**Well : DA#4(ADD)**

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| **General Well Data** | |
| Well Name | :DA#4(ADD) |
| Field/Structure | : Agartala Dome |
| Well Type | : Exploratory Step Out |
| Target Depth | : 3750 m |
| Drilled Depth | : 3750m |
| Rig | :E-1400-X |
| Location | : Latitude - 23º43′05″ N  Longitude - 91º23′41″ E |
| Elevation | :GL- 66.30 m  KB- 74.44 m |
| **Operations at a Glance:** |  |
| Drilling Rig (Rig-E-1400-X) | :30.03.1988 to 08.04.1989 |
| 1st Work Over Job (Rig- IR-500-I) | :18.09.2008 to 20.03.2009 |
| 2nd Work Over Job (Rig- John-100-25) | :02.11.2012 to 10.12.2012 |

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| **Casing Details:** | | | | |
| **Casing Size (Inches)** | **Shoe at (m)** | **Cement Rise** | **Grade & Thickness** | **Remarks** |
| 13⅜″ | 408.27 | Upto surface | C-95, 68ppf, BTC | F/C at 384.66m |
| 9⅝″ | 2020.35 | Not Recorded | N-80, 47ppf, BTC, | F/C at 1996.34m |
| 7″ (1893.6-3438.6m) | 3438.60 | Upto Hanger Top (1893.6m) | V-150-XL, 29ppf, 20.35mm | L/C at 3414.66m |
| 5½″ (0-1794m)/  5″ (1794-3699.68m) | 3699.68 | 2600 from surface | 5½″-N-80, 23ppf, LTC, 10.54mm 5″-V-150, 18ppf, XL, 9.20mm | F/C at 3687.24m |

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| **Operation with Drilling Rig (30.03.1988 to 08.04.1989)**  **Rig:** E-1400-X  **Objective:**   1. Location released as an exploratory A category location with an objective to explore the hydrocarbon prospect of Surma sequence of rocks. 2. The objective of increasing the target depth from 3500m to 3750 m was to delineate the reservoir met with in AD-2 at 3620 m which indicated presence of gas during drilling.   **Operation:** The well was drilled down to 411m with 17 ½” bit, then lowered and cemented 13 3/8” conductor casing. Further well was drilled to 2024.28m and 9 5/8” casing was lowered and cemented with shoe at 2020.35m. The well was drilled down to 2041m by 8 ½” bit. Leak off test was carried out in the mud of sp. gr. 1.19/ 1.20, keeping string bottom at 2020m, but no leak off point could be reached upto a pressure of 182Kg/cm2 on the surface, i.e. 2.10MWE. The well was further drilled down upto 3555m while cutting three cores, i.e. CC-I, CC-II, & CC-III, in the intervals 2721.06-2726.06m, 3129.35-3133.85m & 3501.52-3504.27m respectively. During circulation of mud, sharp rise in total gas upto 25% in MLU and lighter mud flow @20-30liters/minute were noted. sp. gr. of out coming mud came down from 1.47 to 1.08 without any remarkable change in viscosity. To subdue the well activity, sp. gr. Of mud was gradually increased to 1.84/ 1.85 and well got stabilized. While pulling out severe tight pull observed with string bottom at 3303m, which could not be cleared and string got stuck. The well could be cleared upto 2058m during fishing job. It was decided to side track the well. A cement plug was placed with top at 2000.20m, which was drilled to 2028.32m and tested negative hermeticity, which was found o.k.  The well was deviated at 2028m with 8 ½” bit and dynadrill and further drilled down upto 3467.75m. 7” liner casing was lowered and due to hold up at 3445m, the shoe was adjusted at 3438.60m and hanger top at 1893.60m. The liner casing was cemented upto hanger top leaving a cement plug of about 100m thick above top of liner hanger. 6” bit was lowered and drilled down to 3574m with gradually increasing sp. gr. of mud to 1.80/ 1.81. During drilling at 3574m, activity was observed in the well which continued upto 3577m. The activity was reduced considerably by increasing the sp. gr. Of mud to 1.84/ 1.85 and string was pulled out to casing shoe. The sp. gr. of mud was further increased to 2.00/ 2.01 and drilling was continued to 3617.87m. The logging could not be carried out, because the well became active after pulling out the string completely. The sp. gr. of mud was increased to 2.10/ 2.13 and well was drilled down to 3750m with mud of sp. gr. 2.13/ 2.14. Final logs could not be recorded in two attempts. The production casing 5” / 5 ½” was lowered and due to held up at 3700m, the shoe was adjusted at 3699.68m and same was cemented. During hermetical testing of casing, leakage was observed. To detect leakage depth, during lowering of packer assembly, it got slipped and fell in the well. The assembly could not be fished out in several attempts and finally well head was removed and casing was retrieved upto 1994m. Fresh 5” / 5 ½” casing were lowered and tightened at 1994m with the existing casing in the well. The well head was installed and hermetically tested at 600Kg/cm2. While running in tubings, obstruction was felt around 3550m due to settling of barites. The well was cleared upto 3667m by lowering cutting tool. The 5” / 5 ½” casing was hermetically tested at 450Kg/cm2 in water and found sealed.  On basis of logs interpretation, seven objects were recommended for the testing. Object-I and II were evaluated based on cased hole N-N logs as no open hole logs could be recorded for the section drilled with 6“ bit below 7” liner shoe at 3438.6 m. Remaining five objects were evaluated on open hole log and cased hole N-N logs. Out of seven interesting objects identified, four have been tested by deep drilling rig. First three objects did not indicate any commercial accumulation of hydrocarbon. Fourth object (3235.0-3243.0m) proved to be gas bearing and the well has been completed as gas producer in this object. | | | |
| **Object** | **Sand** | **Interval (mMDKB)** | **Testing Result** |
| Object-I |  | 3541-3545, 3549-3551 | Produced only water @ 144 m3/d thru' 10mm bean, Salinity = 25.08 gpl, FTHP/STHP = 28/337 KSC. |
| Object-II |  | 3497-3501 | No Influx |
|  |  | 3364.50-3362.50, 3366.00-3364.50, 3305-3302 & 3299.50-3298.00 | Gas bearing but commercially not viable,  *Tested as missed zone later with WOR* |
| Object-III |  | 3290-3296 | Influx of 0.98 m3 of formation water, Salinity=4.94 gpl. |
| Object-IV | PA-60 | 3235-3243 | Well flowed gas @ 84600m3/d via 8mm bean, FTHP/FCHP = 140.6/144.2ksc |
| Object-V |  | 3110-3114, 3125-3127 |  |
| Object-VI |  | 3046-3052 |  |
| Object-VII |  | 2988-2994 |  |
| **Status of well:** Completed as gas producer in PA-60 (3235-3243m) | | | |

**Initial production testing:**

**Object –I:**

It was perforated in the interval **3541.0-3545.0m** **and 3549.0-3551.0m** @10SPM in the mud of sp. gr. 2.13/ 2.14The well became active after displacement with mud of sp. gr. 1.50 and produced water @ 6m3/hour (Salinity- 25.08gm/lit) through 10.0mm bean. FTHP- 400psi & FCHP-0. The well was closed for pressure build up and recorded STHP-4800psi & SCHP-2300psi. Extrapolated reservoir pressure and temperature at 3545m were 698.52Kg/cm2 and 104.3oC respectively. Testing of Object-I was concluded and the well was killed with mud of sp. gr. 2.14/ 2.15.

**Status:** It was water bearing having fairly good permeability. The object was isolated by setting Halliburton bridge plug at 3523m controlling setting depth with GR log.

**Object-II:**

It was perforated the interval **3497.0-3501.0m** @10SPM in the mud of sp. gr. 2.13/ 2.14. The well mud was displaced with water, but it did not become active. After applying compressor up to 100Kg/cm2, no influx of formation fluid was observed. Testing was concluded and well was subdued with mud of sp. gr. 1.37/ 1.38.

**Status:** It was very tight reservoir having very poor permeability. The object was isolated by setting Halliburton bridge plug at 3361m.

**Object-III:**

It was perforated the interval **3290.0-3296.0m** @10SPM in the mud of sp. gr. 1.37/ 1.38. The well mud was displaced with water, but it did not become active. After applying compressor twice upto 100Kg/cm2, influx of 0.98m3 of water was observed. The well was kept under observation, but showed no activity. Testing was concluded and well was subdued with mud of sp. gr. 1.34/ 1.35. Maximum salinity of formation water was 4.94gm/lit.

**Status:** It was water bearing having poor permeability. The object was isolated by setting pengo bridge plug at 3275m.

**Object-IV (Pay Sand- PA-60):**

It was perforated the interval **3235.0-3243.0m** @10SPM in the mud of sp. gr. 1.34/ 1.35. The well mud was displaced with water, but it did not become active. After applying compressor up to 110Kg/cm2, well became active flowing technical water and gas in surges. The well was cleaned with 10.0mm bean and reservoir study was carried out.

**Brief of Testing Results:**

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| --- | --- | --- | --- | --- |
| **Bean (mm)** | **SBHP/ FBHP (Kg/cm2)** | **STHP/ SCHP or**  **FTHP / FCHP (Kg/cm2)** | **Gas Rate (m3/d)** | **Condn. Rate (m3/d)** |
| 0.0 | 319.32 | 253.20/ 253.20 | - | - |
| 4.0 | 247.60 | 189.90/ 193.40 | 41,000 | 0.16 |
| 5.0 | 206.35 | 207.50/ 203.90\* | 54,000 | 0.50 |
| 6.0 | 177.68 | 126.60/ 130.10 | 70,900 | 0.90 |
| 8.0 | 185.0(?) | 140.60/ 144.20 | 84,600 | 1.50 |
| Depth of Measurement: 2900m., P\* (at 2900m)-320.96Kg/cm2., P (at mid of perforation-3239m)-325.59Kg/cm2., Reservoir Temperature (at 3239m): 213.56oF  AOFP- 1.08 lakhm3/day. | | | | |

Anomaly in FTHP through 5.0mm and 8.0mm was observed due to hydrate formation**.**

**Status:** It was completed in pay sand PA-60 in Object-IV (interval 3235-3243m) as a commercial Gas Producer.

**1st Work-Over Operation, Rig: IR-500-I (18.09.2008 to 20.03.2009)**

**Objective:**

1. Testing of Identified Missed-Zone in the Interval (3364.50-3362.50m) and Isolation of the Missed Zone after Testing
2. Re-Completion in PA-60 Pay-Sand with selective Perforation (3238-3235m) /Additional Perforation

**Operations:**

The well AD # 04 (ADD) was subdued with mud of 1.05 Sp.Gr, X-Mass Tree was removed and BOP was installed. The 2 7/8” X 2 3/8” Tubing was pulled out completely. During the P/O of the Tubing, a single piece of the Tubing Slips fell in to the well. The 2 3/8” X 2 7/8” Drill-Pipe with Magnet was lowered up to 3275m (Bridge-Plug Top), circulated and worked on Fish to engage it. The Magnet was pulled out completely and recovered no Fish. The Peripheral Milling Tool with Junk-Basket was lowered along with 2 3/8” X 2 7/8” Drill-Pipes up to 3275m, circulated, Milling of B/Plug along with Die was carried out from 3275.00m to 3275.40m, was pushed down up to 3360m and after conditioning the well, Milling Tool was pulled-out and Milled-out B/Plug was also retrieved along with the Milling-Tool. The 2 3/8 X 2 7/8” Drill-Pipe with OEDP was lowered up to 3360m, the well mud was conditioned and Viscous-Pill was placed at bottom. The OEDP was set at 3300m, carried out Cement-Squeeze Job in the intervals 3296-3290m and 3244-3235m as per the plan. Well Kept under 100 KSC Pressure.

**Testing of Identified Missed-Zone in the Interval 3364.50-3362.50m):-**

After WOC, 4 1/8” Bit was lowered. Cement was tagged at 3210m, the same was cleared up to 3306m. After clearing the well up to 3360m, Casing Integrity Test was carried out (Up to 100 KSC in mud) and was found to be okay. After pulling out the bit, Peripheral Milling Tool was lowered up to B/Plug Top (3361m) and the same was milled and pushed-down up to 3380m. The well was scrapped up to 3380m with 5” scrapper and after changing over from mud to the Brine of 1.05 average Sp.Gr, the scrapper was pulled out by breaking and laying down the 2 3/8” X 2 7/8” Drill-Pipes in to singles.

The 2 7/8” X 2 3/8” Tubing was lowered with Shoe at 3325m. Thereafter a dummy-run was carried out with Wire-line and obstruction at 3100m was observed. Tubing string was pulled out for checking and observed buckling in one of tubing and the same was replaced. The 2 7/8” Tubing was again lowered with Hydraulic-Packer and Sliding-Sleeve up to 3327m and a dummy was carried out by Wire-line up to Sliding-Sleeve to prove the hole and was found to be okay. The Packer and Sliding Sleeve Position was adjusted with Packer (Hydraulic) at 3336.00m and Sliding-Sleeve at 3323.00m. After installing X-Mass Tree, the Packer was set and pressure tested and found to be okay. After displacing brine in the Tubing with water, the Compressor was applied (with Sliding-Sleeve in Open Condition) up to 120 KSC for reducing the Hydrostatic-Head and Sliding-Sleeve was closed.

During the TCL-GR run, the tool could not be lowered below 3303m therefore the well was proved with Wire-Line Jarring (by pushing down Pump-Out Plug’s seat at 3336m) up to 3375m. TCL-GR recording was again carried out but the tool did not go below 3358m even after repeated attempts. The Hydraulic-Packer was unseated and after removing X-Mass Tree, the well was proved by lowering Tubing up to 3380m. The well was conditioned thoroughly and after adjusting the tubing Shoe at 3283m, TCL-GR Tool was lowered up to 3380m. After removing the BOP, the X-Mass Tree was installed with Tubing Shoe at 3283.00m. Brine was displaced with water for reducing the hydrostatic-head and the compressor was applied up to 120 KSC.

The Perforation of the Interval 3364.50-3362.50m (Sand below PA-60) Through Tubing under Reduced Hydrostatic-Head Condition was carried out. 1st Compressor was applied up to 160 KSC and observed No Flow up to 120 KSC and from 120-160 KSC the well flowed water. The well was under observation and found no flow. The 2nd Compressor was applied up to 180 KSC and observed no flow from 00 to 130 KSC and from 130-180 KSC flow of water was observed. After releasing the pressure, the well was under observation and no activity was observed. The BHS were carried out and recorded FBHP-129.30 KSC and FBHT-104.150C at 3200m with Liquid Level at 1880m. Salinity of Water Sample collected with Bottom-Hole Sampler at 3200m was found to be 4914 ppm. The well was under observation and found feeble gas with FTHP “0” and FCHP of 25 KSC.

The Interval 3364.50-3362.50m was re-perforated and perforated the additional intervals 3366.00-3364.50m, 3305-3302m & 3299.50-3298.00m @ 18 SPM conventionally in brine of 1.18 Sp.Gr. The well was activated by applying two compressor up to 180 KSC each. In 2nd compressor water returns was observed from 172 KSC. The Well was kept open thru’ tubing with 6mm bean and observed flow of feeble gas at FTHP/CHP-0/45 KSC was observed. Foam-Job was carried out and observed Foam-Cut at 172 KSC. Well was kept open thru’ tubing. The Well flowed feeble gas at FTHP/CHP-0/15 KSC. The well was observed through 10mm Bean and observed flow of muddy fluid followed by water with gas in surges at FTHP/CHP - 27/83 KSC. The Salinity of Water was found to be 23,985 ppm. Subsequently the well flowed water with little gas in surges at FTHP/CHP-7/70 KSC through 10mm bean. The Well was closed for Build-Up and observed STHP/SCHP-290/280 KSC.

In view of the Salinity and Pressure Match with the Object-I (3551-3549 & 3545-3541m) Initial Testing Results, it was concluded that water from object-I is most probably communicating from behind the casing through channelling.

**Status:** The Testing of the zone was concluded with the Status of the intervals 3364.50-3362.50m, 3366.00-3364.50m, 3305-3302m & 3299.50-3298.00m as Gas Bearing and commercially not viable.

**Isolation of the Missed Zone after Testing:-**

In view of the above, it has been decided to Set Bridge-Plug at 3270m and carry out cement-squeeze in the interval 3245-3242m before re-completion of the well in PA-60 Pay-Sand by Selective Perforation of the interval 3238.00-3235.00m and Additional Perforation of the interval 3232.00-3222.00m with in PA-60 Pay-Sand and complete with Packer-Completion.

Accordingly, the well was tried to subdue with 1.18 brine and observed self-flow in surges. The well was closed and observed STHP-290 KSC and SCHP-285 KSC. The pressure was released and circulated with brine and observed the well for activity. The well knocked out entire brine and flowed water. The well was subdued with 1.90 Sp.Gr mud. Observed well trickling mud from both through Tubing and annulus. The Sp.Gr was raised up to 2.05 and the well was conditioned with the help of Cementing-Unit. After installing BOP, Production Tubing was lowered up to 3380m and the well was again condition before pulling out the tubing for lowering of the Bridge Plug. While lowering Bridge Plug, held up was observed at 2901m and could not be lowered even after repeated attempts. Again 2 7/8” Tubing was lowered and the well was cleared up to 3345m and a Cement-Plug was placed in the interval 3345 - 3290m for isolation of the perforated intervals. After WOC, Tubing was lowered with mud Circulation and Cement-Plug was tagged at 3291m. Again 2nd Cement-Plug was placed from 3280m to 3130m. After WOC, 4 1/8” Bit with 2 3/8” Drill-Pipes was lowered and the bottom was tagged at 3040m.

The String was pulled out up to 1500m and attempts to establish mud circulation for displacing the 2.05 Sp.Gr mud with 1.10 Sp.Gr mud failed. The String was pulled-out and replaced the choked D/Collar and Bit. The Bit with Slim-Hole D/String was Lowered and displaced mud of 2.05 Sp.Gr. with 1.10 Sp. Gr. of mud in stages up to 3060m. The well was cleared of the cement up to 3240m with CCL-GR recording at 3212m, the mud was conditioned, 200m brine cushion was placed at bottom and the string was pulled out.

**Re-Completion in PA-60 Pay-Sand:-**

Selective Perforation of the PA-60 Pay-Sand in the interval 3238-3235m was carried out conventionally @ 12 SPM and 2 7/8” Tubing with Hydraulic-Packer and Sliding Sleeve was lowered with Shoe at 3202m. After installing X-Mass Tree, the well fluid was displaced with water and the well activated by applying compressor twice up to 180 KSC and observed return flow of water from 178 KSC to 180 KSC in 2nd application. The salinity of water was 1170 ppm only.

The Foam-Job was carried out flowed by Compressor Application and observed 00-155 KSC-Water with Foam-Cut at 160 KSC. The well was under observation and observed little flow of Gas through Tubing with 6 / 4mm Beans with CHP-42 KSC and FTHP-Nil. During the TCL-GR recording for Re-Perforation / Additional Perforation held-up was observed 3236.50m. The well was subdued with mud of 1.10 Sp.Gr, the bottom was cleared with Tubing up to 3240m and Tubing Bell-bottom was set at 3196m. The Re-Perforation of the Interval 3239-3235m @ 12 SPM and Additional Perforation of the interval 3232-3222m @ 18 SPM within PA-60 Pay-Sane were perforated through Tubing under Reduced-Head in Water. The well was under observation and observed CHP-20 KSC and FTHP-Nil. Foam-Job was carried out and observed Foam-Cut at 135 KSC (in 2nd Foam-Job).

The well was under observation and flowing Gas (with minor quantity of Technical Water of Salinity ranging from 468 ppm to 1287 ppm in surges ) with CHP : 65-75 KSC and FTHP : 10-36 KSC with 4mm Bean. Again well was flowed through 6mm bean for 12 Hrs and found FTHP-7 KSC and CHP-27 KSC with flow of Gas only. The Bean size was reverted to 4mm Bean and carried out BHS: FBHP-36.48 KSC at 3100m with Gradient of Gas in the interval 0000-2500m and Water / Emulsion / Foam in the interval 2500-3100m. The well was under observation through 4mm bean for cleaning and flowed gas with surges of water at FTHP 035 KSC and CHP 75 KSC. Tried to clean the well by flowing through 6mm bean and observed CHP-27 KSC and FTHP-07 KSC with flow of Gas only. Again flowed through 4mm Bean and observed Flow of Gas with FTHP-14 KSC and CHP-41 KSC. The well was closed and recorded SCHP-200 KSC, STHP-200 KSC in 58 Hrs. The Bottom-Hole Studies were carried out and recorded SBHP-271.48 KSC, STHP- 219 KSC and Gradient of 0.16-0.19 from 3100-Up to Surface after 58 Hrs of Shut-In. The well was re-opened through 3mm Bean and observed flow of Gas at FTHP-50 KSC and CHP-60 KSC. Measured Flow Rate: Bean-3mm, Gas-7344 m3/day, FTHP-50KSC and CHP-60 KSC. The Rig was released at 0700 Hrs of 20.03.2009

**Status of well:** Gas producer in PA-60 (interval: 3239- 3235m and 3232- 3222m)

**Rig-Less Job for Improving the Productivity of the Well:** However in order to improve the production rate, Re-Perforation of the additionally perforated interval 3232-3222m was carried out (after rig-release) Through Tubing @ 12 SPM. The well was kept open through 3mm Bean and observed flow of Gas with FTHP- 35 KSC and CHP-40 KSC. The well was closed and in order to confirm that the bottom intervals are free of obstruction, TCL-GR Dummy was lowered up to 3240m. During the Pull-out of the logging tool, the cable got snapped after pull-out up to 450m leaving the Tool (TCL-GR Tool) inside the well.

In view of the released rig’s planned transportation to Sibsagar in April-2009 for refurbishment, it was planned to fish-out the tool, after subduing the well with brine and re-complete the well. Accordingly, the well was subdued with brine of 1.05 Sp.Gr and the String (along with Packer and Sliding-Sleeve) was pulled out.

The Logging-Tool was fished out in the 4th attempt and the well was re-completed with 2 7/8” Tubing-Shoe at 3211m. The well was activated again by Foam-Job and the well flowed Gas through 3mm Bean with FTHP - 1.5 KSC and CHP - 64 KSC. The well was closed on 07.04.2009 at 2330 Hrs for connecting the well to GCS (Agartala-Dome) after Rig-Dismantling and observed STHP / SCHP - 195 KSC (on 19.04.2009). The well was connected to GCS on 27.04.2009 for flowing through 3mm bean and observed STHP/SCHP-212/210 KSC.

**2nd Workover operations: Rig: JOHN-100-25 (03.11.2012 to 11.12.2012)**

**Objective: To test the remaining recommended objects of the well.**

Checked the well pressure and found THP/CHP = 145/ 145 ksc. The well was subdued with mud of sp gr 1.23. N/dn XMT, N/up BOP and pulled out tubing completely. R/I S/edge with 5” scraper up to 3200 m, placed 200 m viscous cushion at bottom and pulled out tubing completely.

**Testing of PA-59 (3183-3177m)- initially not released**

Set bridge plug at 3203 m. Perforated KP-59 pay sand in the interval 3183-3177 m @ 6 spf conventionally on 09.11.2012. R/I 2 7/8” tubing 3160.5 m and landed tubing hanger cone. N/dn BOP, N/uo XMT and tested at 4000 psi. Displaced well mud with water. Air compressor was applied upto 180 KSC and knocked out tech water. Observed flow of feeble gas with without any pressure development. The well was circulated with water. Applied compressor up to 70 KSC followed by foam job and foam cut at 150 KSC. Released air pressure and allowed the well to be cleaned. The well was closed and recorded STHP/SCHP : 44/48 KSC. Subdued the well with mud and pulled out tubing. Re-perforated the interval 3183 - 3175 m @ 6 spf. Tubing was ran in and displaced mud with water. On activation, only flow of feeble gas was observed. Testing of the object was called off on 20.11.2012 and subdued the well with mud of 1.20 sp gr. N/dn XMT, N/up BOP and tested at 4000 psi. Placed 150 m viscous pill and pull out tubing.

**Result: Flow of feeble gas, commercially not viable.**

**Testing of Object-V (sand PA-58 (3106-3109 m))**

Set bridge plug at 3135 m by wire line. Perforated KP-58 sand in the interval 3106-3109 m. Tubing was ran in to 3085 m. N/dn BOP, N/up XMT and tested at 4000 psi. Displaced mud with water. Carried out foam job with compressor and cut at 125 KSC. No surface activity was observed. Testing was called off on 24.11.2012 and subdued the well with mud of 1.10 sp gr. Tubing was pulled out completely and isolation bridge plug was set at 3072 m.

**Result: No influx.**

**Testing of Object-VI (PA-55 (3045-3052 M))**

Sand PA-55 was perforated in the interval 3052-3045 m @ 6 SPF conventionally on 26.11.2012. RIH 2 7/8” with BB shoe up to 3030 m. N/dn BOP, N/up XMT and tested flange at 3000 psi. Displaced mud with water. Carried out foam job with compressor. Air cut at 125ksc. On releasing pressure through 10 mm bean no activity was observed. Called off testing on 28.11.2012 and subdued the well with mud of sp gr 1.2. N/dn XMT, N/up BOP pulled out tubing completely. Set bridge plug at 3041 m and tested at 100 KSC pressure.

**Testing of Object-VII (PA-55 (3021-3027, 2998.5-2996.5 & 2988-2986m))**

Perforated the interval 3021-3027, 2998.5-2996.5 & 2988-2986 m @ 6 SPF conventionally on 30.11.2012.

RIH 2 7/8” tubing upto 2970 m. N/dn BOP, N/up XMT and tested flange at 4000 psi. Displaced mud with water. Foam job was carried out and cut foam at 125 KSC. Testing of object was called off as no activity was observed. The well was subdued with 1.20 sp gr mud and pulled out tubing completely. Scraped the hole up to 1774 m and pulled out tubing.

**Result: No influx.**

**Testing of Object-VIII: (1665-1660, 1609-1605 m) PA-10 B – Not released initially**

Isolation bridge plug was set at 1682 m and perforated object-VIII in the interval 1665-1660 & 1609-1605 m @ 6 SPF. R/I 2 7/8" tubing up to 1591 m. Displaced mud with water. Air compressor was applied through casing and cut air at 125 KSC. On releasing pressure through 10 mm bean, no surface activity was observed. Second compressor was applied through casing and cut air at 162 KSC. Water surfaced at 147 KSC. Tubing pressure was released. Observed no activity. CHP: 105 KSC (comp air press). Again 3rd compressor was applied through casing and water surfaced at 120 KSC. Air cut at 130 KSC. Air pressure was released. No activity was observed. Water collected during activation gave salinity of 585 ppm. Decided to release the rig due to work commitment. Accordingly, called off testing of the object and subdued the well with 1.20 sp gr mud. Two abandonment cement plugs, each 100 m from 1670 to 1570 m (tagged at 1572m) and from 250 m to 150 m were placed as bottom and top plug respectively. After WOC, N/dn 11"-7 1/16" T/Spool and abandoned the Well as per procedure. The rig was released at 1800 Hrs on 11.12.2012 for next location AD#2 (ADA).

**Testing Result: Inconclusive testing**

**Status of well:** Abandoned after testing all recommended intervals

**Production History:**

The well was put on production in February-1998 from PA-60 Pay-Zone. Initially it produced gas @ 70,000 m3/d through 8.0mm bean which gradually decreased to 10,000 m3/d through 6.0mm bean in August-2001 and finally to 3,000 m3/d through 5.0 mm bean in July-2005. The well was closed since August-2005 as the flow from the well was not continuous due to suspected water-loading. The static BHS-Recording on 06-12-2006, an obstruction was observed at 916m. The gradient survey showed Water-level at 700m with SBHP of 53.27 KSC at 800m. Well Ceased to flow after Cumulative Gas Production of 60.45MMm3 as on 01.04.2008. Workover job was carried out from September 2008 to March 2009. For following objective:

* Testing of Identified Missed-Zone in the Interval (3364.50-3362.50m) and Isolation of the Missed Zone after Testing
* Re-Completion in PA-60 Pay-Sand with selective Perforation (3238-3235m) /Additional Perforation

During the WOJ, the testing of the zone was concluded with the Status of the intervals 3364.50-3362.50m, 3366.00-3364.50m, 3305-3302m & 3299.50-3298.00m as Gas Bearing and commercially not viable. The well was completed again as gas producer in PA-60 (interval: 3239- 3235m and 3232- 3222m). Measured Flow Rate: Bean-3mm, Gas-7344 m3/day, FTHP-50KSC and CHP-60 KSC.

Later, in order to improve the production rate, Re-perforation of the additionally perforated interval 3232-3222m was carried out (after rig-release) Through Tubing @ 12 SPM. The well was kept open through 3mm Bean and observed flow of Gas with FTHP- 35 KSC and CHP-40 KSC. The well was closed and in order to confirm that the bottom intervals are free of obstruction, TCL-GR Dummy was lowered up to 3240m. During the Pull-out of the logging tool, the cable got snapped after pull-out up to 450m leaving the Tool (TCL-GR Tool) inside the well. Hence WOJ was carried out again in April 2009 for fishing of logging tool and recompletion. The well was connected to GCS on 27.04.2009 for flowing through 3mm bean and observed STHP/SCHP-212/210 KSC.

Since then the well has been on production till May’12 and it cumulatively produced 63.9367 MMSCM. After this the well was abandoned after testing of other recommended intervals in the well.

**Present Status of Well: Abandoned. Cumulative gas production from the well has been 63.9367 MMSCM.**