

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 31 2014
Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM0405444A
2. Name of Operator DEVON ENERGY PRODUCTION CO LP Contact: LINDA GOOD Email: linda.good@dvn.com		6. If Indian, Allottee or Tribe Name
3a. Address 333 WEST SHERIDAN AVE OKLAHOMA CITY, OK 73102	3b. Phone No. (include area code) Ph: 405.552.6558	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 25 T23S R31E SWSW 200FSL 635FWL		8. Well Name and No. ALDABRA 25 FEDERAL COM 1H
		9. API Well No. 30-015-38612-00-X1
		10. Field and Pool, or Exploratory JENNINGS
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input checked="" type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

ATTENTION: ED FERNANDEZ (Per conversation with John Parks)

Devon Energy Prod Co., L.P. respectfully requests permission to repair casing: After fracking 7 stages on the Aldabra 25 Fed 1H 3rd Bone Spring completion, perforations were shot at 880'. We would like to set a casing patch, monitor the 9 5/8" x 13 3/8" annulus during the frac with a pop-off set @ 4000 psi, and then monitor that annulus via scada for the life of the well. See details below.

"STAGE 8 WIRELINE COULD NOT PUMP DOWN PAST 13480'. TOH TO CHECK PLUG AND GUNS. GOT STUCK AT 880'. PUMPED DOWN WELL AT DIFFERENT RATES UP TO 12 BPM AT 5500 PSI COULD NOT BREAK FREE. TRIED TO SET PLUG. WL ENGINEER FELT PLUG DID NOT SET. TRIED TO FIRE PLUG SETTING TOOL AGAIN BUT HE INADVERTENTLY MOVED THE POS/NEG SWITCH AND FIRED THE BOTTOM GUNS. CHECK BACKSIDE PRESSURE (3500 PSI). STARTED WELL FLOWING BACK TO RELIEVE PRESSURE. CALLED COILED TBG UNIT AND TOOLHANDS. TRIED TO PULL WL OUT

Saltel Slimline casing patch
Accepted for record
NMOCDCES
8/1/14

14. I hereby certify that the foregoing is true and correct. Electronic Submission #254947 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION CO LP, sent to the Carlsbad Committed to AFMSS for processing by ED FERNANDEZ on 07/31/2014 (14EF0084SE)	
Name (Printed/Typed) LINDA GOOD	Title REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 07/29/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By EDWARD FERNANDEZ	Title PETROLEUM ENGINEER	Date 07/31/2014
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office Carlsbad.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

Additional data for EC transaction #254947 that would not fit on the form

32. Additional remarks, continued

OF ROPE SOCKET AND GOT ALL TOOLS OUT BUT THE FRAC PLUG WHICH HAD SET. RELEASED FRAC CREW. WAIT ON CTU."

MIRU coil tbg, drilled out plug and set kill plug at 1499'.

MIRUWL and set another plug at 1490'.

We dug out the cellar to verify which annulus the valves went to. We have a valve for the 5 1/2" x 9 5/8" annulus and a valve for the 9 5/8" x 13 3/8" annulus. The 20" casing was cut off at surface so there is no valve for the 13 3/8" x 20" annulus, it is cemented to surface.

We performed an injection test down the 5 1/2" casing and was able to circulate out the 9 5/8" x 13 3/8" annular valve at 1.5 bpm and 800 psi. We shut the 9 5/8" x 13 3/8" annular valve and pressured up to 1500 psi at no rate. Pressure would bleed off 200 psi in 1 minute. With the 5 1/2" x 9 5/8" annular valve open we did not circulate out that valve and have not seen any pressure on that annulus.

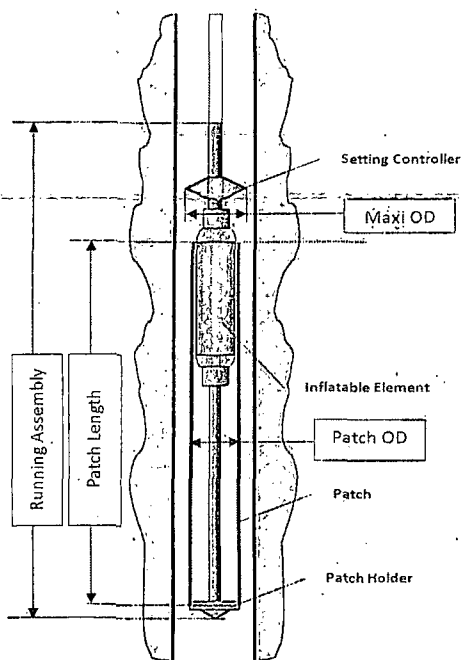
Based on the bond log and the fact that we are not able to circulate and have not seen any pressure on that annulus we would not be able to pull the 5 1/2" casing and replace it without doing more damage.

Ran a model to estimate the perforation penetration and they calculated that the charges should have penetrated through the 20" casing and went 15" into the formation.

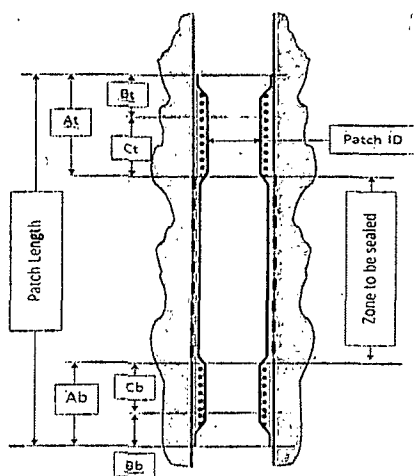
Devon plan to set a Saltel Slimline casing patch, see attached procedure and technical information for the patch.

INTERNAL JOB DATA

Service Company	Saltel Industries Midland
Date	23-Jul-2014
Company	Devon Energy
Well Type	Gas Producer
Well Number	Aldabra 25 Fed Com 1H
Application	Casing Repair
Revision	A



A (t or b) = Over
 B (t or b) = Anchorage
 C (t or b) = Sealing



WELL FLUID LEVEL	
m	ft
Degree	
m	ft
8.35	1.00
8.35	1.00
bar	

MD Fluid Level
 Well Deviation
 TVD Fluid Level
 Density of Well Fluid (annulus)
 Density of Inflation Fluid Tubing
 Differential Hydrostatic Pressure

ZONE TO BE SEALED	
121.08	4.77
Cased Hole	
5in 1/2 - 17 lb/ft	Casing Type
124.26	4.892
121.08	4.767
267.61	878.00
268.22	880.00
0.61	2.00
32	90

Minimum Restriction to Go Through
 ID Nominal
 ID Drift
 Top of the zone to be sealed MD
 Bottom of the zone to be sealed MD
 Zone to be sealed Length
 Down Hole Setting Temperature

PATCH RUNNING CHARACTERISTICS	
Standard Sealing Patch	Patch Model
5.5in Slimline	Patch Size
108.00	4.252
3.95	12.96
105.00	4.134
3.00	0.118
1.50	0.059
4.50	0.177

Patch Running OD
 Patch Length
 Patch Steel tube OD before setting
 Steel Thickness
 Elastomer Thickness
 Patch Thickness before setting

EXPANDABLE PACKER ELEMENT	
3.75in	
108.00	4.252
6.75	22.16
32	72
175	394
27.2	

Maximum Assembly Running OD
 Running Assembly Length
 Patch Weight in Air
 Total Assembly Weight in Air
 Well Dogleg Severity (*100ft or *730m)
 Max allowed DLS (*100ft or *730m)

PATCH POSITIONING	
265.91	872.42
269.71	884.89
3.80	12.47
1.70	5.58
1.49	4.89
0.38	1.26
0.17	0.57
1.32	4.32
1.32	4.32

Top of the Patch MD
 Bottom of the Patch MD
 Patch Length
 (At) Top Over lap
 (Ab) Bottom Over lap
 (Bt) Top Anchorage
 (Bb) Bottom Anchorage
 (Ct) Effective Top Sealing Length
 (Cb) Effective Bottom Sealing Length

PATCH CHARACTERISTICS WHEN SET	
32	90
115.45	4.545
112.15	4.415
20.1%	16.8%
3.91 - 3.97	0.154 - 0.156
2.72 - 2.77	0.107 - 0.109
1.18 - 1.2	0.047 - 0.047
81	1178
225	3259
1000	14500

Down Hole Operating Temperature
 Patch ID (Nominal)
 Patch ID (Drift)
 Patch Expansion Ratio
 Patch Thickness (Nominal - Drift)
 Steel Thickness (Nominal - Drift)
 Elastomer Thickness (Nominal - Drift)
 External Service Pressure (in Casing)
 Internal Service Pressure when Patch is unsupported
 Internal Service Pressure with 1in perforations

SETTING PRESSURE REQUIREMENTS	
281	4072
331	4797
381	5522
331	4797
381	5522

Surface Pressure Patch in Contact
 Surface Pressure to Set the Patch (Sealing)
 Surface Over Pressure
 Down hole pressure to Set the patch (Sealing)
 Down hole Over Pressure

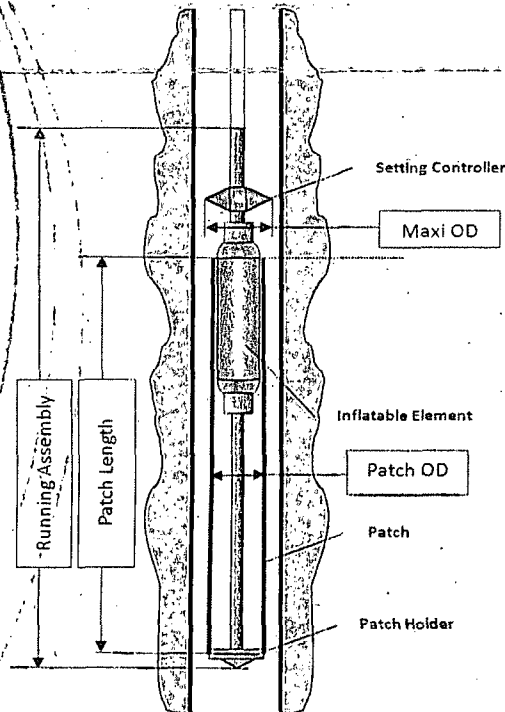
TECHNICAL DATA

Devon Energy Aldabra 25 Fed Com 1H - Casing Repair / Gas Producer

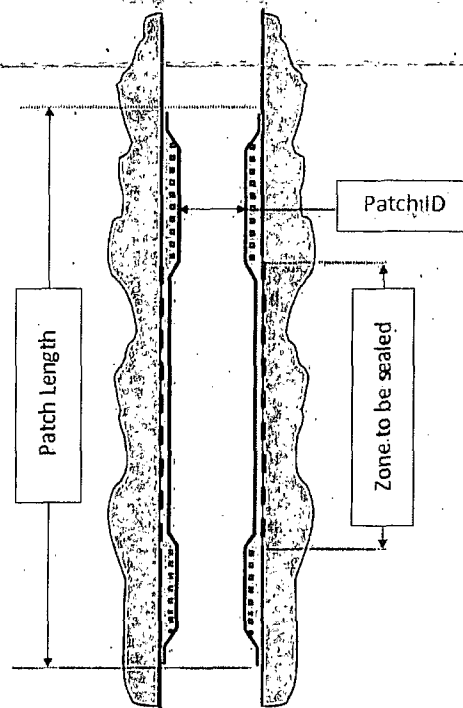
PRODUCT LINE
SALTEL EXPANDABLE
STEEL PATCH

Customer	Well Number	Aldabra-25-Fed-Com-1H
Devon Energy	Well Type	Gas Producer
	Application	Casing Repair
	Proposal Number	2014MID-JLE010 - A

Patch Running Assembly



Set Patch Characteristics



Setting temperature

32 °C	90 °F
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	Metric	Imperial
Casing weight - 5in1/2	25.30 kg/m	17.00 lb/ft
Nominal Casing ID	124.26 mm	4.892 in
Drift Casing ID	121.08 mm	4.767 in
Patch Maximum OD	108.00 mm	4.252 in
Max Assembly Running OD	108.00 mm	4.252 in
Patch weight in air	32 kg	72 lb
Total assembly weight in air	175 kg	394 lb
Patch length	3.95 m	12.96 ft
Total Tool length	6.75 m	22.16 ft
BHA Mechanical weak point	16 tons	36 Klb
Mechanical bleed off	9 tons	20 Klb
Setting Pressure	331 bar	4797 psi
Max setting pressure	381 bar	5522 psi

Operating temperature

32 °C	90 °F
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	Metric	Imperial
Patch Thickness	3.97 mm	0.156 in
Nominal ID (Casing ID - patch WT)	115.45 mm	4.545 in
Drift ID (Casing drift - patch WT)	112.15 mm	4.415 in
Programmed Calibrated Drift	TBD	TBD
Set Length	3.80 m	12.47 ft
Top of the Patch setting depth	265.91 m	872.42 ft
Bottom of the Patch setting depth	269.71 m	884.89 ft
Internal DPR 1in hole	1000 bar	14500 psi
External diff pressure rating	81 bar	1178 psi
Internal DPR (unsupported)	225 bar	3259 psi

DPR = differential pressure rating

EXPANDABLE STEEL TECHNOLOGY

www.satel-industries.com



WELL PREPARATION & SETTING PROGRAM

Devon Energy Aldabra 25 Fed Com 1H - Casing Repair / Gas Producer

1 - Conveyance string pressure rating

<input type="checkbox"/> Downhole standard setting pressure	4797 psi	331 bar
<input type="checkbox"/> Max. anticipated differential pressure	5522 psi	381 bar
<input type="checkbox"/> The conveyance string (Tubing/Drill Pipe) pressure rating needs to be confirmed		

2 - Casing preparation

- ☐ Well bore has to be scraped and drifted from 840ft to 901ft (from 256m to 275m)
- ☐ Drift Size : 4.767 in (121.08 mm)
- ☐ Minimum rathole or cellar must be: 901 ft (275 m)
- ☐ Any tight spot has to be recorded and noted. Drift mill is recommended

3 - Fluid level

- ☐ It is necessary to know the static fluid level in the well (with the tubing in) and the densities of the fluids to calculate the differential pressure to know the required surface pressure for expansion and pressure testing.

4 - Run in hole

- ☐ During the rig-up of the Patch, take care to avoid bending or damaging the Patch
- ☐ Fill the tubing string every 10-15 joints to avoid trapping air inside.
- ☐ Do not use too much dope (grease) on tubing threads, in order to avoid plugging filters.
- ☐ Make a regular Pressure test of the conveyance string at 4050 psi (280 bar) (75% of the Burst Disc value)

5 - Positioning

- ☐ No conveyance string has been defined
- ☐ The top of the Patch will be set at 872.42ft (265.91m) after expansion.
Depth control is not included in the Saltel tools, correct positioning is the responsibility of the oil company.

6 - Setting

- ☐ Check the cellar space for the end of the setting and the control of the Patch Drift ID (2 times patch length).
- ☐ Go back to the Zero Ref and pressure test the conveyance string at 4050 psi (280 bar)
- ☐ Burst the rupture disk at 5390 psi (370 bar) (+/-10%) and anchor the Patch.
- ☐ Pull back to step 2 and expand top of patch to ensure a nice entry guide
The surface pressure will be adjusted with the fluid level/density correlation. (PS.Value)
- ☐ RIH to step 3. Repeat until the bottom of expansion zone is 8in (20cm) above patch bottom
- ☐ Use short steps at the end to avoid any restriction at patch bottom
- ☐ Run through the set patch with the setting controler (gauge ring) to confirm accurate setting.

8 - Well pressure test

- ☐ The well can be pressure tested just after the setting
- ☐ The expansion tool can stay in the well during pressure test. Pull the expansion tool out of Patch.
Attention to pressure ejecting the tools (Follow proceduree SIQ-507)
- ☐ Pressure bleed off must always be done progressively at a rate of 350psi/min - 25bar/min

7 - Pulling Out

- ☐ Pull out slowly while expansion tool is still inside the Patch
- ☐ Pay attention on weight increase and fluid coming from the annulus during POOH.
It could create swabbing & could collapse the Patch.
- ☐ Fill the annulus while Pulling out if necessary

SALTEL EXPANDABLE
STEEL PATCH

PRODUCT LIFE

CONDITIONS OF APPROVAL

Sundry dated 7/29/2014

OPERATOR'S NAME:	Devon Energy Prod Co
LEASE NO.:	NM0544986
WELL NAME & NO.:	ALDABRA 25 FEDERAL COM 1H 3001538612
SURFACE HOLE FOOTAGE:	200' FSL & 635' FWL
LOCATION:	Section 25, T.23 S., R.31 E., NMPM
COUNTY:	Lea County, New Mexico

- All well test shall be charted and submitted to the BLM under a Sundry Subsequent Report
- Life of well monitoring system; operator to keep scada record on the annulus and made available to the BLM upon request.

EGF 07/31/2014

CONDITIONS OF APPROVAL
DATE 07/31/2014