

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy Minerals and Natural Resources

Form C-101

June 16, 2008

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MAR 07 2011

HOBBSOCD

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address Apache Corp 303 Veterans Airpark Ste 3000 Midland TX 79705		² OGRID Number 873
³ Property Code -6482 306603		⁴ API Number 30 - 025-06596
⁵ Property Name L.G. Warlick C		⁶ Well No. 005
⁹ Proposed Pool 1 Penrose Skelly; Grayburg (50350)		¹⁰ Proposed Pool 2

⁷ Surface Location

UL or lot no. O	Section 15	Township 21S	Range 37E	Lot Idn	Feet from the 335 330	North/South line South	Feet from the 2310	East/West line East	County Lea
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⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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Additional Well Information

¹¹ Work Type Code P	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 3417'
¹⁶ Multiple Y	¹⁷ Proposed Depth 7827' TD	¹⁸ Formation Grayburg	¹⁹ Contractor Open	²⁰ Spud Date Open

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17"	13-3/8"	48#	300'	300	Surf
11"	8-5/8"	32#	2800'	1300	Surf
8"	5-1/2"	17#	7655'	1100	55'

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

This well was completed in the Ellenburger 7/17/1950 with perms 7655'-7827'. Apache attempted to recomplate to the Hare Simpson (McKee & Connell), which was unsuccessful. Apache now proposes to recomplate to the Grayburg B & C, as noted on the attached procedure.

Permit Expires 2 Years From Approval
Date Unless Drilling Underway
Plugback

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
Signature: <i>Reesa Holland</i>		Approved by: <i>[Signature]</i>	
Printed name: Reesa Holland		Title: PETROLEUM ENGINEER	
Title: Sr. Engineering Tech		Approval Date: MAR 31 2011	Expiration Date:
E-mail Address: Reesa.Holland@apachecorp.com			
Date: 03/03/2011	Phone: 432/818-1062	Conditions of Approval Attached ☐	

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-06596	² Pool Code 50350	³ Pool Name Penrose Skelly; Grayburg
⁴ Property Code 6482	⁵ Property Name L.G. Warlick C	⁶ Well Number 005
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705	⁹ Elevation 3427'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	15	21S	37E	330		South	2310	East	Lea

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. PC-1015						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16					¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order hereinafter entered by the division. <u>Reesa Holland</u> 03/03/2011 Signature Date Reesa Holland Printed Name
					¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

AFE No: TW- 10- 4252-01

L.G. Warlick C #5
API #: 30-025-06596
339' FSL & 2310' FEL
Section 15, Township 21S, Range 37E
Lea County, New Mexico

Recomplete to Grayburg B & C

3 March 2011

Note: All perf depths are picked from the Gray Wireline Compensated Neutron/Gamma Ray/CCL log dated 2/22/11.

Recommended Procedure:

1. MIRU pulling unit. Install BOP.
2. MIRU wireline service. RIH w/CIBP. Set plug @ +/-4100'. Dump bail 2 sx cmt on top of plug.
3. Perf (Grayburg) : 3814', 16', 18', 20', 25', 34', 38', 46', 51', 53', 55', 57', 81', 83', 85', 87', 95', 97', 3911', 18', 27', 31', 37', 39' & 41' w/2 spf, 120 deg phasing. (Total : 50 shots).
4. RIH w/5-1/2" treating pkr on 3-1/2", L-80 frac string. Set pkr @ +/- 3700'.
5. Acidize Grayburg w/3,000 gals 15% HCL-NE-FE BXDX acid and ball sealers.
6. Release pkr & run through perfs to knock off balls. Reset pkr @ 3700'.
7. Pump 1 drum of corrosion inhibitor followed by 10 bbls 2% KCL pad. Pump 2 drums of scale inhibitor followed by 10 bbls 2% KCL flush.
8. Frac the Grayburg B & C intervals w/80,000# 20/40 SLC resin coated sand (2-5 ppg ramp) down 3-1/2" frac string @ 30+ BPM in 30# XL gel as per frac recommendation.
9. Release pkr & POOH laying down 3-1/2" frac string.
10. RIH w/4-3/4" bit on 2-7/8" tbg. Clean well out to PBTD @ +/- 4065'. POOH.
11. RIH w/SS, SN & 2-7/8" tbg. Land SN @ +/-3975'. RIH w/1-1/2" pump new 76 rod string.
12. Hang well on and place in test. Report results to Midland office.

Proposed

WELL DATA SHEET

Last Update: 3-2-11

Lease Name: L.G. Warlick "C" #5

API No: 30-025-06596

Location: 33°51'23.10"E
Unit 0, Sec 15, T-21S, R-37E

County: Lea ST: NM

Spud Date: 5-30-50 Well Elev: 3417' GL 11' KB

TD Date: 7-10-50 Completion Date: 7-17-50

TD: 7827' PBTD: 4065' TOC: 55' (+5)

13 3/8" 48" H-40 300' 300.5x (Circ)

Csg Size: 8 5/8" Wt: 32" Grd: J-55 Dpth: 2800' Cmt: 1300.5x (Circ)

Producing Formation: Grayburg

Perfs: From 3814' to 3941' 2/spf to _____
_____ to _____ /spf _____ to _____

IP: _____ BOPD _____ BWPD _____ MCF/D

Well History: (See Attached)

Well Equipment:

Pumping Unit: Lufkin M228-200-86

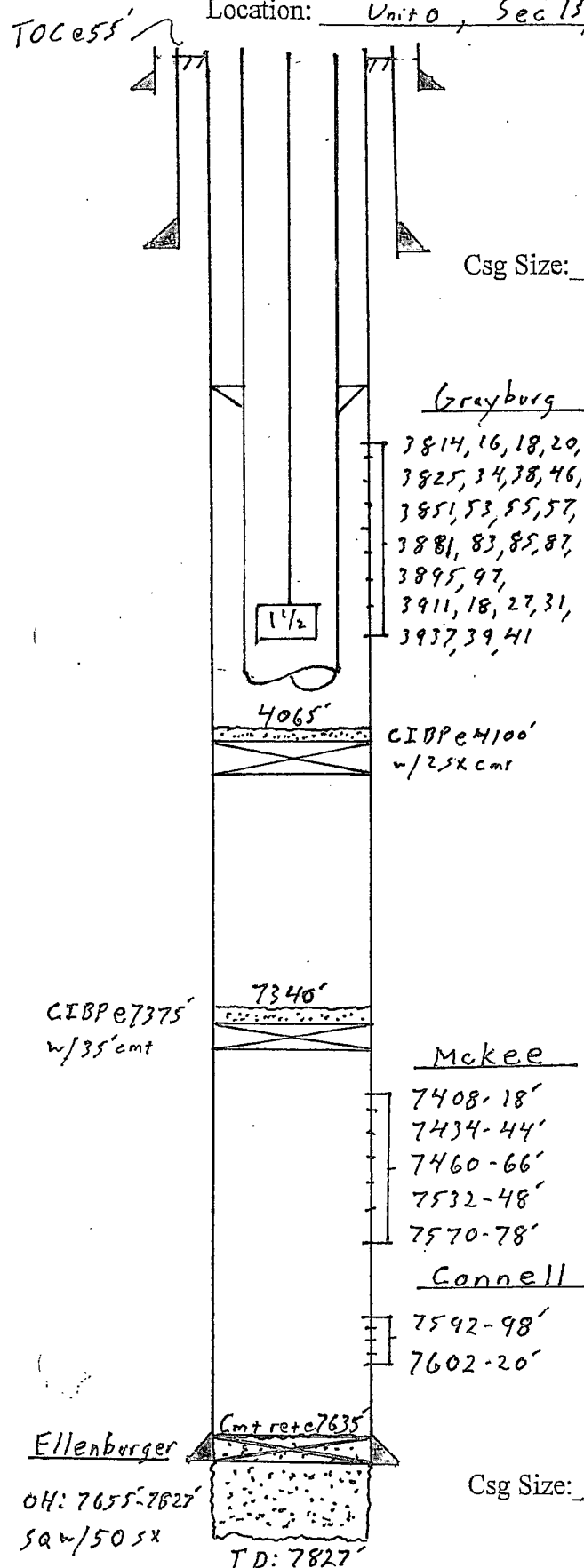
Motor Type: _____ HP: _____ POC: _____

Tbg: 128' Jts 2 7/8" Size 6.5" Grade J-55

MA @ 4000' SN @ 3975' TAC @ 3700'

Rods: 7.6 rod string

Pump: 2" x 1 1/2" x 24' RHBC



Csg Size: 5 1/2" Wt: 17" Grd: J-55 Dpth: 7655' Cmt: 1100.5x

Present

WELL DATA SHEET

Last Update: 3-2-11

Lease Name: L.G. Warlick "C" 45

API No: 30-025-06596

Location: 339°5/2310°E
Unit 0, Sec 15, T-21S, R-37E

County: Lea ST: NM

Spud Date: 5-30-50 Well Elev: 3417' GL 11' KB

TD Date: 7-10-50 Completion Date: 7-17-50

TD: 7827' PBTD: 7340' TOC: 55' (trs)

13 3/8" 48" H-40 300' 300 sx (Circ)

Csg Size: 8 5/8" Wt: 32# Grd: J-55 Dpth: 2800' Cmt: 1300 sx (Circ)

Producing Formation: Ellenburger

Perfs: From 7655' to 7827' /spf 04 to _____
_____ to _____ /spf _____ to _____

IP: _____ BOPD _____ BWPD _____ MCF/D

Well History: (See Attached)

Well Equipment:

Pumping Unit: Lufkin M228-200-86

Motor Type: _____ HP: _____ POC: _____

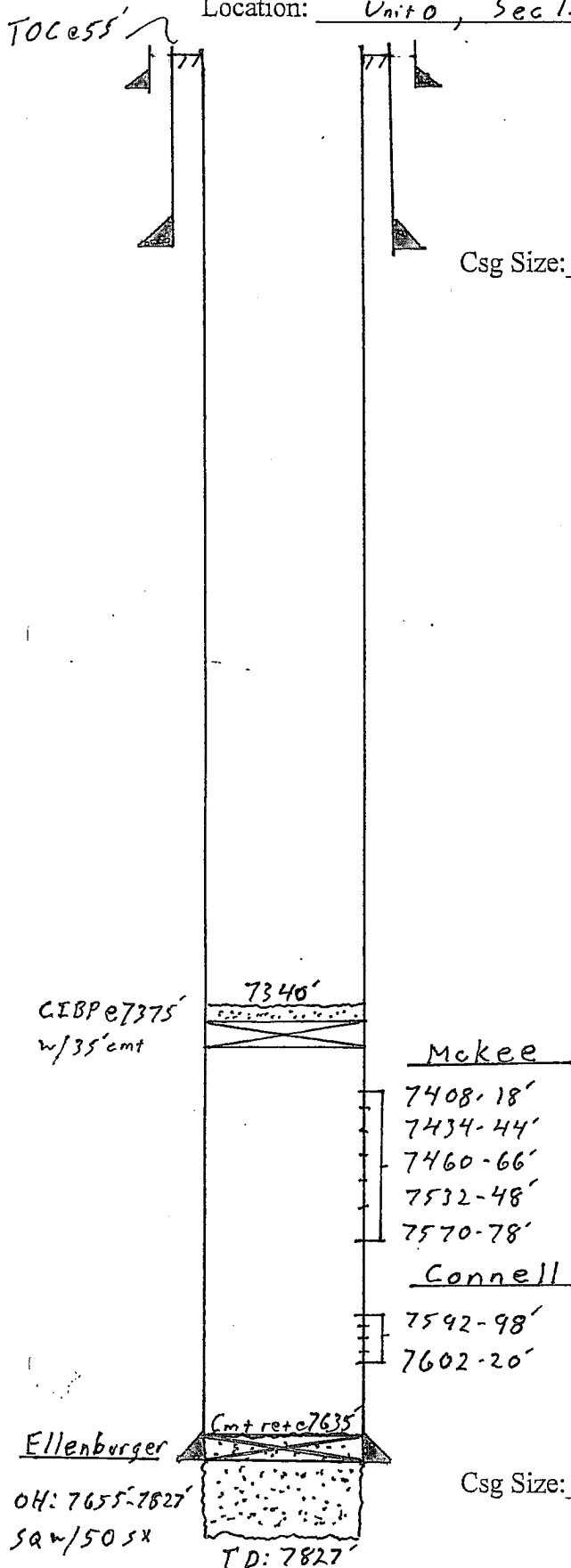
Tbg: 259 Jts 2 3/8" Size 4.7# Grade J-55

MA @ _____ SN @ _____ TAC @ _____

Rods: Rods & tbs pulled from well.

Pump: _____

Csg Size: 5 1/2" Wt: 17# Grd: J-55 Dpth: 7655' Cmt: 1100 sx



L.G. Warlick "C" #5

339' FSL & 2310' FEL

SW-SE, Unit O

Sec 15, T-21S, R-37E

Lea Co., NM

- 05/30/50:** Spud. GL = 3417'. KB = 11' AGL. Set 13-3/8", 48#, H-40 csg @ 300' w/300 sx cmt (circ). Set 8-5/8", 32#, J-55 csg @ 2800' w/1300 sx cmt (circ). TD well on 7/10/50 @ 7827'. Set 5-1/2", 17#, J-55 csg @ 7655' w/1100 sx cmt. TOC @ 55' (ts).
- DST #1:** McKee. Pkr @ 7393'. TD @ 7543'. Top McKee sd @ 7430'. GTS in 27 mins. Flow 45 BO in 1 hr + 50 mcf/d rate. FP = 1550 psi.
- DST #2:** Ellenburger Lm. 7658' - 7827'. GTS in 20 mins. Flow 62 BO in 30 mins + 3,300 mcf/d rate.
- 07/16/50:** RIH w/262 jts 2-3/8", H-40 & J-55 tbg to 7825'. Tbg perfed @ 7819' - 22'.
- 07/17/50:** Ellenburger KO flowing natural 258 BO in 6 hrs on 1/2" choke. Est 1038 BOPD rate. RTP.
- 1985:** Ellenburger flow test : 0 / 0 / 119.
- 08/20/91:** Ellenburger flow test : 0 / 0 / 64.
- Oct 1994:** Ellenburger flow test : 0 / 0 / 5.
- 10/18/94:** Killed well. TFF @ 7819'. POOH w/2-3/8" tbg. RIH w/MA, SN, TAC & 2-3/8", J-55 tbg.
- 10/19/94:** RIH w/1-1/16" pump on 5/8" high strength rods.
- 10/20/94:** Set National 114 PU w/Ajax gas engine.
- 10/21/94:** RTP Ellenburger on pump.
- 10/29/94:** Ellenburger test pump : 7 / 6 / 8.
- 10/31/94:** Not pumping.
- 11/01/94:** Pump stuck. Pulled pump. Pulled tbg.
- 11/02/94:** RIH w/2-3/8" tbg. Hot water w/35 bbls 2% KCL. RIH w/pump & rods.

L.G. Warlick "C" #5

339' FSL & 2310' FEL

SW-SE, Unit O

Sec 15, T-21S, R-37E

Lea Co., NM

11/07/94: Ellenburger test pump : 8 / 0 / 13.

08/16/97: Ellenburger test pump : 7 / 22 / 123.

08/01/99: Ellenburger test pump : 2 / 36 / 83.

08/01/00: Ellenburger test pump : 2 / 24 / 78.

06/26/02: Ellenburger test pump : 3 / 20 / 52.

02/11/03: Pump stuck. Jarred free. Pull rod parted. POOH w/rods.

02/12/03: TFF @ 7781'. Stripped out tbg.

02/13/03: Stripped out tbg. RIH w/bailer. Tag @ 7774'. CO to 7779'. Hard fill. POOH.

02/14/03: RIH w/prod tbg.
RIH w/pump & rods.

02/17/03: Long stroke well. RTP.

03/02/03: Ellenburger test pump : 4 / 33 / 58.

07/28/03: Change PR liner.

06/23/05: POOH w/305 – 5/8" EL rods & pump.
PTT to 1000 psi. Held.

06/24/05: RIH w/2" x 1-1/4" x 16' pump on 305 – 5/8" EL rods. SN @ 7647'.
EOT @ 7663'.

July '07: Ellenburger test pump : 1 / 27 / 35.
AFE to recomple to Paddock 5120' – 5292'. Not done.

10/01/08: POOH w/305 – 5/8" EL rods & pump.
Hot water tbg for paraffin. PTT to 1000 psi. Failed.
POOH w/251 jts 2-3/8" tbg, TAC, 7 jts tbg, 1 ceramic jt (with hole),
SN, 4' PS & MA.

L.G. Warlick "C" #5

339' FSL & 2310' FEL

SW-SE, Unit O

Sec 15, T-21S, R-37E

Lea Co., NM

- 10/02/08:** RIH w/251 jts 2-3/8" tbg, TAC, 7 jts tbg, Alloy jt, SN & MA. TFF @ 7722'.
- 10/03/08:** POOH w/prod tbg. RIH w/bit.
- 10/06/08:** Air foam unit not working properly. Call for another unit.
- 10/07/08:** TFF @ 7722'. CO to 7828'.
- 10/08/08:** TFF @ 7828'. POOH.
RIH w/MA, SN, alloy jt, 5 jts 2-3/8" tbg, TAC & 251 jts 2-3/8" tbg.
MA @ 7745'. SN @ 7713'. TAC @ 7519'.
RIH w/2" x 1-1/4" x 16' pump on 293 - 5/8" EL + 10 - 3/4" N-97 rods.
- 10/09/08:** Land pump in SN. RTP.
- June '09:** Ellenburger test pump : 1 / 0 / 12.
- 09/10-13/10:** Tbg leak - jt #193 (rod wear). Pull tbg. Pull pump. / Pump change.
Iron & scale noted in pump.
RIH w/259 jts 2-3/8", J-55 tbg. SN @ 7769'. TAC @ 7419'.
RIH w/2" x 1-1/2" x 16' RHBC pmp on 292 - 5/8" EL + 14 - 3/4" N-97 rods.
- 02/16/11:** Recomplete to McKee.
MIRU. POOH LD pump & rods.
- 02/17/11:** POOH LD 2-3/8" prod tbg. RIH w/4-3/4" bit & scraper on 2-7/8" ws.
Ran bit to 7650'. POOH.
- 02/18/11:** RIH w/CNL. Log well from 7650' to 6250' (pulled out of fluid).
POOH.
RIH w/cmt retainer. Set retainer @ 7635'.
- 02/21/11:** Squeezed Ellenburger OH w/50 sx Class H cmt. 2.9 BPM @ 100 psi.
POOH w/tbg.
- 02/22/11:** RIH w/CNL. Log well from 5600' to 3400'.
Perf (McKee) : 7408' - 18', 34' - 44', 60' - 66', 7532' - 48' & 70' - 78'
w/2 spf.
Perf (Connell) : 7592' - 98' & 7602' - 20' w/2 spf.

L.G. Warlick "C" #5

339' FSL & 2310' FEL

SW-SE, Unit O

Sec 15, T-21S, R-37E

Lea Co., NM

- 02/23/11:** **RIH w/RBP & pkr. Set RBP @ 7630'. Pkr @ 7506'.
Acid Lwr McKee & Connell 7532' – 7620' w/4,000 gals 10% HCL-
NE-FE BXDX acid. 3.8 BPM @ 2500 psi. ISIP = 1490 psi. Vac in 2
mins. Rel pkr & RBP.
Set RBP @ 7506'. Pkr @ 7344'.
Acid McKee 7408' – 66' w/2,500 gals 10% HCL. 4 BPM @ 1800 psi.
ISIP = 22 psi. Vac in 1 min. Rel pkr & RBP.
Set RBP @ 7630'. Pkr @ 7344'.
IFL @ 4000'. Rec 26 BW in 5 runs. FFL @ SN. 100' fluid entry per
hour. 100% water.**
- 02/24/11:** **SITP = 0 psi. IFL @ 6900'. Rec 5 BW in 5 runs. FFL @ SN.**
- 02/25/11:** **SITP = 20 psi. IFL @ 7100'. Rec 2 BW in 1 run. Rel pkr & RBP.
POOH.
RIH w/CIBP to 7375'. Spot 35' cmt cap on plug. POOH LD ws.
RDMO. SWI.**