has developed a standard reservoir simulation model of the Mannville coals based on available geological, core and petrophysical data, and the historical performance of a number of vertical pilot wells operated by QRCI and others. Since 2005, QRCI has not seen a significant change in the general performance of Mannville test wells to warrant a recalibration of our model. This standard Mannville model was then used in a horizontal well configuration to predict the performance of a Mannville horizontal well.

Based on a model calibrated to the production performance of numerous vertical Mannville wells, our horizontal well simulations showed that we could expect significant increases in both water and gas production from an effectively completed Mannville horizontal well (see table below).

Well Type	Anticipated gas production rate, mcf/d	Anticipated water production rate, bbl/d
Vertical Mannville Well	50 – 100	150 - 300
Horizontal Mannville Well	Up to 1,000	1,500

iv. Pressure, temperature, and other applicable reservoir data.

QRCI has not performed any long term shut in pressure build up tests on the Mannville horizontals as of yet, so we use as representative the 6-week build up pressure and fluid level data from the vertical Mannville well at 11-4-48-21W4

Casing Pressure: 3790 kPa
Fluid Level to MPP: 415 m

Reservoir Pressure = casing pressure + hydrostatic pressure
= 3790 kPa + (p+g+h)
= 3790 kPa + (1.103 kg/m3)*(9.81)*(415m)
= 8280 kPa

Reservoir Temperature = 30 °C

v. Any other measurements, observations, tests or data pertinent to the pilot.

N/A

b. Interpretation of pilot data.

QRCI has developed a calibrated reservoir simulation model for the Mannville coals based on available geological, core and petrophysical data, and production performance from wells in our pilot area, as well as additional Mannville wells operated by QRCI and others. Our primary objective in

developing this calibrated model was to estimate the bulk permeability of the Mannville coals. Our simulation analysis suggests that permeability in the Mannville coals ranges from less than 1.0 mD to about 20 mD, with a typical value being about 5.0 mD. We used the results from this simulation calibration process as the basis for making our predictions of how a Mannville horizontal well would perform given all the observations and interpreted reservoir conditions derived from vertical Mannville wells.

3. Well information
   a. Well layout map.

      See Appendix 3 a for a map indicating the layout of the wells.

   b. Review drilling, completion and workover operations and any difficulties encountered.

      The Drilling plan consisted of setting surface casing down to 215 m. Setting 7" Intermediate casing HZ in the Mannville coal. QRCI dropped off a 4.5" slotted liner in the 156 mm HZ hole. We then set a whipstock assembly in the 7" intermediate and milled out the 7" intermediate casing where we drilled the sump liner hole. QRCI dropped off a 5.5" flush joint liner in the 156 mm open hole.

      Initial completion on both Hz wells involved a brief swabbing evaluation to confirm inflow, followed by running a rod insert pump to pump water up the tubing and allow gas flow up casing. On the Wetaskiwin well, QRCI performed a coiled tubing / N2 cleanout about 2 months after the well went on production to confirm that there were no blockages in the horizontal section. Coiled tubing was run to the toe of the well and N2 was circulated. There were no blockages and minimal fines were returned. On the Bittern Lake well, a solvent circulation treatment was performed to dissolve an asphaltene and coal fine sludge that had collected in the tubing. Restriction was minimal.

   c. Well operation.
      i. Well list and status.

         100/01-11-047-24W4/00 – Producing, on production date: 20-Jul-05
         100/13-04-048-21W4/00 – Producing, on production date: 10-Aug-05

      ii. Wellbore schematics.

         See Appendix 3 c ii

      iii. Spacing and pattern.

         Wells are single-well horizontals.
         Orientations are: 100/01-11-047-24W4/00 east-southeast from 12-11 to 01-11
         100/13-04-048-21W4/00 north-northwest from 03-04 to 13-04

         See Appendix 3 a for a map indicating the well layout

4. Production performance and data
   a. Injection and production history on an individual well and composite basis.

      100/1-11-47-24W4
      Stabilized H2O production rate: 1.2 m3/day
      Stabilized Gas production rate: 1.3 e3m3/day
      Cumulative H2O production: 998 m3
      Cumulative Gas production: 355 e3m3

      100/13-4-48-21W4
      Stabilized H2O production rate: 4.5 m3/day
      Stabilized Gas production rate: 0.90 e3m3/day
      Cumulative H2O production: 2,190 m3
      Cumulative Gas production: 350 e3m3

   b. Composition of produced / injected fluids.

See Appendix 4 b for gas, water, scale, and wax analyses

c. Comparison of predicted versus actual well / pilot performance and a discussion regarding the difference.

In its IETP application, QRCI anticipated that it would experience producing rates from the wells of up to 500 mcf/d of gas and 800 bbl/d of water.

In fact, the wells have peaked at rates of 100 mcf/d of gas and 370 bbl/d of water, significantly below expectations based on our reservoir simulations. There are a number of potential reasons why our initial horizontal wells did not meet expectations, including, but not limited to:

i. Lower-than-expected formation permeability
ii. Near-wellbore damage caused by drilling and completion operations
iii. Unidentified relative permeability effects
iv. Wellbore hydraulics issues, resulting in a low effective lateral length

Some of these issues relate to making better *a-priori* location selections, assuming that we can develop a process that can predict better formation permeability. The study performed by United attempts to address this issue, among others. The remaining issues relate to the development of best practices (drilling, completion, production), which should improve as we drill additional wells and derive key learnings from those results. In essence, QRCI is still in the early phases of fully understanding how the Mannville should be developed with horizontal well technology. QRCI has only drilled 2 of 5 planned Phase 1 locations in 2005. QRCI is hopeful that the regional mapping work that was performed in early 2006 will result in better location selections and that the first 2 wells drilled in 2006 will exhibit production rates in line with its prior modeling.

d. History of injection, production and observation well pressures and average reservoir pressure.

Well producing pressures have remained relatively constant during each well's production life. The casing pressure has remained to be approximately 140 kPa on average in both wells. The well is simply flowing to flare and producing without the use of a compressor.

As a result of the constant producing casing pressure and fluid level, there appears to be little reservoir pressure depletion at this point.

5. Pilot economics to date
   a. Sales volumes of natural gas and by-products.

   Sales volumes are nil as all produced gas is being flared.

   b. Capital costs (include a listing of items with installed cost greater than $10,000).

   Please see attached Appendix 5 for operating statement information.

   c. Direct and indirect operating costs by category (e.g. fuel, injectant costs, electricity).

   Please see attached Appendix 5 for operating statement information.

   d. Crown royalties, applicable freehold royalties, and taxes.

   Nil

   e. Cash flow.

   Please see attached Appendix 5 for operating statement information.

   f. Cumulative project costs and net revenue.

   Please see attached Appendix 5 for operating statement information.

   g. Explanation of material deviations from budgeted costs.

Operating costs are being capitalized during the early stages of the program. QRCI budgeted $1.3 million per well for drilling equipping and 6 months of operating costs all classified as “capital costs”. For the 2 wells drilled to date, “capital costs” have averaged $1.6 million. Material deviations have resulted largely from increased drilling costs and equipping costs with operating costs being lower than expected due to lower than expected water rates.

6. Facilities
   a. Description of major capital items (including new facilities and additions /modifications to existing facilities).

      100/1-11-47-27W4

      - 912 Pump Jack system
      - Generator Package
      - 2PH-860 kPa Separator (0.61m x 1.52m)
      - Flare Stack
      - 2 x 400 bbl production tanks
      - Meter Run
      - 2-7/8” Well head
      - 1,270 m of 2-7/8” tubing
      - 1,260 m ¾” rod string
      - 2” bottom hole insert pump

      100/13-4-48-21W4

      - 640 Pump Jack system
      - Generator Package
      - 2PH-860 kPa Separator (0.61m x 1.52m)
      - Incinerator
      - 2 x 400 bbl production tanks
      - Meter Run
      - 2-7/8” Well head
      - 1,210 m of 2-7/8” tubing
      - 1,200 m ¾” rod string
      - 1-1/2” bottom hole insert pump

   b. Capacity limitation, operational issues, and equipment integrity.

      QRCI has experienced no capacity issues as of yet. Being that the two wells are not tied into a gathering system, capacity issues such as high line pressures, line liquid loading, and compression facility capacity are not present at this time.

      The only significant operational issues encountered as of yet, were the production of down hole wax and some forming of scale on our bottom hole pump barrel. While performing a standard pump change with the intent of remedying what appeared to be a plugged / damaged pump, QRCI discovered that the pump and some of the rod strings were covered in a produced waxy substance (see attached wax analysis). To address the issue, we pulled all of our equipment of the wellbore and flushed the horizontal leg with a chemical to breakdown and flush out the wax. The well has since been put back on production and appears to be pumping normally.

      In another case, QRCI experienced a separate inability to pump fluids. Upon retrieval of the pump on surface, QRCI noticed that the pump failure was a result of a hole in the pump barrel. After further equipment inspection, QRCI noticed that there was some scale present on the pump barrel as well (see attached scale analysis).

   c. Process flow and site diagram identifying major facilities, including production equipment, connected pipelines, gathering and compression facilities.

      See Appendix 6 c for a diagram of major facilities

7. Environment/Regulatory/Compliance

a. Summary of project regulatory requirements and compliance status.

QRCI has been and is in compliance with all project regulatory requirements.

b. Procedures to address environmental and safety issues.

There are no known environmental or safety issues to be addressed.

c. Plan for shut-down and environmental clean-up

There are no immediate plans to shut in any of the wells for environmental cleanup.

8. Future operating plan
   a. Project schedule update including deliverables and milestones.

   QRCI plans to drill 5 additional horizontal Mannville wells in 2006. We will drill the first 2 of these wells and evaluate progress before determining whether or not to continue with the other 3.

   b. Changes in pilot operation, including production operations, injection process, and cost optimization strategies.

   The operation strategy for our upcoming 2006 wells deviates very little from that of our two presently producing wells. The wells are still going to be pumped via a conventional bottom hole insert pump in conjunction with a conventional rod string and 2-7/8" production tubing. During pumping / production operations, we plan to induce a similar wellbore environment with respect to fluid levels, and static pressures. In order to achieve these parameters, the rate (strokes / minute) at which the wells are operated, will be a function of the produced fluid inflow.

   The one significant change in the production operation is with respect to the surface pumping unit. The two presently producing wells are pumping via a conventional pump jack. However, we plan to pump or 2006 wells with a hydraulic pump jack. Being that this difference is only that of surface equipment and the manner in which the bottom hole pump is stroked, it should have no bearing on the well's deliverability or wellbore conditions.

   c. Salvage update

   QRCI has not yet salvaged any of the equipment from its horizontal Mannville program, nor does it have any current salvage plans.

9. Interpretations and Conclusions
   An assessment of the overall performance of the pilot, including:
   a. Lessons learned.

   The results of QRCI's 2005 Mannville horizontal well program have come in below expectations relative to our reservoir simulation models. There are a number of potential reasons why our initial horizontal wells drilled in 2005 did not meet expectations, including, but not limited to:

      i. Lower-than-expected formation permeability
      ii. Near-wellbore damage caused by drilling and completion operations
      iii. Unidentified relative permeability effects
      iv. Wellbore hydraulics issues, resulting in a low effective lateral length

   These reasons, and/or others yet unidentified, and probably in combination, make the Mannville a complex and difficult problem to solve. One major issue that will need to be resolved with additional testing and experimentation going forward is the development of best practices for drilling, completion and production that will yield the best possible Mannville coal well.

   b. Difficulties encountered.

   <u>01-11-047-24W4</u>

Drilling

The well was originally AFE'd for 12 days. Actual time was 18 days due to

- an extra 1/2 day rigging up top drive,
- numerous motor failures while drilling the intermediate hole,
- the build section drilled much slower than expected (1 day longer),
- the EUB required us to log the intermediate hole with drill pipe (lost 1 day),
- top drive failures (1/2 day),
- staged the cement job for intermediate section,
- EM tool failures while drilling horizontal section,
- longer amount of time drilling the sump section of the hole than anticipated
- unplanned gyro surveys for sump section of the hole.

Completions\Operations

QRCI had to perform an unplanned chemical flush to clean out the horizontal section.

QRCI has recently attempted a surgi-frac on this well in order to further stimulate the well.

13-04-048-21W4

Drilling

Well was originally AFE'd for 12 days. Actual time was 21 days due to problems encountered in the horizontal section. Directional tools were lost as a result of getting stuck.

Completions\Operations

QRCI had to perform an unplanned chemical flush to clean out a wax build-up in the horizontal section.

c. Technical and economic viability.

It would be premature for QRCI to comment on the technical and economic viability of its horizontal Mannville drilling program.

d. Overall effect on overall gas and bitumen recovery.

Nil.

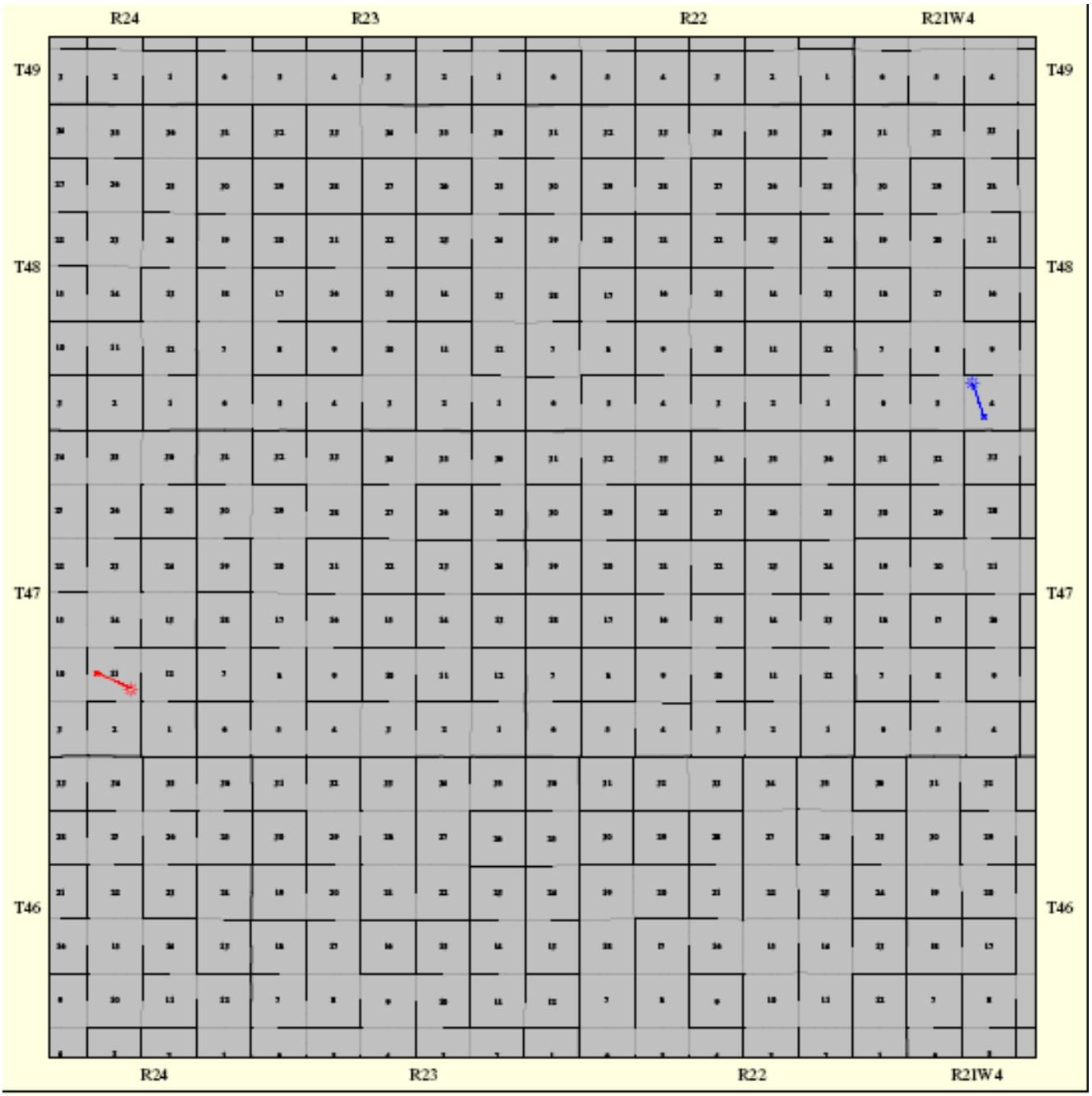
e. Assessment of future expansion or commercial field application and discussion of reasons.

It would be premature for QRCI to comment on future expansion or commercial field application of its horizontal Mannville drilling program.

(Note: Reports should be submitted in both hard copy and electronic format such as pdf file. Raw data should be submitted in a format suitable for ease of use with modeling or other such programs, i.e. Excel.)

Appendix 3 a

Well Layout



Appendix 3 c ii

13-04-048-21W4M Stick Diagram
File: 13-4 STICK.xls

MGV ENERGY INC.
A QUICKSILVER RESOURCES INC. COMPANY

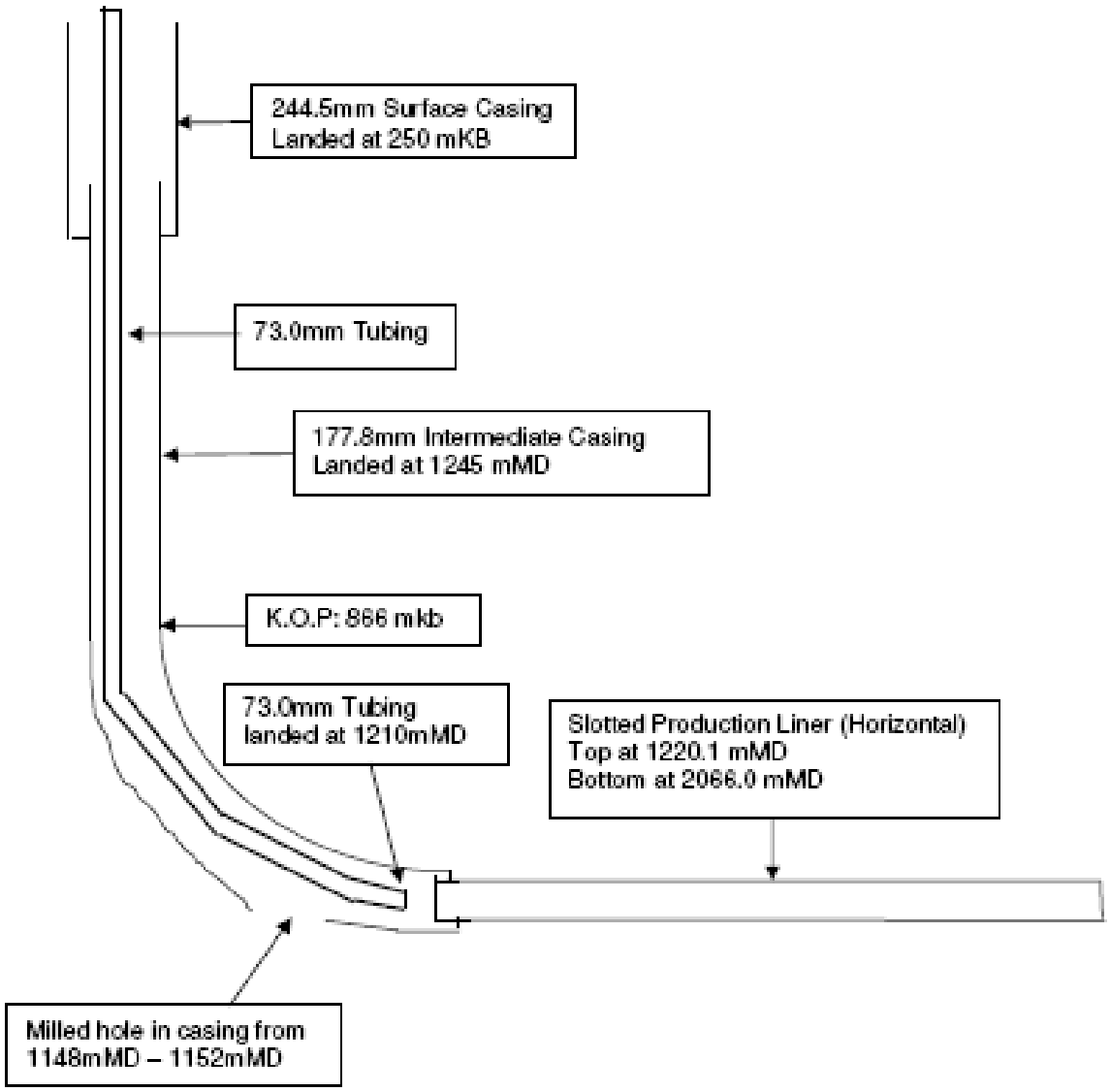
ACTUAL DEPTHS - PLAN SUMMARY CHART
HORIZONTAL WELL
MGV Hz BITTERN LAKE 13-04-048-21W4M

Well : MGV Hz BITTERN LAKE 13-4-48-21W4M
Surface Location : 03-04-048-21W4M
Date Prepared : 2006-06-30
AFE # : 33085
Elevations : GL: 761.70 mSS KB: 765.90 mKB
Information : **CONFIDENTIAL**

Geological Formations	Evaluation	Estimated Depths TVD (mKB)	MD (mKB)	SS (mSS)	Hole Size (mm)	Bit Type	Mud Type	Program Highlights
					324	#1-Retip	Floc water	**Surface Csg:** 244.5 mm, K-55, LT&C, 53.57 kg/m
								Surface Cement: 0:1:0 'G' +0.5% CaCl2.
							or	Cement to surface!!!
Base of Groundwater Protection		200	200	566				**Possible Hole Problems:** Gravel possible- No major problems expected
Belly River Group SS/shale		238	238	528				
8.0 kPa/m, **EMD 815** kg/m3							Gel/Caustic	**Base Of Groundwater Protection:** 200mKB
(Surface Hole TD)		**250**	**250**	516				
(PDC In)		**250**	**250**	516	222	#3-PDC UD 513		**SUPERVISION & SAMPLING:** MGV: From BSC mKB to TD with 5m intervals. EUB: From BSC mKB to TD with 5m intervals..
Lea Park FM shale		561	561	205				Mud Log: Total Gas in intermediate & HZ section.
7.4 kPa/m, **EMD 754** kg/m3								
Milk River		591	591	175				**VERTICAL HOLE and INTERMEDIATE BUILD HOLE**
7.4 kPa/m, **EMD 754** kg/m3								**Core:** none
Colorado Group		720	720	46				**Logs:** None - Logging Waiver Provided
7.4 kPa/m, **EMD 754** kg/m3								
KOP#1A		842	842	-76				
Build @ 2.0deg/30m								**Hole Problems:** Swelling shale's may cause problems in the
KOP#1B		872	872	-106	222			Joli Fou Formation. Pull mini wiper after drilling through it.
Build @ 3.0deg/30m								
KOP#1C		902	902	-136				
Build @4.0deg/30m							Envirofloc	
Second White Specks shale		921	921	-155				**Mud**: Mud up at 1000m, after hole angle exceeds 20deg.
5.7 kPa/m, **EMD 581** kg/m3							&	Base Fish Scales
KOP#1D		932	932	-166	222		Polymer	
Build @5.0deg/30m							Gypsum	**Intermediate Casing:** Obtain a 65s/l vis. prior to POOH to run casing!!
KOP#1E		961	962	-195				- 177.8 mm, 34.23kg/m J-55, LT&C.
Build @5.0deg/30m								
2.38deg assembly W/Pad								
Build to 45.0deg.								
Base Fish Scales Zone shale		996	999	-230	222			**Cement:** Circulate @ 1.4m3/min for 1.5 hrs prior to cementing
6.3 kPa/m, **EMD 642** kg/m3								Lead Tail cement job as per Sanjel Program
Viking FM SS/shale		1,042	1,050	-276				Sanjel Light Weight - top
6.2 kPa/m, **EMD 632** kg/m3								Thixmix II on bottom
Joli Fou Slt/ shale		1,066	1,079	-300				**Dirn'l Parameters:** KOP#1 842.26 mKB TVD/MD - BUR 2.0-6.0 deg/30m
6.2 kPa/m, **EMD 632** kg/m3					222			EOB#1 1117.26mKB (1094.62m TVD) Hold @ 45.0 deg
Mannville Group SS - Start		1,091	1,112	-325				Azimuth 341.70, Survey interval < 20m
8.5 kPa/m, **EMD** 866 kg/m3								KOP#2 1147.26mKB (1115.83m TVD) - BUR 15.0 deg/30m
Note : Increase mud to 1230kg/m3								EOB#2 1237.40mKB (1149.40 TVD) - Land shoe @ 90.7deg
Start of Tangent Section @ 45deg		1,095	1,117	-329				**Intermediate Hole Depth: 1237.40** mKB MD (1149.40 mKB TVD)
End of Tangent Section @ 45deg		1,116	1,147	-350				
Start of Whipstock (after HZ hole)								**Displacement to Intermediate Csg Shoe**: 189.77m
						#4-5-1-7 Tooth		
KOP#2		**1,116**	**1,147**	-350				**HORIZONTAL HOLE DETAILS**
Build @ 15.0deg/30m								
2.77deg assembly								
Build to 90.7deg by 1149.40TVD					156			**HZ Hole Depth:** 2129.83mKB MD (1148.40mTVD) - TOE
Mannville Coal - Start	1	**1,148**	**1,219**	-382	156	#5-Security DBS 2543		**HZ Hole Window:** 1147.90 - 1150.90mKB TVD (+3.0m)
Maintain 1230kg/m3 mud					156	CaCl2		
Mannville Coal - Mid Point		**1,149**	**1,237**	-383	156	Weighted Brine		**HZ Hole Length:** 893 m, or as far as possible
Intermediate Casing point		**1,149**	**1,237**	-383	156	&Defomer		**Expected Mannville Dip:** +1 m heel to toe (drilling up dip)
Set @ 90.7deg					156			**Casing/Liner**: 114.3mm, 17.7kg/m J-55 LT&C 1/4" Slotted Liner & Blanks
Horizontal Section		**1,149**	**1,237**	-383	156			**Hole Problems**: Sloughing Coal, Hole Cleaning, control Drill!
Maintain 90.7deg inclination		**1,148**	**2,130**	-382				Torque & Drag, Cuttings beds. Differential and Mechanical sticking may also occur.
Maintain mud weight @ 1230kg/m3								
								H2S: None expected
Note: Casing exit and sump, after HZ section is drilled								Drilling and Completions **EPZ = 0.0km**

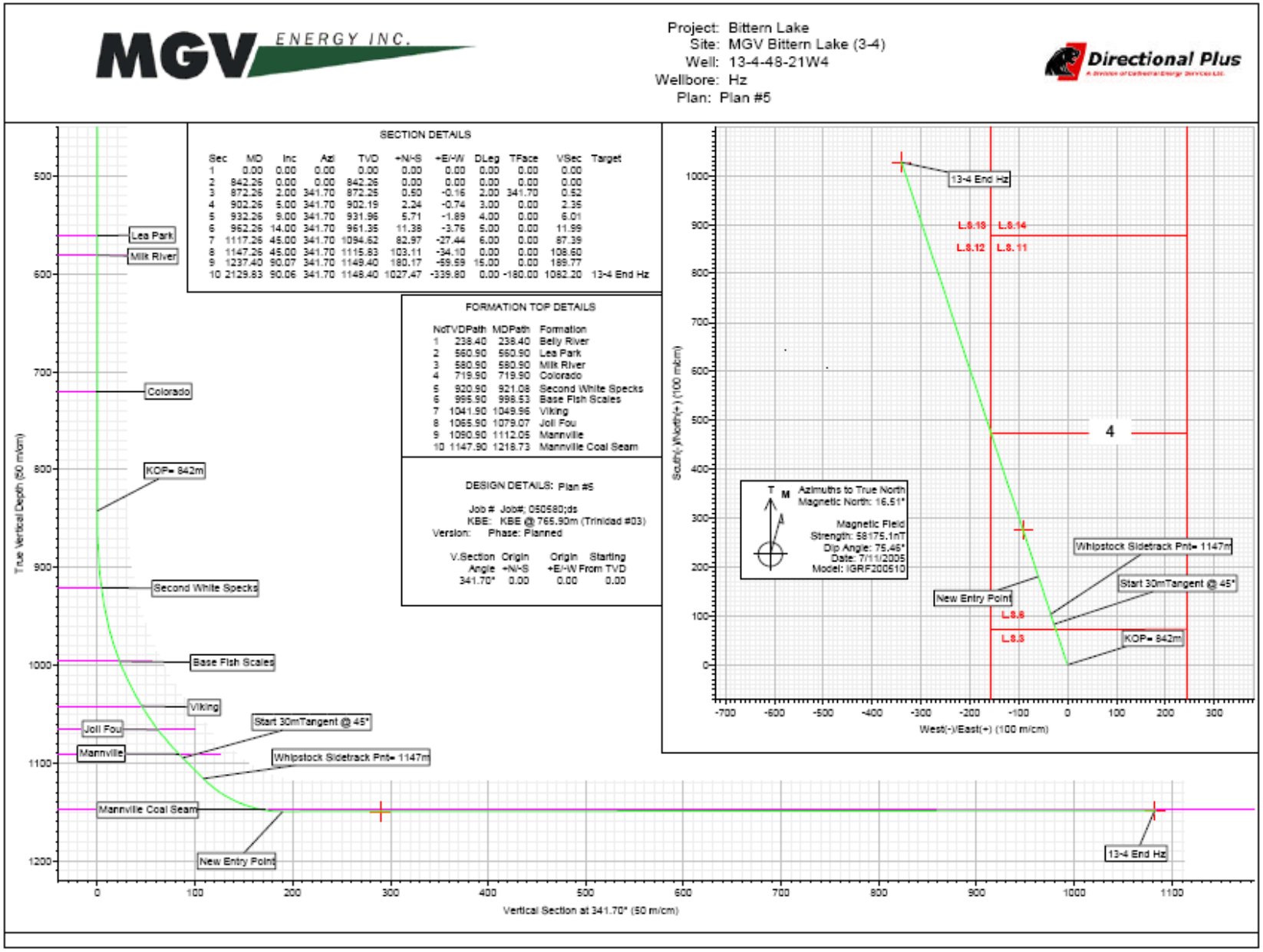
*** Legend: 1 - Primary Zone 2 - Secondary Zone C - Core T - DST P - Penetration DST**

MGV BITTERN LAKE 13-4-48-21 Schematic



Appendix 3 c ii

13-04-048-21W4M Horizontal Plan
File: Bittern Lake (3-4) 14-4 Plan#5.pdf



Appendix 3 c ii Cont'd

Directional Plus

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well 13-4-48-21W4
Company:	MGV Energy Inc.	**TVD Reference:**	KBE @ 765.90m (Trinidad #03)
Project:	Bittern Lake	**MD Reference:**	KBE @ 765.90m (Trinidad #03)
Site:	MGV Bittern Lake (3-4)	**North Reference:**	True
Well:	13-4-48-21W4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #5		

Project	Bittern Lake		
Map System:	Universal Transverse Mercator	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	MGV Bittern Lake (3-4)				
Site Position:		**Northing:**	5,886,017.00 m	**Latitude:**	53° 05' 30.431" N
From:	Map	**Easting:**	365,048.60 m	**Longitude:**	113° 00' 57.558" W
Position Uncertainty:	0.00 m	**Slot Radius:**	mm	**Grid Convergence:**	-1.61 °

Well	13-4-48-21W4					
Well Position	**+N/-S**	0.00 m	**Northing:**	5,886,017.00 m	**Latitude:**	53° 05' 30.431" N
	+E/-W	0.00 m	**Easting:**	365,048.60 m	**Longitude:**	113° 00' 57.558" W
Position Uncertainty		0.00 m	**Wellhead Elevation:**	m	**Ground Level:**	761.70 m

Wellbore	Hz				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	7/11/2005	16.51	75.46	58,175

Design	Plan #5				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (m)**	**+N/-S (m)**	**+E/-W (m)**	**Direction (°)**	
	0.00	0.00	0.00	341.70	

Plan Sections

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
842.26	0.00	0.00	842.26	0.00	0.00	0.00	0.00	0.00	0.00	
872.26	2.00	341.70	872.25	0.50	-0.16	2.00	2.00	0.00	341.70	
902.26	5.00	341.70	902.19	2.24	-0.74	3.00	3.00	0.00	0.00	
932.26	9.00	341.70	931.96	5.71	-1.89	4.00	4.00	0.00	0.00	
962.26	14.00	341.70	961.35	11.38	-3.76	5.00	5.00	0.00	0.00	
1,117.26	45.00	341.70	1,094.62	82.97	-27.44	6.00	6.00	0.00	0.00	
1,147.26	45.00	341.70	1,115.83	103.11	-34.10	0.00	0.00	0.00	0.00	
1,237.40	90.07	341.70	1,149.40	180.17	-59.59	15.00	15.00	0.00	0.00	
2,129.83	90.06	341.70	1,148.40	1,027.47	-339.80	0.00	0.00	0.00	-180.00	13-4 End Hz

Appendix 3 c ii Cont'd

Directional Plus

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well 13-4-48-21W4
Company:	MGV Energy Inc.	**TVD Reference:**	KBE @ 765.90m (Trinidad #03)
Project:	Bittern Lake	**MD Reference:**	KBE @ 765.90m (Trinidad #03)
Site:	MGV Bittern Lake (3-4)	**North Reference:**	True
Well:	13-4-48-21W4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #5		

Planned Survey

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
842.26	0.00	0.00	842.26	0.00	0.00	0.00	0.00	0.00	0.00
KOP= 842m									
870.00	1.85	341.70	870.00	0.43	-0.14	0.45	2.00	2.00	0.00
872.26	2.00	341.70	872.25	0.50	-0.16	0.52	2.00	2.00	0.00
900.00	4.77	341.70	899.94	2.05	-0.68	2.16	3.00	3.00	0.00
902.26	5.00	341.70	902.19	2.24	-0.74	2.35	3.00	3.00	0.00
921.08	7.51	341.70	920.90	4.18	-1.38	4.40	4.00	4.00	0.00
Second White Specks									
930.00	8.70	341.70	929.73	5.38	-1.78	5.66	4.00	4.00	0.00
932.26	9.00	341.70	931.96	5.71	-1.89	6.01	4.00	4.00	0.00
960.00	13.62	341.70	959.16	10.87	-3.60	11.45	5.00	5.00	0.00
962.26	14.00	341.70	961.35	11.38	-3.76	11.99	5.00	5.00	0.00
990.00	19.55	341.70	987.90	18.98	-6.28	19.99	6.00	6.00	0.00
998.53	21.25	341.70	995.90	21.80	-7.21	22.97	6.00	6.00	0.00
Base Fish Scales									
1,020.00	25.55	341.70	1,015.60	29.90	-9.89	31.49	6.00	6.00	0.00
1,049.96	31.54	341.70	1,041.90	43.48	-14.38	45.80	6.00	6.00	0.00
Viking									
1,050.00	31.55	341.70	1,041.94	43.50	-14.39	45.82	6.00	6.00	0.00
1,079.07	37.36	341.70	1,065.90	59.11	-19.55	62.26	6.00	6.00	0.00
Joli Fou									
1,080.00	37.55	341.70	1,066.64	59.65	-19.73	62.83	6.00	6.00	0.00
1,110.00	43.55	341.70	1,089.42	78.16	-25.85	82.32	6.00	6.00	0.00
1,112.05	43.96	341.70	1,090.90	79.50	-26.29	83.74	6.00	6.00	0.00
Mannville									
1,117.26	45.00	341.70	1,094.62	82.97	-27.44	87.39	6.00	6.00	0.00
Start 30mTangent @ 45°									
1,140.00	45.00	341.70	1,110.70	98.23	-32.49	103.47	0.00	0.00	0.00
1,147.26	45.00	341.70	1,115.83	103.11	-34.10	108.60	0.00	0.00	0.00
Whipstock Sidetrack Pnt= 1147m - End of Tangent									
1,170.00	56.37	341.70	1,130.22	119.78	-39.61	126.17	15.00	15.00	0.00
1,200.00	71.37	341.70	1,143.39	145.28	-48.05	153.02	15.00	15.00	0.00
1,218.73	80.73	341.70	1,147.90	162.52	-53.75	171.18	15.00	15.00	0.00
Mannville Coal Seam									
1,230.00	86.37	341.70	1,149.17	173.15	-57.26	182.37	15.00	15.00	0.00
1,237.40	90.07	341.70	1,149.40	180.17	-59.59	189.77	15.00	15.00	0.00
New Entry Point									
1,260.00	90.07	341.70	1,149.37	201.63	-66.68	212.37	0.00	0.00	0.00
1,290.00	90.07	341.70	1,149.33	230.11	-76.10	242.37	0.00	0.00	0.00
1,320.00	90.07	341.70	1,149.29	258.59	-85.52	272.37	0.00	0.00	0.00
1,350.00	90.07	341.70	1,149.26	287.08	-94.94	302.37	0.00	0.00	0.00
1,380.00	90.07	341.70	1,149.22	315.56	-104.36	332.37	0.00	0.00	0.00
1,410.00	90.07	341.70	1,149.19	344.04	-113.78	362.37	0.00	0.00	0.00
1,440.00	90.07	341.70	1,149.15	372.53	-123.20	392.37	0.00	0.00	0.00
1,470.00	90.07	341.70	1,149.12	401.01	-132.62	422.37	0.00	0.00	0.00
1,500.00	90.07	341.70	1,149.08	429.49	-142.04	452.37	0.00	0.00	0.00
1,530.00	90.07	341.70	1,149.05	457.97	-151.46	482.37	0.00	0.00	0.00
1,560.00	90.07	341.70	1,149.01	486.46	-160.88	512.37	0.00	0.00	0.00
1,590.00	90.07	341.70	1,148.98	514.94	-170.30	542.37	0.00	0.00	0.00
1,620.00	90.07	341.70	1,148.95	543.42	-179.72	572.37	0.00	0.00	0.00
1,650.00	90.06	341.70	1,148.91	571.90	-189.14	602.37	0.00	0.00	0.00
1,680.00	90.06	341.70	1,148.88	600.39	-198.56	632.37	0.00	0.00	0.00

Appendix 3 c ii Cont'd

Directional Plus
Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well 13-4-48-21W4
Company:	MGV Energy Inc.	**TVD Reference:**	KBE @ 765.90m (Trinidad #03)
Project:	Bittern Lake	**MD Reference:**	KBE @ 765.90m (Trinidad #03)
Site:	MGV Bittern Lake (3-4)	**North Reference:**	True
Well:	13-4-48-21W4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #5		

Planned Survey

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
1,710.00	90.06	341.70	1,148.84	628.87	-207.98	662.37	0.00	0.00	0.00
1,740.00	90.06	341.70	1,148.81	657.35	-217.40	692.37	0.00	0.00	0.00
1,770.00	90.06	341.70	1,148.78	685.84	-226.82	722.37	0.00	0.00	0.00
1,800.00	90.06	341.70	1,148.75	714.32	-236.24	752.37	0.00	0.00	0.00
1,830.00	90.06	341.70	1,148.71	742.80	-245.66	782.37	0.00	0.00	0.00
1,860.00	90.06	341.70	1,148.68	771.28	-255.08	812.37	0.00	0.00	0.00
1,890.00	90.06	341.70	1,148.65	799.77	-264.50	842.37	0.00	0.00	0.00
1,920.00	90.06	341.70	1,148.62	828.25	-273.92	872.37	0.00	0.00	0.00
1,950.00	90.06	341.70	1,148.59	856.73	-283.34	902.37	0.00	0.00	0.00
1,980.00	90.06	341.70	1,148.55	885.21	-292.76	932.37	0.00	0.00	0.00
2,010.00	90.06	341.70	1,148.52	913.70	-302.18	962.37	0.00	0.00	0.00
2,040.00	90.06	341.70	1,148.49	942.18	-311.60	992.37	0.00	0.00	0.00
2,070.00	90.06	341.70	1,148.46	970.66	-321.02	1,022.37	0.00	0.00	0.00
2,100.00	90.06	341.70	1,148.43	999.15	-330.44	1,052.37	0.00	0.00	0.00
2,129.83	90.06	341.70	1,148.40	1,027.47	-339.80	1,082.20	0.00	0.00	0.00
Hz TD= 2130m									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (m)	+N/-S m	+E/-W m	Northing (m)	Easting (m)	Latitude	Longitude
13-4 End Hz - plan misses by 907.64m at 1222.15m MD (1148.40 TVD, 165.73 N, -54.81 E) - Point	0.00	0.00	1,148.40	1,027.47	-339.80	5,887,053.62	364,737.85	53° 07' 03.673" N	113° 01' 15.831" W
13-4 Entry Pt - plan misses by 12.37m at 1350.00m MD (1149.26 TVD, 287.08 N, -94.94 E) - Point	0.00	0.00	1,149.40	275.33	-91.06	5,886,294.79	364,965.33	53° 06' 39.339" N	113° 01' 02.454" W

Casing Points

Measured Depth (m)	Vertical Depth (m)	Name	Casing Diameter (mm)	Hole Diameter (mm)
250.00	250.00	Surf Csg		

Appendix 3 c ii Cont'd

Directional Plus

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well 13-4-48-21W4
Company:	MGV Energy Inc.	**TVD Reference:**	KBE @ 765.90m (Trinidad #03)
Project:	Bittern Lake	**MD Reference:**	KBE @ 765.90m (Trinidad #03)
Site:	MGV Bittern Lake (3-4)	**North Reference:**	True
Well:	13-4-48-21W4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #5		

Formations

Measured Depth (m)	Vertical Depth (m)	Name	Lithology	Dip (°)	Dip Direction (°)
238.40	238.40	Belly River		0.00	
560.90	560.90	Lea Park		0.00	
580.90	580.90	Milk River		0.00	
719.90	719.90	Colorado		0.00	
921.08	920.90	Second White Specks		0.00	
998.53	995.90	Base Fish Scales		0.00	
1,049.96	1,041.90	Viking		0.00	
1,079.07	1,065.90	Joli Fou		0.00	
1,112.05	1,090.90	Mannville		0.00	
1,218.73	1,147.90	Mannville Coal Seam		0.00	

Plan Annotations

Measured Depth (m)	Vertical Depth (m)	Local Coordinates +N/-S (m)	Local Coordinates +E/-W (m)	Comment
842.26	842.26	0.00	0.00	KOP= 842m
1,117.26	1,094.62	82.97	-27.44	Start 30mTangent @ 45°
1,147.26	1,115.83	103.11	-34.10	Whipstock Sidetrack Pnt= 1147m
1,147.26	1,115.83	103.11	-34.10	End of Tangent
1,237.40	1,149.40	180.17	-59.59	New Entry Point
2,129.83	1,148.40	1,027.47	-339.80	Hz TD= 2130m

Appendix 3 c ii cont'd

13-04-048-21W4M Sump Plan
File: Bittern Lake (3-4) 14-4 Plan#5 L2.pdf

Directional Plus
Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well 13-4-48-21W4
Company:	MGV Energy Inc.	**TVD Reference:**	KBE @ 765.90m (Trinidad #03)
Project:	Bittern Lake	**MD Reference:**	KBE @ 765.90m (Trinidad #03)
Site:	MGV Bittern Lake (3-4)	**North Reference:**	True
Well:	13-4-48-21W4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Sump Well		
Design:	Plan #5		

Project	Bittern Lake		
Map System:	Universal Transverse Mercator	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	MGV Bittern Lake (3-4)				
Site Position:		**Northing:**	5,886,017.00 m	**Latitude:**	53° 09' 30.431" N
From:	Map	**Easting:**	365,048.60 m	**Longitude:**	113° 00' 57.558" W
Position Uncertainty:	0.00 m	**Slot Radius:**	mm	**Grid Convergence:**	-1.61 °

Well	13-4-48-21W4					
Well Position	**+N/-S**	0.00 m	**Northing:**	5,886,017.00 m	**Latitude:**	53° 09' 30.431" N
	+E/-W	0.00 m	**Easting:**	365,048.60 m	**Longitude:**	113° 00' 57.558" W
Position Uncertainty		0.00 m	**Wellhead Elevation:**	m	**Ground Level:**	761.70 m

Wellbore	Sump Well				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	7/5/2005	16.51	75.46	58,177

Design	Plan #5				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	1,147.26
Vertical Section:	**Depth From (TVD) (m)**	**+N/-S (m)**	**+E/-W (m)**	**Direction (°)**	
	0.00	0.00	0.00	0.00	

Plan Sections

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)	TFO (°)	Target
1,147.26	45.00	341.70	1,115.83	103.11	-34.10	0.00	0.00	0.00	0.00	
1,167.26	46.03	344.11	1,129.85	116.74	-38.29	3.00	1.54	3.61	60.00	
1,269.59	46.03	344.11	1,200.90	187.57	-58.46	0.00	0.00	0.00	0.00	

Appendix 3 c ii Cont'd

Directional Plus

Planning Report

Database:	EDM	**Local Co-ordinate Reference:**	Well 13-4-48-21W4
Company:	MGV Energy Inc.	**TVD Reference:**	KBE @ 765.90m (Trinidad #03)
Project:	Bittern Lake	**MD Reference:**	KBE @ 765.90m (Trinidad #03)
Site:	MGV Bittern Lake (3-4)	**North Reference:**	True
Well:	13-4-48-21W4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Sump Well		
Design:	Plan #5		

Planned Survey

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Dogleg Rate (°/30m)	Build Rate (°/30m)	Turn Rate (°/30m)
1,147.26	45.00	341.70	1,115.83	103.11	-34.10	103.11	0.00	0.00	0.00
Whipstock Sidetrack Pnt= 1147m									
1,167.26	46.03	344.11	1,129.85	116.74	-38.29	116.74	3.00	1.54	3.61
1,170.00	46.03	344.11	1,131.75	118.64	-38.83	118.64	0.00	0.00	0.00
1,200.00	46.03	344.11	1,152.58	139.41	-44.74	139.41	0.00	0.00	0.00
1,230.00	46.03	344.11	1,173.41	160.17	-50.66	160.17	0.00	0.00	0.00
1,260.00	46.03	344.11	1,194.24	180.93	-56.57	180.93	0.00	0.00	0.00
1,269.59	46.03	344.11	1,200.90	187.57	-58.46	187.57	0.00	0.00	0.00
TD= 1270m									

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (m)	+N/-S m	+E/-W m	Northing (m)	Easting (m)	Latitude	Longitude
13-4 End Hz - plan misses by 940.13m at 1193.98m MD (1148.40 TVD, 135.24 N, -43.56 E) - Point	0.00	0.00	1,148.40	1,027.47	-339.80	5,887,053.62	364,737.85	53° 07' 03.673" N	113° 01' 15.831" W
13-4 Entry Pt. - plan misses by 146.89m at 1195.42m MD (1149.40 TVD, 136.23 N, -43.84 E) - Point	0.00	0.00	1,149.40	275.33	-91.06	5,886,294.79	364,965.33	53° 06' 39.339" N	113° 01' 02.454" W

Casing Points

Measured Depth (m)	Vertical Depth (m)	Name	Casing Diameter (mm)	Hole Diameter (mm)
250.00	250.00	Surf Csg	0.00	0.00

Plan Annotations

Measured Depth (m)	Vertical Depth (m)	Local Coordinates +N/-S (m)	Local Coordinates +E/-W (m)	Comment
1,147.26	1,115.83	103.11	-34.10	Whipstock Sidetrack Pnt= 1147m
1,269.59	1,200.90	187.57	-58.46	TD= 1270m

Appendix 3 c ii Cont'd
01-11-047-24W4M Stick Diagram
File: 1-11 STICK.xls

MGV ENERGY INC.
A QUICKSILVER RESOURCES INC. COMPANY

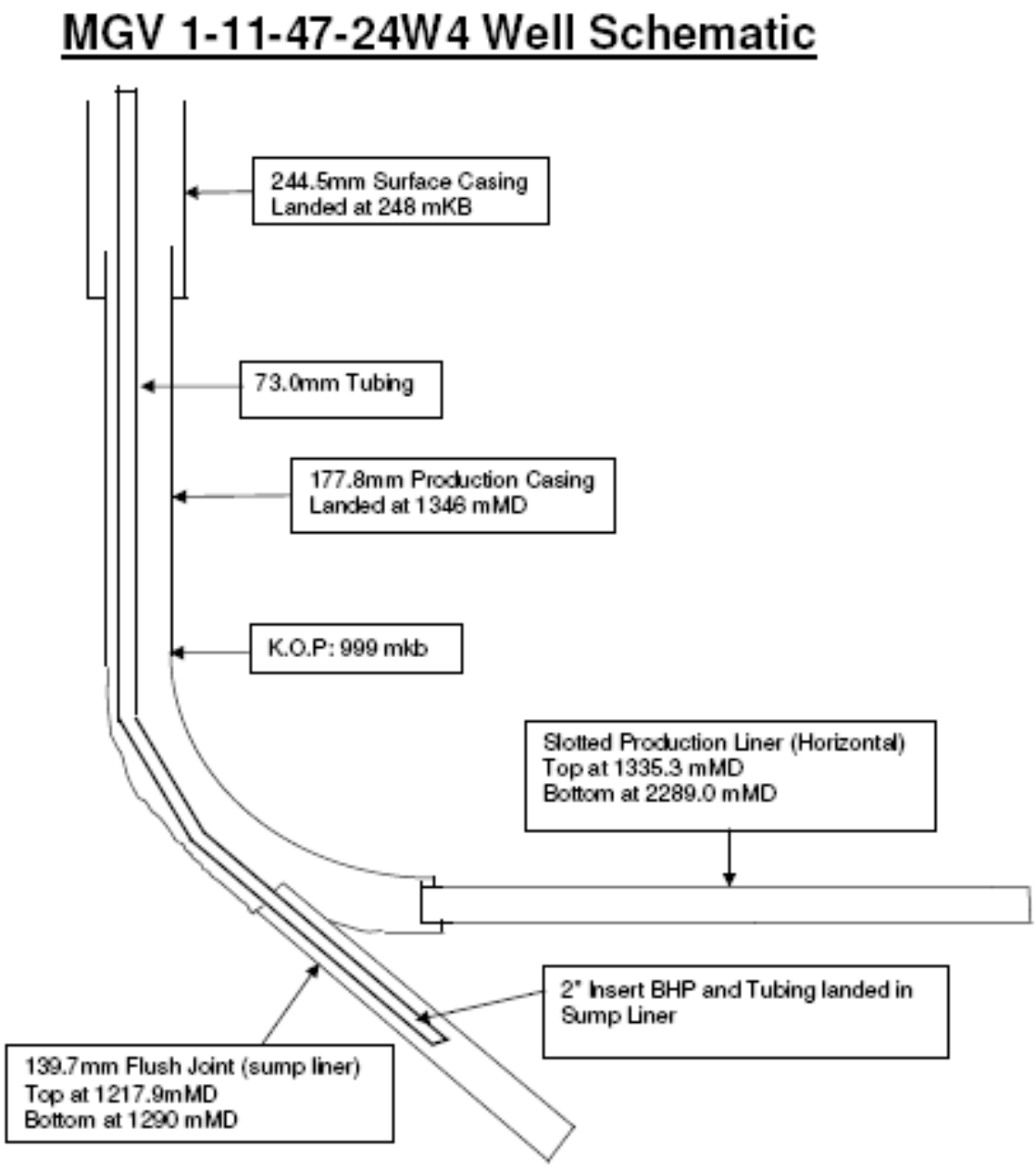
ACTUAL DEPTHS - PLAN SUMMARY CHART
HORIZONTAL WELL
MGV Hz BITTERN LAKE 1-11-47-24W4M

Well : MGV Hz WETASKIWIN 1-11-47-24W4M
Surface Location : 12-11-047-24W4M
Date Prepared : 2006-06-30
AFE # : 32775
Elevations : GL: 752.48 mSS KB: 756.48 mKB
Information : **CONFIDENTIAL**

Geological Formations	Evaluation	Estimated Depths TVD (mKB)	MD (mKB)	SS (mSS)	Hole Size (mm)	Bit Type	Mud Type	Program Highlights
					311	#1-Retip #2-PDC	Floc water	**Surface Csg:** 244.5 mm, K-55, LT&C, 53.57 kg/m
							or	**Surface Cement:** 0:1:0 'G' +0.5% CaCl2. Cement to surface.
Base of Groundwater Protection		200	200	553				**Possible Hole Problems:** Gravel - No major problems expected
							Gel/Caustic	**Base Of Groundwater Protection:** 200mKB
(Surface Hole TD)		**250**	**250**	502				
(PDC In)		**250**	**250**	502	222	#3-PDC		**SUPERVISION & SAMPLING:** MGV: From BSC mKB to TD with 5m intervals. EUB: From BSC mKB to TD with 5m intervals.. Mud Log: Total Gas in intermediate & HZ section.
Belly River Group SS/shale 8.0 kPa/m, **EMD 815** kg/m3		425	425	333				
Lea Park FM shale 6.6 kPa/m, **EMD 672** kg/m3		670	670	98				**VERTICAL HOLE and INTERMEDIATE BUILD HOLE** **Core:** none **Logs:** Reeves memory logs on Drill pipe.
Colorado Group 8.8 kPa/m, **EMD 897** kg/m3		798	798	-40	222			**Hole Problems:** Swelling shale's may cause problems in the Joli Fou Formation. Pull mini wiper after drilling through it.
KOP#1A Build @ 2.0deg/30m		985	985	-237				
KOP#1B Build @ 3.0deg/30m		995	995	-237			Envirofloc	
KOP#1C Build @4.0deg/30m		1,005	1,005	-247	222		& Polymer	**Mud**: Mud up at 1100m, after hole angle exceeds 20deg. Mannville Formation
KOP#1D Build @4.0deg/30m		1,015	1,015	-257			Gypsum	**Intermediate Casing:** 177.8 mm, 34.23kg/m J-55, LT&C. Plus stage tool set @ 1110mMD
1.83deg assembly Build to 45.0deg.								
Second White Specks shale 6.4 kPa/m, **EMD 653** kg/m3		1,018	1,018	-261				
Base Fish Scales Zone shale 6.7 kPa/m, **EMD 683** kg/m3		1,106	1,108	-348	222			**Cement:** Two stage cement job as per Sanjel Program
Viking FM SS/shale 7.7 kPa/m, **EMD 785** kg/m3		1,145	1,152	-387				Sg 1500 - top Thixmix II on bottom
Joli Fou Slt/ shale 8.3 kPa/m, **EMD 846** kg/m3		1,182	1,193	-424	222			**Dirn'l Parameters:** KOP#1 985 mKB TVD/MD - BUR 2.0-6.0 deg/30m EOB#1 1225mKB (1203m TVD) Hold @ 45.0 deg
Mannville Group SS - Start 9.4 kPa/m, **EMD** 958 kg/m3		1,201	1,222	-443				Azimuth 114.57, Survey interval < 20m KOP#2 1256mKB (1224m TVD) - BUR 15.0 deg/30m
Note : Increase mud to 1250kg/m3								EOB#2 1346mKB (1257.69 TVD) - Land shoe @ 90.2deg
Start of Tangent Section @ 45deg		1,203	1,225	-445				**Intermediate Hole Depth: 1350** mKB MD (1257.70 mKB TVD)
End of Tangent Section @ 45deg		1,224	1,256	-466				**Displacement to Intermediate Csg Shoe**: 186.78m
						#4-5-1-7 Tooth		
KOP#2 Build @ 15.0deg/30m 2.97deg assembly		**1,224**	**1,256**	-466				**HORIZONTAL HOLE DETAILS**
Build to 90.2deg by 1257.7TVD					156			**HZ Hole Depth:** 2402mKB MD (1253.69mTVD) - TOE
Mannville Coal - Start	1	1,254	**1,315**	-496	156	#5-5-1-7 insert		**HZ Hole Window:** 1257.69 - 1253.69mKB TVD (+4.0m)
Maintain 1250kg.m3 mud					156	CaCl2		
Mannville Coal - Base		**1,258**	**1,344**	-500	156	Brine		**HZ Hole Length:** 1056 m, or as far as possible
Intermediate Casing point		**1,258**	**1,346**	-500	156	&Chemicals		**Expected Mannville Dip:** +4 m heel to toe (drilling up dip)
Set @ 90.2deg					156	#6-517 insert		**Casing/Liner**: 114.3mm, 17.7kg/m J-55 LT&C 1/4" Slotted Liner
Horizontal Section		**1,258**	**1,350**	**-500**	156			**Hole Problems**: Sloughing Coal, Hole Cleaning, control Drill! Torque & Drag, Cuttings beds. Differential and Mechanical sticking may also occur.
Maintain 90.22deg inclination		**1,254**	**2,402**	**-496**				
Maintain mud weight @ 1230kg/m3								
								H2S: None expected
Note: Casing exit and sump, after HZ section is drilled								Drilling and Completions **EPZ = 0.0km**

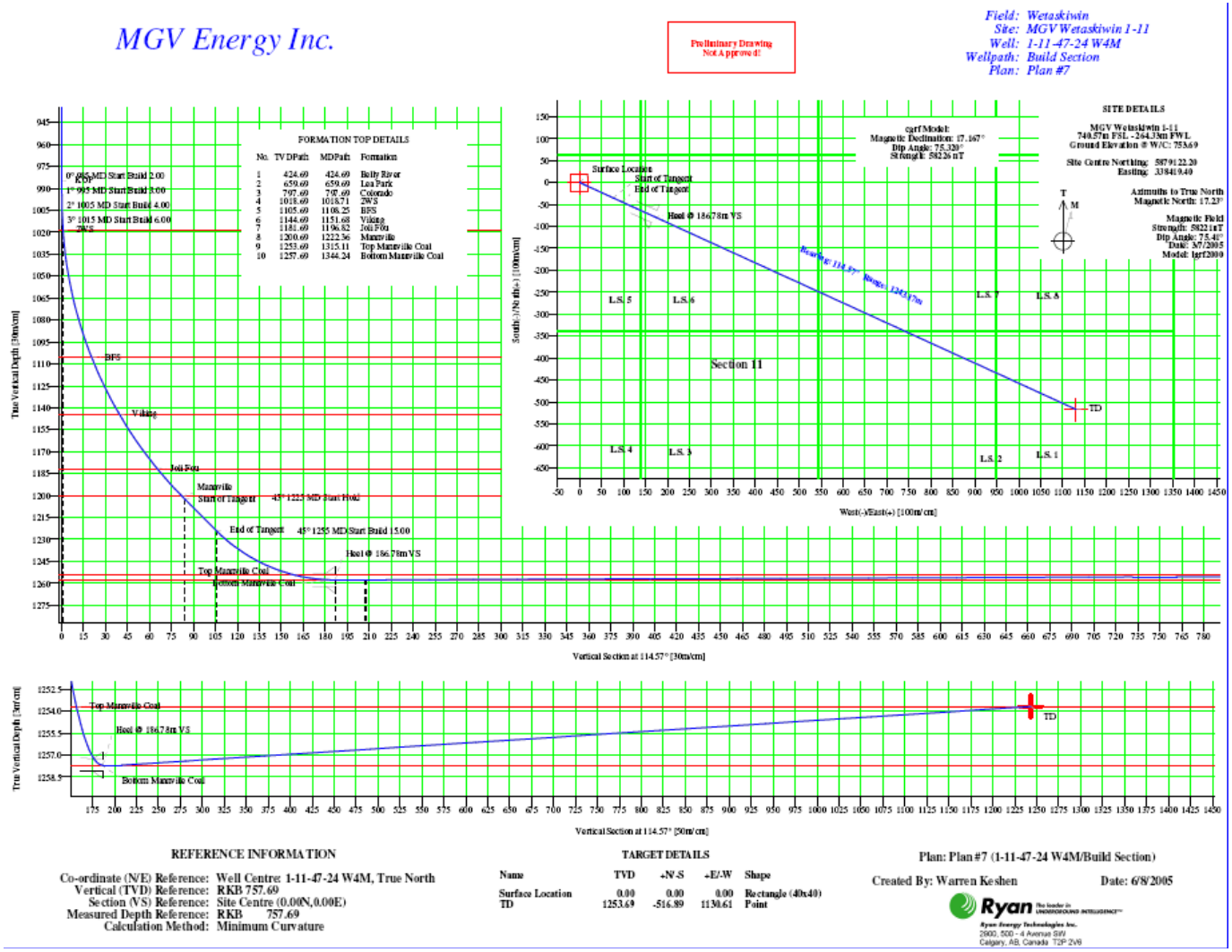
*** Legend: 1 - Primary Zone 2 - Secondary Zone C - Core T - DST P - Penetration DST**

Appendix 3 c ii Cont'd



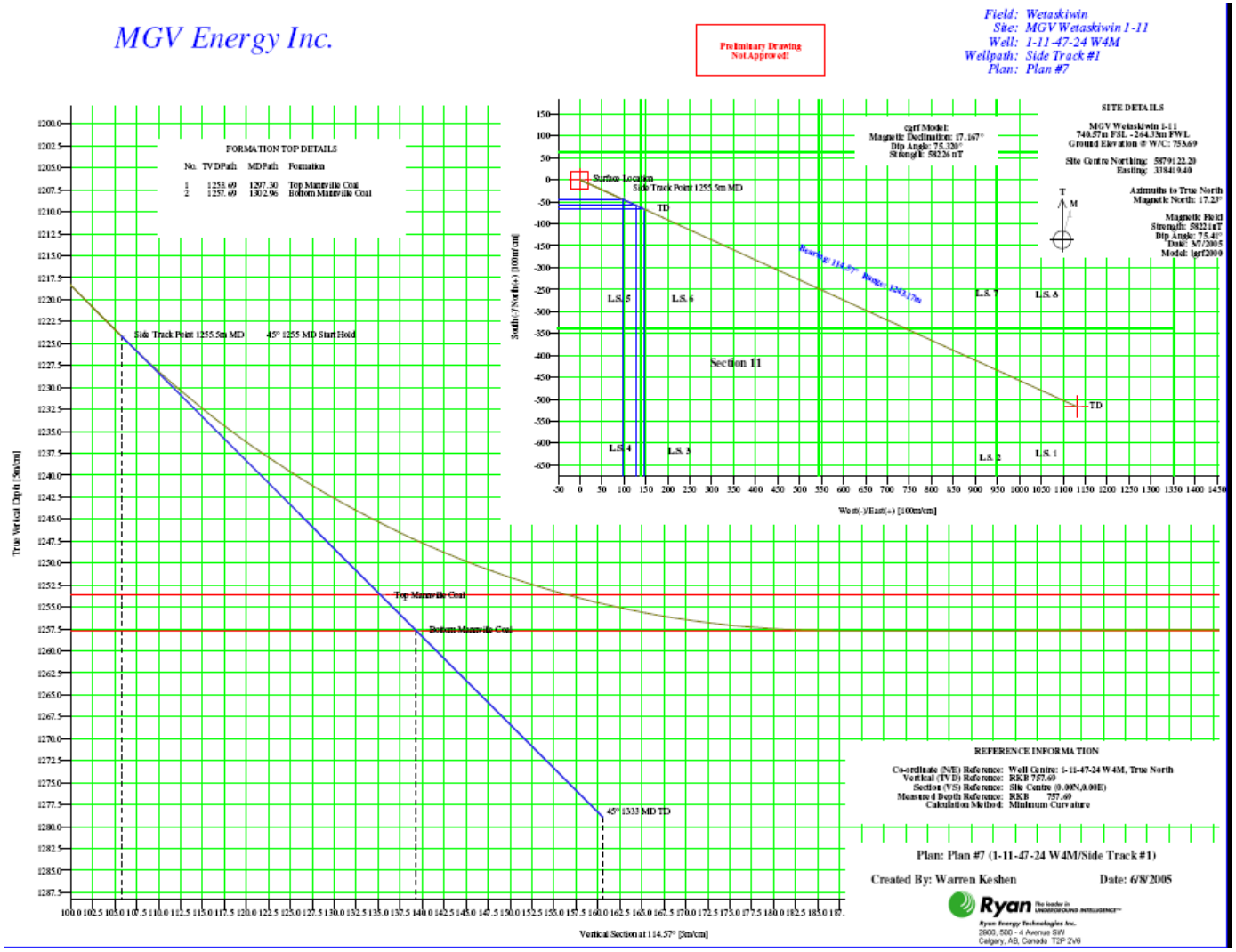
Appendix 3 c ii Cont'd

01-11-047-24W4M Horizontal Build Section Plan
File: MGV Wetaskiwin 1-11 Plan7 Map.pdf



Appendix 3 c ii Cont'd

01-11-047-24W4M Horizontal Side Track #1 Plan
File: MGV Wetaskiwin 1-11 ST Plan7 Map.pdf



Appendix 4 b

Gas Analysis – Vertical Offset 06-04-48-21W4M

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
AGAT 4115	05G131918B

Operator Name
MGV ENERGY INC.

Unique Well Identifier	Well Name	Elevation
06-04-048-21W4		KB m GRD m

Field or Area	Pool or Zone	Sampler's Company
BITTERN LAKE	MANNVILLE	

Test Type	Test No.	Test Recovery	Name of Sampler
			RJ

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
	WELLHEAD	Pressure (kPa)			345	345	1
		Temperature					21

Date Sampled	Date Received	Date Reported	Entered By	Certified By
	Aug 03, 2005	Aug 09, 2005	GL	GL

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL / m³
H2	TRACE	TRACE	
He	0.0003	0.0003	
N2	0.1154	0.1160	
CO2	0.0055	0.0000	
H2S	0.0000	0.0000	
C1	0.8322	0.8369	
C2	0.0425	0.0427	
C3	0.0011	0.0011	4.0
IC4	0.0012	0.0012	5.2
NC4	0.0011	0.0011	4.6
IC5	0.0002	0.0002	1.0
NC5	0.0001	0.0001	0.5
C6	0.0001	0.0001	0.5
C7+	0.0003	0.0003	2.1
Total	1.0000	1.0000	17.9

Exceeds normal limits:
N2

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free	C7+, Air Free As Received
34.77	34.96	0.07

RELATIVE DENSITY (CALCULATED) **DENSITY**

Moisture Free	Moisture & Acid Gas Free	C7+, Moisture Free	C7+, Portion Whole Density	C7+ Density (kg/m3)
0.634	0.629	3.944	0.001	706.7

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPo (abs) kPa	pTo K	pPo (abs) kPa	pTo K
4487	189.5	4471	188.9

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
18.4	114.2

VAPOUR PRESSURE (Pentanes +): 62.09 kPa

H_2S g/m³: 0.00

Appendix 4 b

Gas Analysis – Vertical Offset 09-04-48-21W4M

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
AGAT 21424	05G131918C

Operator Name
MGV ENERGY INC.

Unique Well Identifier	Well Name	Elevation
09-04-048-21W4		KB m / GRD m

Field or Area	Pool or Zone	Sampler's Company
BITTERN LAKE	MANNVILLE	

Test Type	Test No.	Test Recovery	Name of Sampler
			RJ

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
	WELL	Pressure (kPa)			276	276	150
		Temperature			10	10	21

Date Sampled	Date Received	Date Reported	Entered By	Certified By
Dec 30, 1899	Aug 03, 2005	Aug 09, 2005	GL	GL

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL / m³
H2	0.0001	0.0001	
He	0.0003	0.0003	
N2	0.0914	0.0919	
CO2	0.0059	0.0000	
H2S	0.0000	0.0000	
C1	0.8394	0.8444	
C2	0.0469	0.0472	
C3	0.0120	0.0121	44.1
IC4	0.0016	0.0016	7.0
NC4	0.0014	0.0014	5.9
IC5	0.0004	0.0004	2.0
NC5	0.0002	0.0002	1.0
C6	0.0002	0.0002	1.1
C7+	0.0002	0.0002	1.3
Total	1.0000	1.0000	62.4

Exceeds normal limits:
N2

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free	C7+, Air Free As Received
36.49	36.71	0.04

RELATIVE DENSITY (CALCULATED) / DENSITY

Moisture Free	Moisture & Acid Gas Free	C7+, Moisture Free	C7+, Portion Whole Density	C7+ Density (kg/m3)
0.638	0.633	3.702	0.001	697.8

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPo (abs) kPa	pTo K	pPo (abs) kPa	pTo K
4513	193.8	4496	193.1

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
18.5	107.2

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
86.19 kPa	0.00

Calgary AB, Ph: (403) 299-2000. Edmonton AB, Ph: (780) 469-0106. Grand Prairie AB, Ph: (780) 539-6500. Red Deer AB, Ph: (403) 346-6645.
Fort St. John BC, Ph: (250) 785-5500. Prince George BC, Ph: (250) 563-6011. Terrace BC, Ph: (250) 615-9288. Mississauga ON, Ph: (905) 501-9998.

Appendix 4 b

Gas Analysis – Vertical Offset 11-04-48-21W4M

AGAT® Laboratories

GAS ANALYSIS

Container Identification	Laboratory Number
AGAT 4000498	05G131918D

Operator Name
MGV ENERGY INC.

Unique Well Identifier	Well Name	Elevation
11-04-048-21W4		KB m GRD m

Field or Area	Pool or Zone	Sampler's Company
BITTERN LAKE	MANNVILLE	

Test Type	Test No.	Test Recovery	Name of Sampler
			RJ

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
	WELLHEAD	Pressure (kPa)			276	276	250
		Temperature					21

Date Sampled	Date Received	Date Reported	Entered By	Certified By
	Aug 03, 2005	Aug 09, 2005	GL	GL

Other Information

COMP	MOLE FRACTION		PETROLEUM LIQUID
	AIR FREE AS RECEIVED	AIR FREE ACID GAS FREE	mL / m³
H2	0.0042	0.0042	
He	0.0006	0.0006	
N2	0.1704	0.1710	
CO2	0.0036	0.0000	
H2S	0.0000	0.0000	
C1	0.7721	0.7750	
C2	0.0371	0.0372	
C3	0.0093	0.0093	34.2
IC4	0.0011	0.0011	4.8
NC4	0.0010	0.0010	4.2
IC5	0.0002	0.0002	1.0
NC5	0.0001	0.0001	0.5
C6	0.0001	0.0001	0.5
C7+	0.0002	0.0002	1.3
Total	1.0000	1.0000	46.5

Exceeds normal limits:
N2

GROSS HEATING VALUE MJ/m³
15° C AND 101.325 kPa

Air Free As Received	Moisture & Acid Gas Free	C7+, Air Free As Received
32.91	33.03	0.04

RELATIVE DENSITY (CALCULATED) | DENSITY

Moisture Free	Moisture & Acid Gas Free	C7+, Moisture Free	C7+, Portion Whole Density	C7+ Density (kg/m3)
0.657	0.654	3.702	0.001	697.8

PSEUDO CRITICAL PROPERTIES (CALCULATED)

As Sampled		Acid Gas Free	
pPo (abs) kPa	pTo K	pPo (abs) kPa	pTo K
4396	185.8	4386	185.4

RELATIVE MOLECULAR MASS

Total Gas	C_{7+}
19.0	107.2

VAPOUR PRESSURE (Pentanes +)	H_2S g/m³
73.06 kPa	0.00

Appendix 4 b

Water Analysis – 01-11-47-24W4M

AGAT® Laboratories

WATER ANALYSIS

Container Identification	Laboratory Number
PB1A	05W131150A

Operator Name
MGV ENERGY INC.

Unique Well Identifier	Well Name	Elevation
01-11-047-24W4		KB m GRD m

Field or Area	Pool or Zone	Sampler's Company
WETASKWIN	NOT AVAILABLE	SAME

Test Type	Test No.	Test Recovery	Name of Sampler
			RJ

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
	WELLHEAD	Pressure (kPa)					
		Temperature					

Date Sampled	Date Received	Date Reported	Entered By	Certified By
Jul 20, 2005	Jul 27, 2005	Jul 29, 2005	ML	ML

Other Information

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WebFLUIDs, a comparison, history and trending analysis system.

Cations

ION	mg/L	mmol/L	meq/L
Na	26400.0	1148.3	1148.3
K	1310.0	33.5	33.5
Ca	18900.0	471.6	943.2
Mg	2390.0	98.3	196.7
Fe	0.3	0.0	TRACE
		Total Cations	2321.7

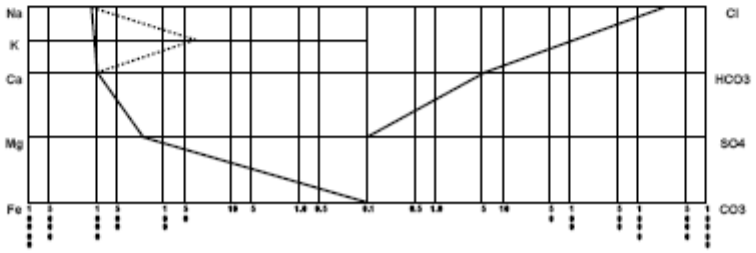
Anions

ION	mg/L	mmol/L	meq/L
Cl	85856.4	2421.7	2421.7
HCO3	336.7	5.5	5.5
SO4	TRACE	TRACE	TRACE
CO3	Nil	Nil	Nil
OH	Nil	Nil	Nil
		Total Anions	2427.2

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	135193
Observed pH	6.83
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.103
Resistivity/OHM-m (25°C)	0.075
Salinity %	14.06

Stiff Diagram (meq/L)



Appendix 4 b

Water Analysis – 01-11-47-24W4M

AGAT® Laboratories

WATER ANALYSIS

Container Identification
PB1A

Operator Name	Laboratory Number
MGV ENERGY INC.	06W160444A

Unique Well Identifier	Well Name	Elevation
01-11-047-24W4		KB m: GRD m:

Field or Area	Pool or Zone	Sampler's Company
WETASKIWIN	NOT AVAILABLE	SAME

Test Type	Test No.	Test Recovery	Name of Sampler

Test Interval or Perfs	Sampling Point		Separator	Reservoir	Source	Sampled	Received
	TANK BOTTOM	Pressure (kPa)					
		Temperature					

Well License	Date Sampled	Date Received	Date Reported	Entered By	Certified By
		Mar 10, 2006	Mar 21, 2006	EM	EM

Other Information

Note: Sampling Point, Unique Well Identifier and/or Pool or Zone information was unavailable at time of reporting. This information is integral to AGAT's WebFLUIDs, a comparison, history and trending analysis system.

Cations

ION	mg/L	mmol/L	meq/L
Na	33200.0	1444.1	1444.1
K	938.0	24.0	24.0
Ca	7440.0	185.8	371.3
Mg	1200.0	49.4	98.7
Fe	162.0	2.9	8.7
Total Cations			1946.8

Anions

ION	mg/L	mmol/L	meq/L
Cl	62580.0	1765.2	1765.2
HCO3	898.7	14.7	14.7
SO4	TRACE	TRACE	TRACE
CO3	Nil	Nil	Nil
OH	Nil	Nil	Nil
Total Anions			1779.9

Other Measurements

Measurement	Value
Total Dissolved Solids (Calculated) mg/L	106418
Observed pH	6.62
H2S (25°C) mg/L	N/D
Relative Density (25°C)	1.073
Resistivity/OHM m (25°C)	0.083
Salinity %	10.54

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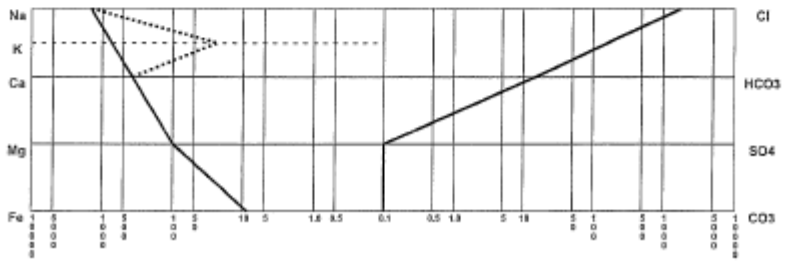
APR 03 2006

Stiff Diagram (meq/L)



Calgary AB, Ph: (403) 299-2000. Edmonton AB, Ph: (780) 469-0106. Grand Prairie AB, Ph: (780) 539-6500. Red Deer AB, Ph: (403) 346-6645.
Fort St. John BC, Ph: (250) 785-5500. Prince George BC, Ph: (250) 563-6011. Terrace BC, Ph: (250) 615-9288. Mississauga ON, Ph: (905) 501-9998.

Appendix 4 b

Wax Analysis – 13-04-48-21W4M Page 1

MGV Energy Inc.

COMPOSITIONAL ANALYSIS OF ONE SAMPLE OF SOLIDS FROM ROD STRING AT MGV BITTERN LAKE.

Work Order A-11761

August, 2005

AGAT Laboratories

3801 - 21 Street N.E.
Calgary, Alberta
T2E 6T5

Appendix 4 b

Wax Analysis – 13-04-48-21W4M Page 2

COMPOSITIONAL ANALYSIS

One sample of solids from rod string at MGV Bittern Lake was analyzed by AGAT Laboratories Ltd. for mineral and elemental identification. The sample was analyzed by X-ray diffraction (XRD) technique to determine its mineralogical composition. For measuring elemental composition, the sample was examined by X-ray energy spectrometry (XES) technique. It is important to note that XRD analysis identifies crystalline material only and XES does not detect elements with an atomic number smaller than 6 (carbon).

The XRD results (Figure 1) show that the sample consists mainly of graphite (carbon, C) with lesser amounts of pyrite (FeS_2), fayalite (Fe_2+$2SiO_4$), zincite (ZnO), calcite (calcium carbonate, CaCO3) and halite (Sodium Chloride, NaCl).

The XES results (Figure 2) show that the sample is composed mainly of carbon (carbon, C) with lesser amounts of sulfur (S) and chlorine (Cl). Minor amounts of silicon (Si), aluminum (Al), oxygen (O), iron (Fe), calcium (Ca), sodium (Na) and zinc (Zn) is also present.

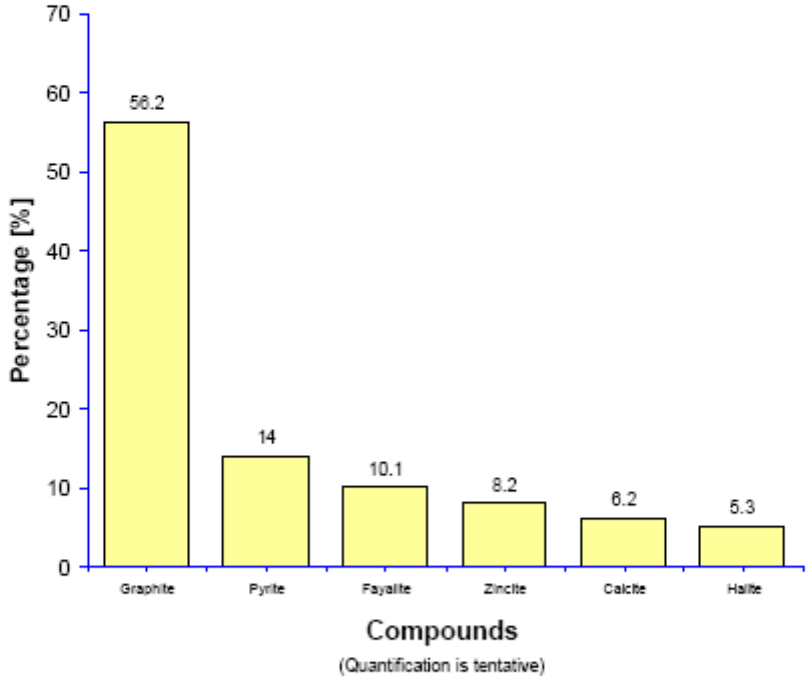
The analyses suggest that the sample consists mainly of carbon bearing material (graphite- precipitate from hydrocarbon?), and iron bearing compounds (faylalite, pyrite, - corrosion products?). Minor amounts of salt (halite – precipitate from brine), calcium carbonate (calcite - precipitate from water?) and zinc oxide (zincite – corrosion product ?) is also present. Aluminum is possibly associated with clay minerals.

Appendix 4 b

Wax Analysis – 13-04-48-21W4M Page 3

Figure 1
X-Ray Diffraction Analysis

Well Name: MGV Bittern Lake
Sample Point: Rod string



Note: XRD identifies crystalline material only

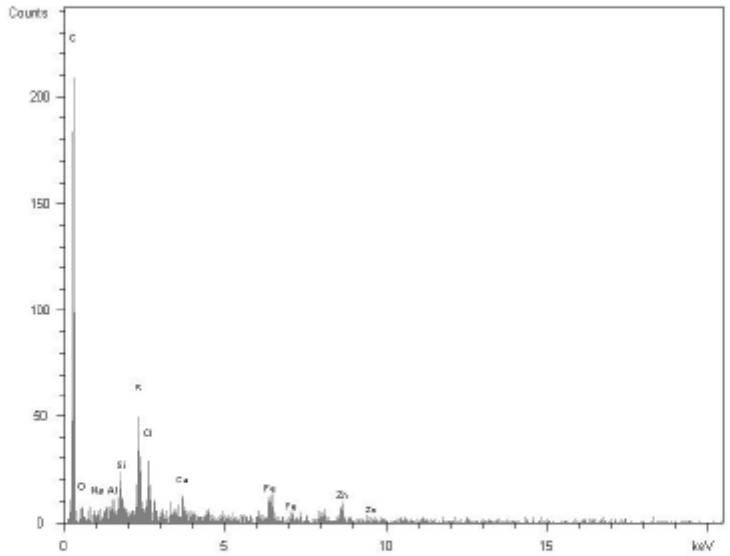
Appendix 4 b

Wax Analysis – 13-04-48-21W4M Page 4

Figure 2

X-Ray Energy Spectrometry Analysis

Sample ID: From rod string at MGV Bittern Lake



A11761-1.1

Elements

Counts – a semi-quantitative measure of the elemental abundance,
i.e. the higher the counts the more abundant the element..

Appendix 4 b

Scale Analysis – 13-04-48-21W4M Page 1

materials analysis

Darwin Precoor
Brenntag Canada
3124 54th Ave SE
Calgary, Alberta
T2C 0A8

March 22, 2006

Dear Darwin,

Re: MGV Energy Pipe Scale

Evaluation of the pipe scale sample from MGV Energy that was submitted for X-ray Diffraction (XRD) analysis is now complete. The diffraction pattern is shown below in Figure 1.

MGV Energy Pipe Scale

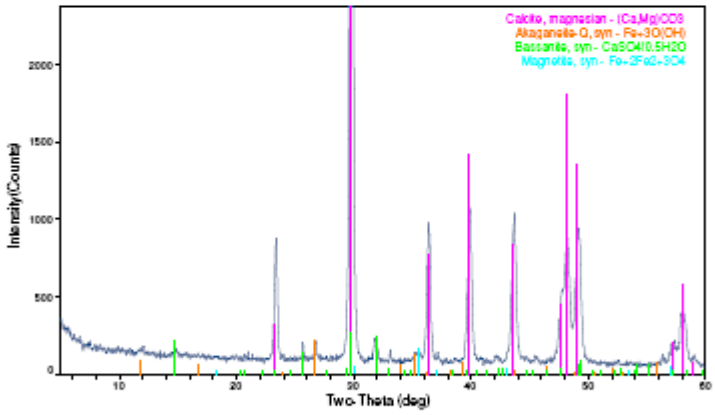


Figure 1. Diffraction pattern for the pipe scale from MGV Energy.

The reflections obtained were matched to the standard patterns for calcite, akaganeite, bassanite and magnetite. The abundance of each phase was estimated from the peak intensities and is shown in Table 1.

DNX Inc., Bay #4, 2280 – 39th Avenue N.E. Calgary, AB. T2E 6P7
Ph: 403/265-XRAY Fx: 403/291-1423
Or e-mail us at info@dnx-ray.ca

Appendix 4 b

Scale Analysis – 13-04-48-21W4M Page 2

Compound	Chemical Name	Abundance (%)
Calcite, magnesian	calcium magnesium carbonate	90-99
Akaganeite	iron oxide hydroxide	1-5
Bassanite	calcium sulfate hydrate	1-5
Magnetite	iron oxide	trace

Table 1. Composition of the pipe scale from MGV Energy.

Calcite is a common carbonate scale. Akaganeite is typically a corrosion product. Bassanite is a sulphate scale. Magnetite may be mill scale or a corrosion product.

We hope that this report fulfils your requirements with this sample. Should you have any further questions or concerns regarding this analysis, please do not hesitate to call our office at **403/265-XRAY**.

Sincerely

Cynthia Nahnybida, *BSc.*
XRD Specialist
Reference: DNX 8419

DNX Inc., Bay #4, 2280 – 39th Avenue N.E. Calgary, AB. T2E 6P7
Ph: 403/265-XRAY Fx: 403/291-1423
Or e-mail us at info@dnx-ray.ca

Appendix 5

Operating Statement 01-11-047-24W4

Monthly Operating Summary (Acct Gross) by Account
Acct Period: Apr 2005 to Jun 2006

Displayed by Acct Period

12782 - WETASKIWIN 100/01-11-047-24W4M/00
Currency: CAD
Measure System: Metric

User: EWALTERS

05-Jul-2006 at 13:54:26

Account	Account Description	Apr 2005	May 2005	Jun 2005	Jul 2005	Aug 2005	Sep 2005	Oct 2005	Nov 2005	Dec 2005	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Total
Expenses																	
9910	120 EQUIPMENT RENTALS	0	0	0	0	0	0	0	2,500	0	0	0	0	0	0	0	2,500
9910	130 PRESSURE TESTING/ SAMPLING/ ANAI	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	98
9910	142 CHART READING	0	0	0	0	0	17	0	0	22	15	11	23	0	27	0	116
9910	151 SURFACE LEASE RENTALS - FREEHOL	0	0	0	0	0	0	0	0	0	0	2,705	0	0	0	0	2,705
9910	160 FUEL AND POWER	0	0	0	0	0	0	0	0	0	78	0	0	0	0	0	78
	Total Expenses	0	0	0	0	0	17	0	2,500	22	93	2,716	121	0	27	0	5,496
	NET OPERATING INCOME	0	0	0	0	0	17	0	2,500	22	93	2,716	121	0	27	0	5,496
	Total Capital Expenditures	0	0	60,672	262,250	348,299	661,097	484,034	190,296	13,604	80,033	319,690	46,474	-192,146	-33,826	160,377	2,380,852
	Net Cash Flow	0	0	60,672	262,250	348,299	661,114	484,034	192,796	13,626	80,126	322,406	46,594	-192,146	-33,800	160,377	2,386,347
	Net Income (per BOE)																
	Royalties as a % of Revenue																

Appendix 5

Operating Statement 13-04-048-21W4

Monthly Operating Summary (Acct Gross) by Account
Acct Period: Apr 2005 to Jun 2006

Displayed by Acct Period

12904 - BITTERN LAKE 100/13-04-048-21W4M/00
Currency: CAD
Measure System: Metric

User: EWALTERS

05-Jul-2006 at 13:56:17

Account	Account Description	Apr 2005	May 2005	Jun 2005	Jul 2005	Aug 2005	Sep 2005	Oct 2005	Nov 2005	Dec 2005	Jan 2006	Feb 2006	Mar 2006	Apr 2006	May 2006	Jun 2006	Total
Expenses																	
9910	142 CHART READING	0	0	0	0	0	11	0	0	20	13	9	23	0	29	0	106
9910	148 MINERAL LEASE RENTAL - CROWN	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	112
9910	151 SURFACE LEASE RENTALS - FREEHOL	0	0	0	0	0	0	0	0	0	2,465	0	0	0	0	0	2,465
9910	162 AUTOMOTIVE COSTS	0	0	0	0	0	0	0	0	79	57	88	64	82	92	0	462
9910	168 FLUID HAULING	0	0	0	0	0	0	0	0	0	0	0	0	72	0	0	72
9910	196 COMPANY WAGES AND BENEFITS	0	0	0	0	0	0	0	0	293	0	332	4	321	328	0	1,278
	Total Expenses	0	0	0	0	0	11	0	0	392	2,647	429	91	475	449	0	4,494
	NET OPERATING INCOME	0	0	0	0	0	11	0	0	392	2,647	429	91	475	449	0	4,494
	Total Capital Expenditures	0	0	0	0	126,054	91,048	95,589	102,799	12,622	21,591	122,117	11,263	186,443	7,192	32,042	808,761
	Net Cash Flow	0	0	0	0	126,054	91,059	95,589	102,799	13,014	24,238	122,546	11,354	186,918	7,641	32,042	813,245
	Net Income (per BOE)																
	Royalties as a % of Revenue																

Appendix 6 c

Major Facilities Diagram