

Of

DM 561724

PARA ET AL CAMERON H-06
UNIT H SECTION 06

Jason Galbraith
Paramount Resources Ltd.
(Company)

MOH & ASSOCIATES OILFIELD CONSULTANTS LTD.

CALGARY, ALBERTA

N E B COPY

NATIONAL ENERGY BOARD
Exploration and Production

APR 26 2010

Geological Report

Of

DM 561724

PARA ET AL CAMERON H-06
UNIT H SECTION 06

For



PARAMOUNT RESOURCES LTD.

Report For:

**Jason Galbraith
Paramount Resources Ltd.
Calgary, AB.**

Reported By:

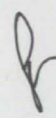
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Scale:1:240

WELL SUMMARY

OPERATOR : *PARAMOUNT RESOURCES LTD.*
WELL NAME : *PARA ET AL CAMERON H-06*
UWI : *300-H-06-6010-117300*
WELL LICENSE : *1221*
AFE : *09NO10004*
FIELD : *Cameron Hills*
SURFACE LOCATION : *Unit: H Section: 06*
Grid Area: 60° 10' N 117° 30' W
SURFACE COORDINATES : *Latitude: 60° 05' 18.2" N*
Longitude: 117° 30' 23.2" W
DRILLING RIG : *Precision Drilling Rig# 245*
DRILLING CONTRACTOR : *Precision Drilling.*
WELL TYPE : *Vertical Development Well*
RKB - MSL : *763.00m*
MSL - GL : *758.40m*
SPUD DATE : *January 16, 2010.*
DATE TD REACHED : *January 31, 2010.*
DATE RIG RELEASED : *February 03, 2010.*
TD DEPTH : *1468.0m MBRT (-705.0m SS)*
TD COORDINATES : *Latitude: 60° 05' 18.2" N*
Longitude: 117° 30' 23.2" W
HOLE SIZE : *311.0mm 378.0m RKB*
200.0mm 1468.0m RKB.
SAMPLE INTERVALS : *780m to 1035m @ 5m Intervals 1 Set.*
1350m – TD @ 5m Intervals 2 Sets.
1350m – TD Unwashed Spl 1 Set.
DRILLING FLUID : *Surface Hole: Polymer*
Main Hole: Floc Water & Polymer.
WELL STATUS : *Cased for Production Testing.*
STRIKE AREA : *South Great Slave Lake*
REGION : *NWT Mainland*



Photo 1: Precision Rig# 245 on Para Et Al Cameron H-06 Location.

WELL ABSTRACT

The **Para Et al Cameron H-06** well is located in Unit H, Section 06 and Grid 60° 10' 00" N and 117° 30' 00" W at the surface co-ordinates of 60° 05' 18.2" N and 117° 30' 23.2" W6 of Cameron Hills in Northwest Territory.

The proposed **Cameron H-06** well is a part of an extensive drilling program. The well is proposed to drill vertically as a new delineation well. Paramount Resources Ltd. retained the services of **Precision Drilling Rig# 245**.

The primary objective is to penetrate the prognosticated heavy hydrocarbon bearing zones in the limestone and dolomite sections of the **Sulphur Point** formation. The Secondary target is to investigate the prospective and possibilities of commercial hydrocarbon in the **Slave Point** Formation. In addition to the above objectives, the well are to validate the seismic picking of the reservoirs, to specify the time to depth conversion with the seismic data and to learn more about the complex reservoir characteristic of these formations in the Cameron Hills.

The well is spudded at 23:15hrs on the January 16, 2010. Drilling of 311mm hole from surface to 378m is completed using one rock bit in 31.0 on bottom bit hours. During drilling at 141m RKB a lost circulation is encountered and return mud are received around the cellar. A cement plug is set from 28m to 141m. Top cement jobs around cellar and false conductor are completed. 219.1mm surface casings are run in setting the shoe at 378m and cemented with Sanjel as per program. Polymer mud is used for drilling the surface hole.

200mm main hole drilling reached the TD - 1468m RKB (-705.0m SS) into the **Muskeg** Formation at 21:30hrs of January 31, 2010. Total 114.25 on bottom bit hours are consumed using two rock bits. A total lost circulation zone is encountered at 560m RKB in the **Wabamun** formation. Blind drilling is continued to covering the entire **Wabamun** formation and +/-40m in the **Fort Simpson** formation to 752m RKB. Two cement plugs are set between 752m to 627m and 663m to 553m respectively. Drilling of the main hole started with Floc Water mud and eventually weighted up and converted to Gel Chem mud from 945m. The mud is again converted to Polymer mud from 1200m RKB as to get better hole condition. At TD section, the hole is circulated clean before POOH. A wiper trip is performed and a Hi-vis pill being pumped before POOH to run in wireline logs. The open hole logging is completed by Weatherford Logging Services. Run# 1: STI/SPeD/CNS/GR/MRT/HBC/CAL tools are run in. The production casings 139.7mm are run in and shoe is set at 1468.0m RKB

The Geological target tops and bases of the well, hydrocarbon bearing zones and formations are encountered very much closed to the prognosis. After comprehensive studies of ditch cuttings, gas shows, co-relation with offset wells and well logs the formation tops are identified. The geology section in the Strip Log gives a brief representation of the individual stratigraphic formations.

The **Sulphur Point** limestone section is identified at 1389.0m RKB (-626.0m SS) and followed by the dolomite section at 1407.0m RKB (-644.0m SS). The dolomite section is 26.5m thick. This section is 12.5m thicker than the expected prognosis thickness and enhanced better reservoir properties. The **Sulphur Point** formation is 44.50m thick overlying on the **Muskeg** formation. Maximum 342/31 units formation gas is recorded in the limestone section with positive natural sample fluorescence. 425/31 units and 345/31 units formation gas are recorded in the dolomite section with oil shows are encountered in the dolomite section.

The **Slave Point** Formation is anticipated at 1326.50m RKB (-563.50m SS) and is 48.50m thick. Maximum 219/31 units and 275/31 units formation gases are noticed with positive natural sample fluorescence during drilling in this formation.

From ditch cuttings, gas shows and from the quick look interpretation of electrical logs **Sulphur Point** Limestone section possesses good reservoir properties with a little tight porosities. The dolomitic section possesses excellent reservoir properties unlike the other wells in the Cameron Hills. The dolomite section is more porous where as the limestone section. **The Slave Point** looks to be very prominent from the porosity, gas shows and sample florescence showing better reservoir potentialities for commercial production on of gas.

The well is for cased for production testing with viable possibilities of commercial production from limestone sections of both the **Slave Point** and the **Sulphur Point** formations. The dolomite section possesses all the properties for commercial hydrocarbon production. Further evaluation and detail studies are proposed.

FORMATION TOPS

FORMATION	PROGNOSIS TOPS		SAMPLE TOPS		COMMENTS
MSL – RKB: 763.0m	m TVD	m SubSea	m TVD	m SubSea	m Isopach
Wabamun FM	533.00	230.00	532.50	230.50	166.50
Jean Marie Mbr	699.00	64.00	699.00	64.00	6.00
Fort Simpson Fm	706.00	57.00	705.00	58.00	110.50
Twin Falls Fm	818.00	-55.00	815.50	52.50	157.00
Hay River Fm	979.00	-216.00	972.50	-209.50	329.50
Beaverhill Lake Fm	1312.00	-549.00	1302.00	-539.00	24.50
Slave Point Fm	1335.00	-572.00	1326.50	-563.50	48.50
F4 Marker Fm	1377.00	-614.00	1375.00	-612.00	7.50
Watt Mountain Fm	1384.00	-621.00	1382.50	-619.50	6.50
Sulphur Pt Ls Fm	1392.00	-629.00	1389.00	-626.00	18.00
Sulphur Pt Dol	1402.00	-639.00	1407.00	-644.00	26.50
Muskeg Fm	1416.00	-653.00	1433.50	-670.50	34.50
Total Depth	1437.00	-674.00	1468.00	-705.00	-

FORMATION EVALUATION

Slave Point Formation
Paleozoic, Middle Devonian
Age: 370 million years
Well: Para Et Al Cameron H-06

The Middle Devonian, Slave Point Formation consists of cream, dark brown, light yellowish brown and oil stained limestone interbedded occasionally with lenses of finely crystalline dolomites and intercalated with dark brownish grey shale fragments which possibly occur as thin shale laminae or lenses. The Formation is overlain by the Upper Devonian cyclical limy shale beds argillaceous limestone and argillaceous micrities of Beaverhill Lake formation, and conformably underlain by Fort Vermilion Formation.

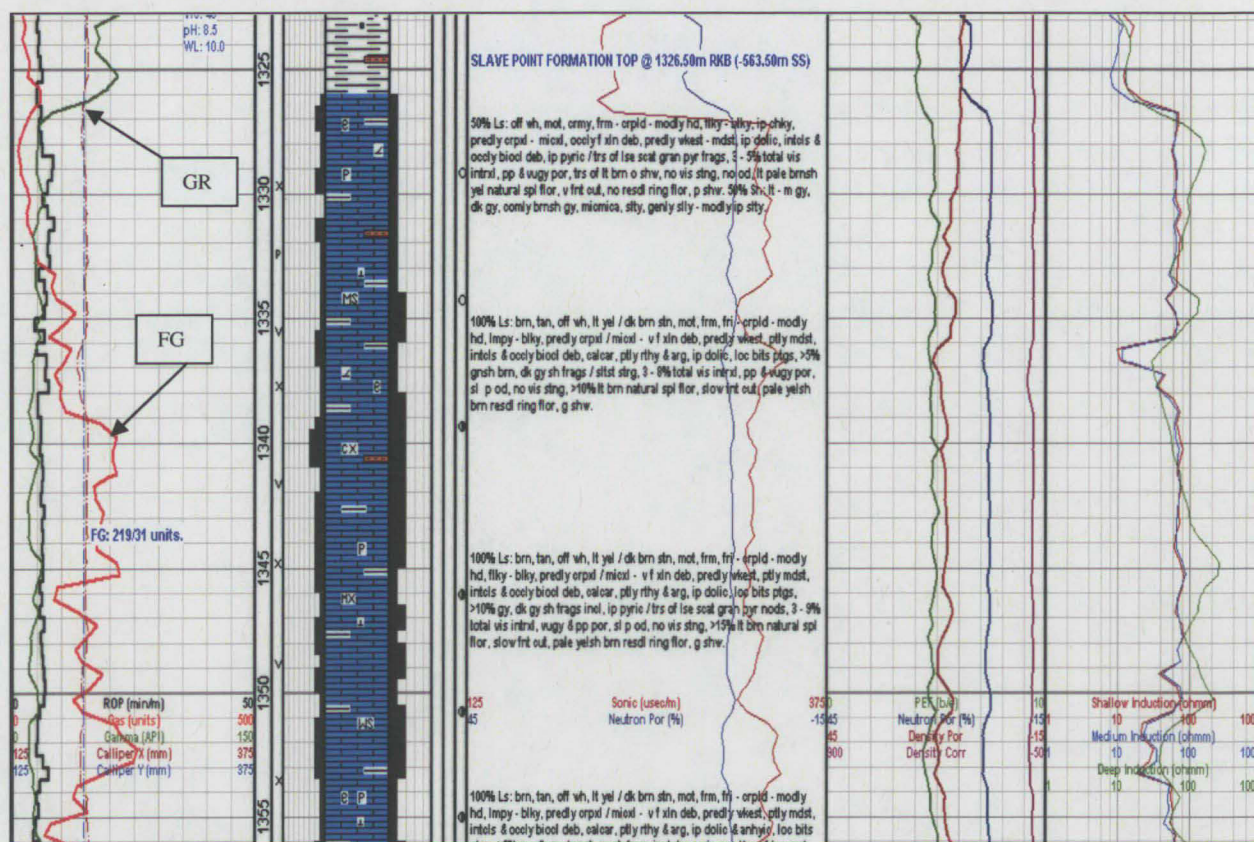


Figure 1: Striplog of Slave Point Formation.



Photo 2: Ls in Slave Point Fm_1345m RKB.

The **Slave Point** Formation is picked up and identified at 1326.50m RKB (-563.50m SS) from the change of average ROP from 20m/hr to an average 15m/hr, typical light yellowish brown to dark brown limestone and with the anticipation of formation gas increase.

The **Slave Point** anticipated is 48.5m thick with its typical light yellowish brown to dark brown limestone, interbedded with thin shale laminae and often intercalated with thin lenses of fine crystalline dolomites. The top section is tight varying from 3 - 5% porosities and the middle section from 1338m to 1346m is more porous varying from 4 - 8% total scattered visible porosities. Maximum 219/31 units and 275/31 units formation gases recorded against 1345.5m and 1357.5m respectively. The porosity tightens with the increases of the depth and faded to almost 3% due to increase of chalky, earthy dense argillaceous limestone.

The limestones encountered in the **Slave Point** are off white, mottled, creamy, light yellow with dark brown stain. They are crumpled to moderately hard and predominately blocky with some sub blocky grains. Smooth to gritty very sharp texture resembles to cryptocrystalline group. Partly microcrystalline with a few fine crystalline grains are noticed. They are predominately wackestone to packstone, intraclasts & occasionally bioclastic debris and partly calcarenite. They are partly earthy & argillaceous, rarely in part dolomitic, Traces of fine crystalline dolomite are commonly noticed all through the section with traces to maximum 10% greenish brown, dark grey shale fragments with siltstone stringers.

Moderate petroleum odor are noticed all through the section with >15% light brown natural sample fluorescence, slow faint cut, pale yellowish brown residual ring fluorescence, good show. From 1338m to 1346m RKB possesses good reservoir properties with 5 - 9% total scattered visible intracrystalline, pin point and vuggy porosity.

From the ditch cuttings properties, gas and florescence shows and quick look interpretation of electrical logs the **Cameron H-06** looks to be very much prospective as such the well is cased for production testing. Commercial production is possible from this zone. Further studies are proposed.

FORMATION EVALUATION

Sulphur Point Formation

Middle Paleozoic, Devonian

Age: 370 million years

Well: Para Et Al Cameron H-06

The Paleozoic, Middle Devonian, Sulphur Point Formation conformably separates the overlying from greenish shale of the Watt Mountain from the underlying anhydritic and dolomitic Muskeg formations. The limestone part of the formation is picked up with the end of greenish shaley deposit of the Watt Mountain formation.

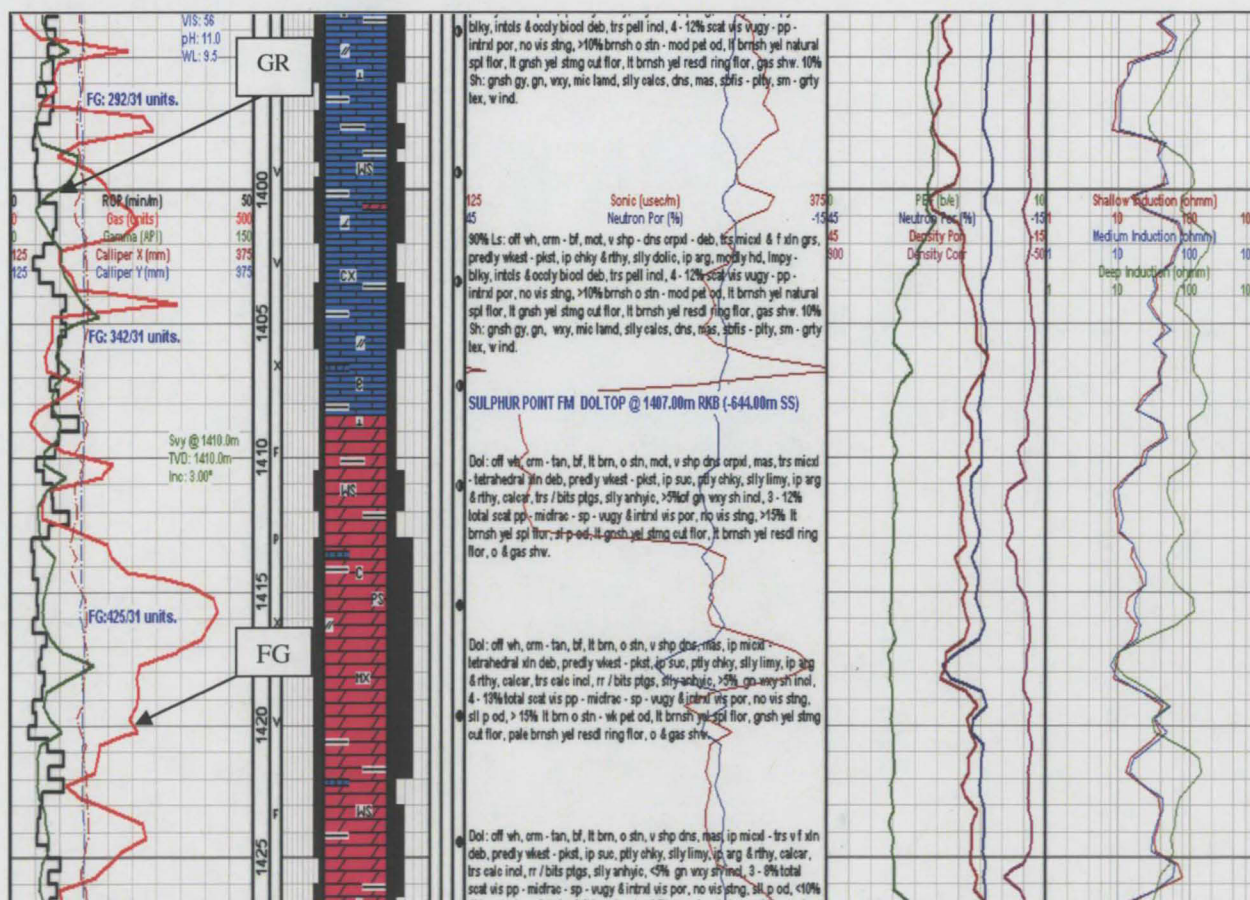


Figure 2: Striplog of Sulphur Point Formation.



Photo 3: Ls in Sulphur Point Fm_ 1400m RKB.



Photo 4: Dol in Sulphur Point Fm_1420m RKB.

The limestone part of the **Sulphur Point** is identified by comparatively slower ROP and change of drill cuttings from greenish shale to limestone. The formation encountered at 1389.0m RKB (-626.0m SS). First six meters from 1389m to 1395 are covered with shale or argillaceous limestone deposition and tight. Co-relation with the offset wells is the other criteria for identifying this formation. ROPs are comparatively slower 8.5 min/m from that of the overlying **Watt Mountain** formation 6.5 min/m which is anticipated at 1382.50m RKB (-619.50m SS). The limestone section is 18.0m thick.

The limestones are off white, cream to buff, mottled, color with dark brownish stain. They are generally very sharp to dense cryptocrystalline with some microcrystalline to crystalline debris and crumple to moderately hard, lumpy to blocky, Predominately they are subblocky to blocky and wackestone to packstone texture. They are slightly dolomitic, intraclasts & occasionally bioclastic debris, traces pelletoidal inclusion. They are chalky in parts and slightly earthy and slightly argillaceous. Traces to maximum 10%, greenish to greenish brown shale fragments are anticipated which possibly occur as thin laminae.

Slight to moderate petroleum odor with maximum 15% brownish yellow natural fluorescence are noticed in the limestone section. Usually they possess no visible staining, traces of light brown oil show, light brownish yellow natural light brownish yellow natural sample fluorescence; light greenish yellow streaming cut fluorescence, light brownish yellow residual ring fluorescence, gas show. Total scattered visible porosity varies between 3 – 9%.

The dolomitize part of the **Sulphur Point** Formation is separated from the overlying of limestone part and underlying **Muskeg** Formation. Presence of dolomite is the main criteria of identifying this section. In general ROP varied between 5.8min/m to 10.6min/m other than in the fine crystalline porous intercalation where ROP are a litter faster. The Dolomite section of the **Sulphur Point** Formation is encountered at 1407m RKB (-644.00m SS). The section is 28.5m thick overlying on the cyclic deposition of anhydride and dolomites of the **Muskeg** formation.

In the top section the dolomites are coarsely crystalline and in general they are of off white, cream to tan, buff, light brown, oil stained. They are predominately very sharp dense, massive, in part microcrystalline to tetrahedral crystalline debris, with abundant of cryptocrystalline debris, in part sucrosic Usually they are crumpled to moderately hard, blocky to subblocky, smooth to gritty, dense and massive. They are partly earthy & chalky and slightly argillaceous. They are partly ratty, predominately wackestone & packstone texture. Traces of fine crystalline limestone grains are also noticed in the dolomite section which possibly intercalated as thin laminae or lenses. Thin waxy green shale grains are common. Total scattered pin point to micro fracture to spot to vuggy & intracrystalline visible porosity varies between 4 to 13%. More than 15% light brown oil stain to weak petroleum odor, light brownish yellow sample

fluorescence; greenish yellow streaming cut fluorescence, pale brownish yellow residual ring fluorescence leads to the symptoms of presence of, oil & gas deposition.

The lower dolomite section are more of chalky and ratty mudstone to packstone structures and slightly anhydritic. This section seems to be tighter than the upper section and total scattered visible pin point to micro fracture to spot to vuggy & intracrystalline porosity varies between 3 – 9%. Maximum 425/31 units and 345/31 units formation gases are recorded in the upper and lower dolomite section respectively. About 20% oil stained cuttings with brownish yellow natural sample fluorescence, 15% light brown oil stain to weak petroleum odor, light brownish yellow sample fluorescence, greenish yellow streaming cut fluorescence, pale brownish yellow residual ring fluorescence are noticed leading to the symptoms of presence of heavy hydrocarbon.

The upper **Sulphur Point** limestone and dolomite sections possess all the potentiality and characteristics of a good commercial hydrocarbon reservoir and seem to be commercially productive. The well is cased for commercial production as such a cased hole DST may be performed in the interval of 1427m to 1434m RKB and 1409m to 1414m RKB. Further detail studies and evaluations of the **Sulphur Point** formation are proposed.

DAILY DRILLING SUMMARY

(Morning Report @ 07:00 Hrs)

January 17, 2010

Midnight Depth: 141m

Completed rig up. Pick up Bit# 1, 311mm, Varel, HE04JMRSV, Sr. No. 253625, 18.0 Jets on a stiff drilling assembly and run in hole. Pre-spud safety meeting. Spud the well at 23:15hrs. Spud mud is Gel Chem of 1015 kg/m³, FV: 24 sec/l and pH: 8.0. Drilling of surface hole from 0m to 98m. Conduct surveys. Continue drilling.

January 18, 2010

Midnight Depth: 170m

Continue drilling surface hole from 98m to 141m. Encounter lost circulation. Pump LCM pill. POOH. Cement job with Sanjel. Cement False Conductor. WOC.

January 19, 2010

Midnight Depth: 360m

WOC. Pick up Kelly tag cement at 28m. Clean out cement and POOH. Conduct top cement job around Cellar with Sanjel. WOC. Pick up Bit# 1RR1 on a stiff assembly and clean out to bottom. Resume drilling of 311mm surface hole from 141m to 246m. Conduct surveys.

January 20, 2010

Midnight Depth: 378m

Continue drilling of 311mm surface hole from 246m to 351m RKB. Circulation and mud conditioning to 1100 kg/m³; FV: 49 sec/l and pH: 9.0. Strap out of hole. Strapping depth is 350.93m. RIH with the same bit and BHA. Resume drilling and drill down to 378m RKB - TD of the surface hole. Circulation and mud conditioning. Wiper trip to 187m. Circulation and mud conditioning at TD.

January 21, 2010

Midnight Depth: 378m

Circulation and mud conditioning. Trip out of hole. Safety meeting with casing hands. RIH of 219mm surface casings. Circulation and mud conditioning through the casing string to 1130 kg/m³, FV: 52 sec/l and FV: 8.0. Cement job with Sanjel. WOC. Cut, weld and dress casing string. Nipples up BOP stack.

January 22, 2010**Midnight Depth: 532m**

Nipples up BOP stack from scratch. Pressure tests of BOPs and surface equipments. Pick up a new Bit#1, 200mm on a stiff BHA and RIH.

January 23, 2010**Midnight Depth: 695m**

RIH with a new PDC 200mm, Varel Bit# 1, VTD513HX, Sr. No. 4000297, 10.3x5 jets bit on a stiff drilling assembly. Drill out cement, float and shoe. Start drilling of 200mm main hole from 378m to 560m RKB. Encounter lost circulation zone. No return. Continue blind drilling to 597m RKB. Drilling suspended at 597m. Build up mud volume.

January 24, 2010**Midnight Depth: 752m**

Build up mud volume at 597. Resume blind drilling with no return from 597m to 705. Drilling is stopped at 627m, 650m, 657m as to build up mud volume. 1058m³ is pumped down the hole in drilling from 560m to 705m RKB.

January 25, 2010**Midnight Depth: 752m**

Build up mud volume at 705m. Resume blind drilling with no returns from 705m to 752m. POOH. RIH with open ended drill pipe to bottom. Set cement Plug# 1 between 752m to 627m with Sanjel. POOH to surface casing shoe depth. Circulation and mud conditioning. WOC. Tag cement at 663m RKB. Set cement Plug# 2 between 663m to 553m. POOH to 365m. Circulation and mud conditioning. WOC. Slip and cut drill line.

January 26, 2010**Midnight Depth: 947m**

WOC. RIH with Bit# 2RR1 on a stiff drilling assembly. Tag cement at 536m. Circulation and mud conditioning. TG at 536 is 466/73 units. Drill out cement from 536m to 724m. Cement drilling continued.

January 27, 2010**Midnight Depth: 1143m**

Drill out cement from 724m to 752m. Drilling of 200mm hole from 752m to 1040m. Conduct surveys.

January 28, 2010**Midnight Depth: 1189m**

Drilling of 200mm hole from 1040m to 1124m. Circulate to raise viscosity prior to conduct a short trip – failed. Resume drilling and drill down to 1143m. Circulation and mud conditioning to 1110 kg/m³, FV: 32 sec/l and pH: 10.5. Short trip to 750m. Trip gas is 275/34 units. Resume drilling and drill down to 1175m.

January 29, 2010**Midnight Depth:1245m**

Continue drilling from 1175m to 1183m. Bit got balled. Circulation and mud conditioning. Bit trip. Trip gas 255/29 units. Displace Gel Chem mud with Polymer mud. Resume drilling from 1183m and drill down to 1222m.

January 30, 2010**Midnight Depth:1382m**

Continue drilling from 1222m to 1245m. Bit balled. Circulation and mud conditioning to 1090 kg/m³, FV: 62 sec/l, pH: 9.0 and WL: 15 cm³. POOH. RIH with a new tri-cone 200mm Reed Bit# 3, R09AM, Sr. No. KB1119, 15.9x3 jets on a stiff drilling assembly. Break circulation and drill down to 1246m. Circulation and mud conditioning is continued.

January 31, 2010**Midnight Depth:1468m**

Circulation and mud conditioning. Resume drilling from 1246m and drill down to 1423m. Conduct surveys. Encounter intermittent pump pressure problems while drilling fluctuating from 500 to 2000 kPa.

February 01, 2010**Midnight Depth:1468m**

Continue drilling from 1423m to 1450m. Circulation & mud conditioning to 1090 kg/m³, FV: 186 sec/l, pH: 10.5 & WL: 9.0 cm³. Strap out of hole to BHA depth. RIH and ream down from 1429m to bottom. Trip gas is 365/64 units. Resume drilling and drill down to 1468m – TD of the well reached at 21:30hrs. Circulation and mud conditioning. POOH for logging with Weatherford. Logging.

February 02, 2010**Midnight Depth:1468m**

Logging. Run# 1: STI/SPeD/CNS/GR/MRT/HBC/CAL tools. Rig down Weatherford logging tools and equipments. RIH with hole cleaning assembly. Circulation at TD. Trip gas is 505/62 units. Mud conditioning to 1090 kg/m³, FV: 82 sec/l, pH: 13 and WL: 13.0 cm³. POOH. RIH of 139.7mm production casings. RIH of casings continued.

February 03, 2010**Midnight Depth:1468m**

RIH of casings to 95m. POOH casings and lay down the same as of wrong size centralizers. Wait on centralizers. RIH of production casings. Circulation and mud conditioning through the casings string. Trip gas at TD is 466/51 units. Pre-job safety meeting with Sanjel. Pressure test of cementing line. Cement with Sanjel. WOC. Nipple down BOPs.

SAMPLE DESCRIPTIONS

DRILLED SECTION FROM 00m - 1468.0m RKB

(Sampling Depth from 775m to ~~1140m~~ & 1295m to TD)

1040

775-785

80% Limestone: off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone texture, traces argillaceous mudstone, calcarenite, in part slightly dolomitic, partly earthy & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, in part pyritic, 3 to 4% total visible intracrystalline porosity with pin point porosity, no shows.

20% Shale: dark to blackish grey, greenish grey, micromicaceous in part, non to slightly calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks.

785-795

80% Limestone: off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone texture, traces argillaceous mudstone, calcarenite, in part slightly dolomitic, partly earthy & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, in part pyritic, 3 to 4% total visible intracrystalline porosity with pin point & vuggy porosity, no shows.

20% Shale: dark to blackish grey, greenish grey, micromicaceous in part, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks.

795-800

80% Limestone: off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately

mudstone with packstone texture, traces argillaceous mudstone, calcarenite, in part slightly dolomitic, partly earthy & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, in part pyritic, 3 to 4% total visible intracrystalline porosity with pin point & vuggy porosity, no shows.

20% Shale: dark to blackish grey, greenish grey, micromicaceous in part, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks.

800-810

60% Shale: medium grey, dark grey, commonly greenish grey, micromicaceous, moderately silty, micro laminated on darker & harder fraction, non calcareous, dense, massive, smooth to gritty texture, well indurated, partly dull earthy texture, moderately hard, occasionally micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, traces sandstone & siltstone stringers, trace loose sandstone grains with trace of siltstone stringers, occasionally pyritic, in part fossiliferous.

40% Limestone: off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone texture, traces argillaceous mudstone, 3% total visible intracrystalline porosity with pin point porosity, no shows.

810-815.5

70% Shale: medium grey, dark grey, greenish grey, micromicaceous, moderately silty, micro laminated on darker & harder fraction, non calcareous, dense, massive, smooth to gritty texture, well indurated, partly dull earthy texture, moderately hard, in part micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, traces sandstone & siltstone stringers, trace loose sandstone grains with trace of siltstone stringers, occasionally pyritic, in part fossiliferous.

30% Limestone: off white, white, light brown, buff, predominately cryptocrystalline with abundant of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone & wackestone texture, traces argillaceous mudstone, 3% total visible intracrystalline porosity with pin point porosity, no shows.

TWIN FALLS FM TOP @ 815.50m RKB (-52.50m SS)

- 815.5-820 60% **Shale:** medium grey, dark grey, greenish grey, micromicaceous, moderately silty, micro laminated on darker & harder fraction, non calcareous, dense, massive, smooth to gritty texture, well indurated, partly dull earthy texture, moderately hard, in part micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, traces sandstone & siltstone stringers, trace loose sandstone grains with trace of siltstone stringers, occasionally pyritic, in part fossiliferous.
40% **Limestone:** white, off white, light brown, buff, predominately cryptocrystalline with abundant of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone & wackestone texture, traces argillaceous mudstone, 3% total visible intracrystalline porosity with pin point porosity, no shows.
- 820-830 60% **Limestone:** off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone texture, traces argillaceous mudstone, calcarenite, in part slightly dolomitic, partly earthy & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, in part pyritic, 3% total visible intracrystalline porosity with pin point & rare vuggy porosity, no shows.
40% **Shale:** grey, brownish grey, greenish grey, micromicaceous in part, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks, partly dull earthy texture.
- 830-840 60% **Limestone:** off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone texture, traces argillaceous mudstone, calcarenite, in part slightly dolomitic, partly earthy & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, in part pyritic, 3% total visible intracrystalline porosity with pin point & rare vuggy porosity, no shows.
40% **Shale:** grey, brownish grey, greenish grey, micromicaceous in part, non calcareous, subblocky to blocky, subfissile to sub platy,

smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks, partly dull earthy texture.

840-850

50% **Limestone:** off white, light brown, buff, predominately cryptocrystalline with traces of microcrystalline debris, occasionally fine crystalline grainy grains inclusion, predominately mudstone with packstone texture, traces argillaceous mudstone, calcarenite, in part slightly dolomitic, partly earthy & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, in part pyritic, 3-4% total visible intracrystalline porosity with pin point & rare vuggy porosity, no shows.

50% **Shale:** grey, brownish grey, greenish grey, micromicaceous in part, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks, partly dull earthy texture.

850-860

80% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

20% **Shale:** grey, brownish to greenish grey, in part micromicaceous, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous with traces disseminated carbonaceous specks, partly dull earthy texture.

860-870

80% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

20% **Shale:** grey, brownish to greenish grey, in part micromicaceous, non calcareous, subblocky to blocky, subfissile to

sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, partly dull earthy texture, occur as thin laminae.

870-880

80% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

20% **Shale:** grey, brownish to greenish grey, in part micromicaceous, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, partly dull earthy texture, occur as thin laminae, in part fossiliferous.

880-890

90% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

10% **Shale:** grey, brownish to greenish grey, in part micromicaceous, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, partly dull earthy texture, occur as thin laminae.

890-900

90% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

10% **Shale:** grey, brownish to greenish grey, in part micromicaceous, non calcareous, subblocky to blocky, subfissile to

sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, partly dull earthy texture, in part fossiliferous.

900-910

60% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

40% **Shale:** greenish grey, grey, brownish grey, in part micromicaceous, non calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, partly dull earthy texture, occur as thin laminae.

910-920

50% **Limestone:** off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, traces argillaceous mudstone & chalky debris, in part biostromal, calcarenite, in part slightly dolomitic, partly earthy & ratty & argillaceous, firm to crumpled to moderately hard, blocky to subblocky, commonly loose grains to predominately peloids, 3 to 5% total visible intracrystalline porosity with vuggy porosity, no shows.

50% **Shale:** greenish grey, grey to brownish grey, in part micromicaceous, slightly calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard, partly carbonaceous, partly dull earthy texture, occur as thin laminae, in part fossiliferous.

920-930

70% **Shale:** greenish grey, grey to brownish grey, in part micromicaceous, slightly calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, well indurated, in part dull earthy texture, occur as thin laminae, partly silty, occasionally pyretic with traces of loose scattered granular pyrite fragments, in part fossiliferous.

30% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, calcarenite, in part slightly dolomitic, firm to crumpled to moderately hard, commonly loose grains to predominately

peloids, 3 to 4% total visible intracrystalline porosity with vuggy porosity, no shows.

930-940

60% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, calcarenite, in part slightly dolomitic, firm to crumpled to moderately hard, commonly loose grains to predominately peloids, 3 to 4% total visible intracrystalline porosity with vuggy porosity, no shows.

40% **Shale:** greenish grey, grey to brownish grey, in part micromicaceous, slightly calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, well indurated, in part thin laminae, partly silty, occasionally pyretic with traces of loose scattered granular pyrite fragments, in part fossiliferous.

940 to 950

60% **Shale:** greenish grey, grey to brownish grey, in part micromicaceous, slightly calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, well indurated, in part dull earthy texture, occur as thin laminae, partly silty, occasionally pyretic with traces of loose scattered granular pyrite fragments, in part fossiliferous.

40% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, calcarenite, in part slightly dolomitic, firm to crumpled to moderately hard, commonly loose grains to predominately peloids, 3 to 4% total visible intracrystalline porosity with vuggy porosity, no shows.

950-960

50% **Shale:** greenish grey, grey to brownish grey, in part micromicaceous, slightly calcareous, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, well indurated, in part dull earthy texture, occur as thin laminae, partly silty, occasionally pyretic with traces of loose scattered granular pyrite fragments, in part fossiliferous.

50% **Limestone:** off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, calcarenite, in part slightly dolomitic, firm to crumpled to moderately hard, commonly loose grains to predominately

peloids, 3 to 4% total visible intracrystalline porosity with vuggy porosity, no shows.

960-972.5

70% **Shale**: greenish grey, grey to brownish grey, in part micromicaceous, slightly calcareous, slightly calcareous, dense, massive, subblocky to blocky, subfissile to sub platy, smooth to gritty texture, in part laminated, moderately hard to hard, conchoidal to angular break, partly carbonaceous, well indurated, in part dull earthy texture, partly silty, occasionally pyretic with traces of loose scattered granular pyrite fragments, in part fossiliferous.

30% **Limestone**: off white, light brown, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, calcarenite, in part slightly dolomitic, occur as thin laminae, commonly loose grains to predominately peloids, 3 to 4% total visible intracrystalline porosity with vuggy porosity, no shows.

HAY RIVER FM TOP @ 982.00m RKB (-219.00m SS)

972.5-980

80% **Shale**: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, farm to moderately hard, in part thinly laminated, slightly sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

20% **Limestone**: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, 3% total visible intracrystalline porosity with vuggy porosity, no shows.

980-990

80% **Shale**: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, farm to moderately hard, in part thinly laminated, slightly

sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

20% Limestone: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, 3% total visible intracrystalline porosity with vuggy porosity, no shows.

990-1000

80% Shale: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, firm to moderately hard, in part thinly laminated, slightly sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

20% Limestone: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, 3% total visible intracrystalline porosity with vuggy porosity, no shows.

1000-1010

90% Shale: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, firm to moderately hard, in part thinly laminated, slightly sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

10% Limestone: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, maximum 3% total visible intracrystalline porosity with vuggy porosity, no shows.

1010-1020

90% Shale: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, firm to moderately hard, in part thinly laminated, slightly

sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

10% Limestone: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, maximum 3% total visible intracrystalline porosity with vuggy porosity, no shows.

1010-1020

90% Shale: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, firm to moderately hard, in part thinly laminated, slightly sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

10% Limestone: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, maximum 3% total visible intracrystalline porosity with vuggy porosity, no shows.

1020-1030

90% Shale: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, firm to moderately hard, in part thinly laminated, slightly sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

10% Limestone: off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, maximum 3% total visible intracrystalline porosity with vuggy porosity, no shows.

1030-1040

90% Shale: greenish grey, grey, brownish grey, micromicaceous, generally slightly to moderately silty, micro laminated on darker & harder fraction, calcareous, dense, massive, amorphous to blocky, fissile to platy, smooth to gritty texture, well indurated, partly dull earthy, firm to moderately hard, in part thinly laminated, slightly

sideritic, partly carbonaceous, >5% siltstone stringers inclusion, in part fossiliferous.

10% **Limestone:** off white, light brown, tan, predominately cryptocrystalline with traces of microcrystalline debris, predominately mudstone with partly packstone texture, in part biostromal, slightly dolomitic, occur as thin laminae, traces argillaceous mudstone & chalky debris, partly earthy & argillaceous, maximum 3% total visible intracrystalline porosity with vuggy porosity, no shows.

1040-1295
1295-1302

No descriptions done

100% **Shale:** medium grey, dark grey, commonly greenish grey, micromicaceous, generally slightly to moderately in part silty, micro laminated on darker & harder fraction with fine silty partings, slightly calcareous, dense, massive, grading to mudstone, subblocky to blocky, fissile to platy, smooth to gritty texture, partly well indurated, partly dull earthy texture, firm to friable to moderately hard, occasionally micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, randomly oriented with biotite mica flakes, traces siltstone stringers, traces of argillaceous limestone, traces chert (?) fragments, in part fossiliferous.

BEAVERHILL LK FM TOP @ 1302.00m RKB (-539.00m SS)

1302-1310

100% **Shale:** medium grey, dark grey, commonly greenish grey, micromicaceous, generally slightly to moderately in part silty, micro laminated on darker & harder fraction with fine silty partings, slightly calcareous, dense, massive, grading to mudstone, subblocky to blocky, fissile to platy, smooth to gritty texture, partly well indurated, partly dull earthy texture, firm to friable to moderately hard, occasionally micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, randomly oriented with biotite mica flakes, >5% siltstone stringers, traces of argillaceous limestone, occasionally pyretic with traces of loose scattered granular pyrite fragments, traces chert fragments, in part fossiliferous.

1310-1320

100% **Shale:** light to medium grey, dark grey, commonly brownish grey, micromicaceous, silty, generally slightly to moderately in part silty, micro laminated on darker & harder fraction with fine silty partings, calcareous, partly grading to mudstone, subblocky to

blocky, fissile to platy, smooth to gritty texture, partly indurated, partly dull earthy texture, firm to friable to moderately hard, occasionally micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, randomly oriented with biotite mica flakes, <10% siltstone stringers, local grading silty shale, traces of argillaceous limestone, occasionally pyretic with traces of loose scattered granular pyrite fragments.

1320-1326.5

100% **Shale:** light to medium grey, dark grey, commonly brownish grey, micromicaceous, silty, generally slightly to moderately in part silty, micro laminated on darker & harder fraction with fine silty partings, calcareous, partly grading to mudstone, subblocky to blocky, fissile to platy, smooth to gritty texture, partly indurated, partly dull earthy texture, firm to friable to moderately hard, occasionally micro to thinly laminated, slightly sideritic, partly carbonaceous with traces of disseminated carbonaceous specks, randomly oriented with biotite mica flakes, <10% siltstone stringers, local grading silty shale, traces of argillaceous limestone, occasionally pyretic with traces of loose scattered granular pyrite fragments.

SLAVE POINT FM TOP @ 1326.50m RKB (-563.50m SS)

1326.5-1335

50% **Limestone:** off white, mottled, creamy, firm to crumpled to moderately hard, flaky to blocky, in part chalky, predominately cryptocrystalline to microcrystalline, occasionally fine crystalline debris, predominately wackestone to mudstone, in part dolomitic, intraclasts & occasionally bioclastic debris, in part pyritic with traces of loose scattered granular pyrite fragments, 3 to 5% total visible intracrystalline, pin point & vuggy porosity, traces of light brown oil show, no visible staining, no odor, light pale brownish yellow natural sample fluorescence, very faint cut, no residual ring fluorescence, poor show.

50% **Shale:** light to medium grey, dark grey, commonly brownish grey, micromicaceous, silty, generally slightly to moderately in part silty.

1335-1345

100% **Limestone:** brown, tan, off white, light yellow with dark brown stain, mottled, firm, friable to crumpled to moderately hard, lumpy to blocky, predominately cryptocrystalline with

microcrystalline to very fine crystalline debris, predominately wackestone, partly mudstone, intraclasts & occasionally bioclastic debris, calcarenite, partly earthy & argillaceous, in part dolomitic, local bituminous partings, >5% greenish brown, dark grey shale fragments with siltstone stringer, 3 to 8% total visible intracrystalline, pin point & vuggy porosity, slight poor odor, no visible staining, >10% light brown natural sample fluorescence, slow faint cut, pale yellowish brown residual ring fluorescence, good show.

1345-1355

100% **Limestone:** brown, tan, off white, light yellow with dark brown stain, mottled, firm, friable to crumpled to moderately hard, flaky to blocky, predominately cryptocrystalline with microcrystalline to very fine crystalline debris, predominately wackestone, partly mudstone, intraclasts & occasionally bioclastic debris, calcarenite, partly earthy & argillaceous, in part dolomitic, local bituminous partings, >10% grey, dark grey shale fragments inclusion, in part pyritic with traces of loose scattered granular pyrite nodules, 3 to 9% total visible intracrystalline, vuggy & pin point porosity, slight poor odor, no visible staining, >15% light brown natural sample fluorescence, slow faint cut, pale yellowish brown residual ring fluorescence, good show.

1355-1365

100% **Limestone:** brown, tan, off white, light yellow with dark brown stain, mottled, firm, friable to crumpled to moderately hard, lumpy to blocky, predominately cryptocrystalline with microcrystalline to very fine crystalline debris, predominately wackestone, partly mudstone, intraclasts & occasionally bioclastic debris, calcarenite, partly earthy & argillaceous, in part dolomitic & anhydritic, local bituminous partings, >5% grey, dark grey, brownish grey shale fragments inclusion, traces pyritic grains with traces of loose scattered granular pyrite fragments, 3 to 8% total visible intracrystalline, vuggy & pin point porosity, slight poor odor, no visible staining, >15% light brown natural sample fluorescence, slow faint cut, pale yellowish brown residual ring fluorescence, good show.

1365-1375

100% **Limestone:** brown, tan, off white, light yellow with dark brown stain, mottled, firm, friable to crumpled to moderately hard, flaky to lumpy to blocky, predominately cryptocrystalline with traces microcrystalline debris, predominately wackestone, dense, massive, ratty to earthy, traces argillaceous mudstone & chalky debris, calcarenite, in part argillaceous & anhydritic, local bituminous partings, >5% grey, dark grey, brownish grey shale fragments inclusion, traces pyritic grains with traces of loose scattered granular pyrite nodules, 3 to 5% total visible

intracrystalline, vuggy & pin point porosity, no odor, no visible staining, <5% light brown natural sample fluorescence, hazy cut fluorescence, no shows.

F4 MARKER FM TOP @ 1375.00m MRKB (-612.00m SS)

1375-1382.5

60% **Limestone:** brown, tan, light yellow with dark brown stain, mottled, friable to crumpled to moderately hard, flaky to lumpy to blocky, predominately cryptocrystalline with microcrystalline debris, dolomitic limestone, 3 to 5% total visible intracrystalline, vuggy & pin point porosity, no odor, no visible staining, <5% light brown natural sample fluorescence, hazy cut fluorescence, no shows.

40% **Shale:** medium grey to brownish grey, slightly calcareous, micro laminated, sub blocky to blocky, well indurated, partly carbonaceous, traces inoceramus prism.

WATT MOUNTAIN FM TOP @ 1382.50m KB (-619.50m SS)

1382.5-1389

80% **Shale:** greenish grey, green, micromicaceous, micro laminated, slightly calcareous, dense, massive, amorphous to subfissile, partly platy, smooth to gritty texture, well indurated, partly dull earthy texture, predominately moderately hard, partly carbonaceous with traces of disseminated carbonaceous specks, traces of anhydrite inclusion.

20% **Limestone:** brown, tan, light yellow with dark brown stain, mottled, friable to crumpled to moderately hard, flaky to lumpy to blocky, predominately cryptocrystalline with microcrystalline debris, dolomitic limestone, 3 to 5% total visible intracrystalline, vuggy & pin point porosity, no odor, no visible staining, <5% light brown natural sample fluorescence, hazy cut fluorescence, no shows.

SULPHUR PT FM LS TOP @ 1389.00m RKB (-626.00m SS)

1389-1400

90% Limestone: off white, cream to buff, mottled, very sharp to dense cryptocrystalline to debris, traces microcrystalline & fine crystalline grains, predominately wackestone to packstone, in part chalky & earthy, slightly dolomitic, in part argillaceous, moderately hard, lumpy to blocky, intraclasts & occasionally bioclastic debris, traces pelletoidal inclusion, 4 to 12% scattered visible vuggy to pin point to intracrystalline porosity, no visible staining, >10% brownish oil stain to moderate petroleum odor, light brownish yellow natural sample fluorescence, light greenish yellow streaming cut fluorescence, light brownish yellow residual ring fluorescence, gas show.

10% Shale: greenish grey, green, waxy, micro laminated, slightly calcareous, dense, massive, subfissile to platy, smooth to gritty texture, well indurated.

1400-1408.5

90% Limestone: off white, cream to buff, mottled, very sharp to dense cryptocrystalline to debris, traces microcrystalline & fine crystalline grains, predominately wackestone to packstone, in part chalky & earthy, slightly dolomitic, in part argillaceous, moderately hard, lumpy to blocky, intraclasts & occasionally bioclastic debris, traces pelletoidal inclusion, 4 to 12% scattered visible vuggy to pin point to intracrystalline porosity, no visible staining, >10% brownish oil stain to moderate petroleum odor, light brownish yellow natural sample fluorescence, light greenish yellow streaming cut fluorescence, light brownish yellow residual ring fluorescence, gas show.

10% Shale: greenish grey, green, waxy, micro laminated, slightly calcareous, dense, massive, subfissile to platy, smooth to gritty texture, well indurated.

SULPHUR PT FM DOL TOP @ 1407.00m RKB (-644.00m SS)

1407-1415

100% Dolomite: off white, cream to tan, buff, light brown, oil stain, mottled, very sharp dense cryptocrystalline, massive, traces microcrystalline to tetrahedral crystalline debris, predominately wackestone to packstone, in part sucrosic, partly chalky, slightly limy, in part argillaceous & earthy, calcarenite, traces with

bituminous partings, slightly anhydritic, >5% of green waxy shale inclusion, 3 to 12% total scattered pin point to microfracture to spot to vuggy & intracrystalline visible porosity, no visible staining, >15% light brownish yellow sample fluorescence, slight poor odor, light greenish yellow streaming cut fluorescence, light brownish yellow residual ring fluorescence, oil & gas show.

1415-1425

100% **Dolomite**: off white, cream to tan, buff, light brown, oil stain, very sharp dense, massive, in part microcrystalline to tetrahedral crystalline debris, predominately wackestone to packstone, in part sucrosic, partly chalky, slightly limy, in part argillaceous & earthy, calcarenite, traces calcite inclusion, rare with bituminous partings, slightly anhydritic, >5% green waxy shale inclusion, 4 to 13% total scattered visible pin point to microfracture to spot to vuggy & intracrystalline visible porosity, no visible staining, sll poor odor, > 15% light brown oil stain to weak petroleum odor, light brownish yellow sample fluorescence, greenish yellow streaming cut fluorescence, pale brownish yellow residual ring fluorescence, oil & gas show.

1425-1433.5

100% **Dolomite**: off white, cream to tan, buff, light brown, oil stain, very sharp dense, massive, in part microcrystalline to traces very fine crystalline debris, predominately wackestone to packstone, in part sucrosic, partly chalky, slightly limy, in part argillaceous & earthy, calcarenite, traces calcite inclusion, rare with bituminous partings, slightly anhydritic, <5% green waxy shale inclusion, 3 to 8% total scattered visible pin point to microfracture to spot to vuggy & intracrystalline visible porosity, no visible staining, sll poor odor, <10% light brown oil stain to weak petroleum odor, light brownish yellow sample fluorescence, greenish yellow streaming cut fluorescence, pale brownish yellow residual ring fluorescence, poor show.

MUSKEG FORMATION TOP @ 1433.50m KB (-670.50m SS)

1435.5-1440

70% **Dolomite**: off white, cream to buff, tan, very sharp microcrystalline to fine crystalline debris, predominately grainstone to wackestone to packstone, in part grainy, partly chalky, slightly limy, slightly to very anhydritic, minor argillaceous & earthy, calcarenite, 3 to 5% total scattered visible intracrystalline to vuggy porosity, slight poor odor, traces light

brownish yellow natural sample fluorescence, hazy cut fluorescence, poor show.

30% **Anhydrite**: white, off white, brown to dark brown, hyaline, irregularly shaped, sharp, angular cryptocrystalline with traces microcrystalline, abundant of calcite inclusion.

1440-1450

60% **Anhydrite**: white, off white, brown to dark brown, hyaline, irregularly shaped, sharp, angular cryptocrystalline with traces microcrystalline, dense, abundant of calcite inclusion, traces of fine crystalline limestone with abundant of brownish grey to tan dolomite inclusion.

40% **Dolomite**: off white, cream to buff, tan, very sharp microcrystalline to fine crystalline debris, predominately grainstone to wackestone to packstone, in part grainy, partly chalky, slightly limy, slightly to very anhydritic, minor argillaceous & earthy, calcarenite, 3 to 5% total scattered visible intracrystalline to vuggy porosity, slight poor odor, traces light brownish yellow natural sample fluorescence, hazy cut fluorescence, poor show.

1450-1460

70% **Anhydrite**: white, off white, brown to dark brown, hyaline, irregularly shaped, sharp, angular cryptocrystalline with traces microcrystalline, dense, abundant of calcite inclusion, traces of fine crystalline limestone with abundant of brownish grey to tan dolomite inclusion.

30% **Dolomite**: off white, cream to buff, tan, very sharp microcrystalline to fine crystalline debris, predominately grainstone to wackestone to packstone, in part grainy, partly chalky, slightly limy, slightly to very anhydritic, minor argillaceous & earthy, calcarenite, 3 to 5% total scattered visible intracrystalline to vuggy porosity, slight poor odor, traces light brownish yellow natural sample fluorescence, hazy cut fluorescence, poor show.

1460-1668

60% **Anhydrite**: white, off white, brown to dark brown, hyaline, irregularly shaped, sharp, angular cryptocrystalline with traces microcrystalline dense, abundant of calcite inclusion, traces of fine crystalline limestone with abundant of brownish grey to tan dolomite inclusion.

40% **Dolomite**: off white, cream to buff, tan, very sharp microcrystalline to fine crystalline debris, predominately grainstone to wackestone to packstone, in part grainy, partly chalky, slightly limy, slightly to very anhydritic, minor argillaceous & earthy, calcarenite, 3 to 5% total scattered visible intracrystalline to vuggy porosity, slight poor odor, traces light

brownish yellow natural sample fluorescence, hazy cut
fluorescence, poor show.

TD OF PARA ET AL CAMERON H-06.

DISTRIBUTION

The original and five (5) copies of the Geological Report on Para Et Al Cameron H-06 have been completed. The original and four (4) Copies will be forwarded to PARAMOUNT RESOURCES LTD. and "Moh & Associate Oilfield Consultants Ltd." will retain the remaining copy.

Respectfully



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President,
Moh & Association Oilfield Consultants Ltd.

