CCD-HOBBS

ATS-07-540

Form 3160-3 (April 2004)				FORM AF OMB No 1 Expires Ma		
UNITED STATES DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIOR			5. Lease Serial No. NMNM-97910		
APPLICATION FOR PERMIT TO		REENTER		6 If Indian, Allotee o	r Tribe Name	
la. Type of work: DRILL REENT	ER			7 If Unit or CA Agreer	ment, Name a	
lb. Type of Well. Oil Well Gas Well Other	Sing	le ZoneMultip	ple Zone	8. Lease Name and We Starman Federa		(36726)
2 Name of Operator Devon Energy Production Company, I	_P	(6137	>	9. API Well No 30-025-27752	-	
3a. Address 20 North Broadway Oklahoma City, Oklahoma City 73102-8260	3b. Phone No. (10 Hielderd Fool, or Strawn So	plobery y th	
4. Location of Well (Report location clearly and in accordance with a	ny State requiremen	its *)		11. Sec., T. R. M. or Blk	and Survey	7 Are 5 6 7 50
At surface 1980' FNL & 1980' FEL Ca At proposed prod zone 1880' FNL & 1980' FEL	pitan Contr	olled Water Ba	isin	Sec 28, T26S R3	' ဘီ'	
14 Distance in miles and direction from nearest town or post office ³ Approximately 11 miles southwest of Jal, NM				12. County or Parish Lea County	13."	State CO
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acr 2,200 acres		17. Spacia	ng Unit dedicated to this we deres	() () () () () () () () () () () () () (
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed I	•	20. BLM	BIA Bond No on file	76.55	2212026120
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approxima	ate date work will sta	rt*	23. Estimated duration 70 days		
3140' GL	24. Attach	08/01/2007		/o days		
The following, completed in accordance with the requirements of Onsho			ttached to the	nis form		
Weil plat certified by a registered surveyor A Drilling Plan				ons unless covered by an e	xisting bond	on file (see
A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office)	Lands, the	Operator certifiSuch other site authorized office	specific int	formation and/or plans as r	nay be requir	ed by the
25) Singnature		Printed/Typed) Iorvella Adams		I	Date 06/27/20	007
Title Sr. Staff Eng. Tech						
Approved by (Signature)	Name (Printed/Typed) 54eve	CAFF		9/3/	107
Title FIELD MANAGER	Office	CARLSE	BAD F	TELD OFFIC	E	
Application approval does not warrant or certify that the applicant hol conduct operations thereon. Conditions of approval, if any, are attached						
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fiaudulent statements or representations as	crime for any per s to any matter wi	son knowingly and thin its jurisdiction.	willfully to	make to any department or	agency of th	e United
*Instructions on page 2)						

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

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

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102 Revised October 12, 2005

Submit to Appropriate District Office

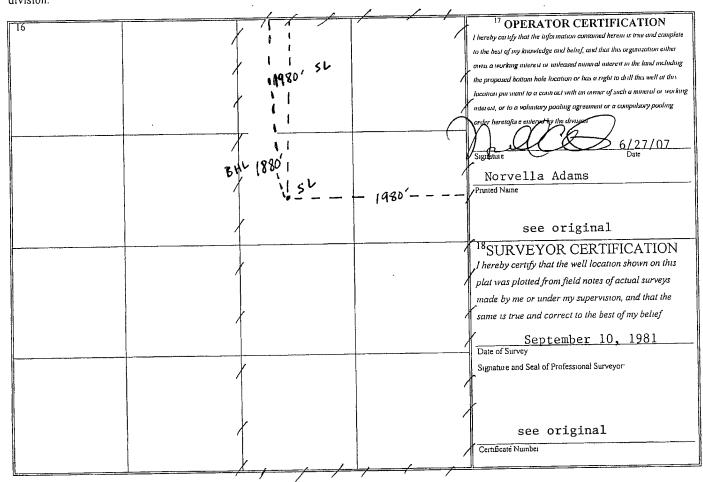
State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

			WELL LO	CATI	ON AND ACK	EAGE DEDIC	ATION PLA	<u>T</u>			
30-025	PI Number -27752			105	80 H	renja Reja	3 Pool Nat	ne trawn	Sout	Vell Number	as
4 Property C					Property	lame			1 1	Yen (Yanibei	1
3672	<i>b</i>		STARM	AN FEI					3	Elevation	
OGRID 1 6317	b137	DE	VON ENER	GY PRO	Operator N ODUCTION COMI		,		314		
	<u> </u>				10 Surface l	Location					
UL or lot no.	Section 28	Township 26		Lot 1	feet from the 1980	North/South line North	Feet from the 1980	Eas Eas	t/West line	Lea	County
		L	11 В	ottom I	Tole Location If	Different Fron	n Surface				
UL or lot no.	Section	Township					Feet from the	Eas	t/West line		County
G	28	26S	35E		1880	North	1980	Eas	t	Lea	
12 Dedicated Acre	s 13 Joint o	r Infill	14 Consolidation	Code	Order No.						
320	1										

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.



DIRECTIONAL DRILLING PROGRAM FOR RENTRY

Devon Energy Production Company, LP

Starman Federal Unit 1

Surface Location: 1980' FNL & 1980' FEL, Unit G, Sec 28 T26S R35E, Lea, NM Bottom Hole Location: 1880' FNL & 1980' FEL, Unit G, Sec 28 T26S R35E, Lea, NM

1. Geologic Name of Surface Formation

a. Alluvium

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a.	Rustler	1,017'	
		•	
b.	Top of Salt	1,503'	
c.	Base of Salt	4,861?	
d.	Delaware	5,269'	
e.	Bone Spring	9,335'	Oil
f.	1 st Bone Spring sand	10,453'	
g.	2 nd Bone Spring limestone	10,989'	
h.	2 nd Bone Spring sand	11,170'	
i.	3 rd Bone Spring limestone	11,378'	
	3 rd Bone Spring sand	12,126'	
	Wolfcamp	12,304'	Gas
1.	Strawn	14,633'	
m.	Atoka Clastics	15,190'	
n.	Base of Atoka Clastics	15,331'	

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands are protected by 13 3/8" casing already in place. Potash / fresh water sands are protected by 9 5/8" casing already in place.

3. Casing Program:

<u>Hole</u>	<u>Hole</u>	OD Csg	<u>Casing</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
<u>Size</u>	<u>Interval</u>		<u>Interval</u>			
8.535"	0', -13, 100'	7 3/4"	0'-13,100'	46.1#	STL	P-110
6.5"	13,630-15,500°	5"	12,800-15,500	23.2#	STL	P-110

Design Parameter Factors:

Casing Size	Collapse Design	Burst Design	Tension Design
	Factor	Factor	<u>Factor</u>
7 3/4"	2.20	1.39	1.63
5"	1.52	1.25	9.16

4. Cement Program: (Note yields; and dv tool depths if multiple stages)

a. 73/4"

13,100'

TOL @ 12,800'

Spacer: 10 bbls Spacer @ 8.43 ppg.

Cement to surface with 40 sx Class H cement + 1% FL-62 0.3% CD-32 + 0.2% Sodium Metasilicate 0.1% R-3 + 2% CaCl₂ + 45.8% Fresh Water, 1.20 cf/sx yield, 558 bbls displacement @

8.34 ppg.

b. 5"

15,500

Spacer: 40.0 bbls turbo Flow III @ 16.2 ppg.

Cement with 265 sx Class H cement + 0.75% EC-1 + 0.7% CD-32 + 1.2% FL-62 + 0.1% Sodium Metalsilicate + 0.25% R-21 + 36.8% Fresh Water, 1.06 cf/sx yield, 125.8 bbls Mud @ 15.2 ppg,

TOC:

Tie-back

12,500°

Production

12,800'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement of the 5" casing will be at the top of the liner. All casing is new and API approved.

5. Directionlal Plan:

Set whipstock and sidetrack at 13,630', 3°/100, and 0° azimuth. Build 4.399° inclination for 130', EOB at 13,776' TVD. Hold build for 432', EOH at 14,207' TVD. Drop 292' at 1.5°/100, EOD at 14,500' TVD. Drill 0° inclination for 1,000' and TD at 15,500'. Vertical Section is +/-50 from exit.

Cutting window: KOP 13,630'

6. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (10M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (5000 psi WP) and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. The BOP will be installed on the 7 3/4" intermediate casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 10,000 psi. Prior to drilling out the 7 3/4" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi WP rating.

7. Proposed Mud Circulation System

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' - 13,630'	$\overline{10.0 \text{-} 10.1}$	29 .	NC	Brine Water
13,630'-	13.0-14.0	40-44	8 cc	Brine Water /
14,000'				Polymer
14,000'-15,000'	14.0-15.0	44-48	6 cc	Brine Water /
1,,000 10,000				Polymer
15,000'-15,500'	15.0-15.5	48-55	6 cc	Brine Water /
15,000 -15,500	15.0 15.5			Polymer

The necessary mud products for weight addition and fluid loss control will be on location at all times.

8. Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation before exiting the cutting window. Breathing equipment will be on location upon drilling the 7 3/4" shoe until total depth is reached.

9. Logging, Coring, and Testing Program:

- a. Drill stem tests will be based on geological sample shows.
- b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
- c. The open hole electrical logging program will be:
 - i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron Z Density log with Gamma Ray and Caliper.
 - ii. Total Depth to Surface Compensated Neutron with Gamma Ray
 - iii. No coring program is planned
 - iv. Additional testing will be initiated subsequent to setting the 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

10. Potential Hazards:

a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 10,900 psi and Estimated BHT 210° F. No H2S is anticipated to be encountered.

11. Anticipated Starting Date and Duration of Operations:

a. Road and location construction will begin after the BLM has approved the APD. Anticipated start date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days. If production casing is run then an additional 45 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

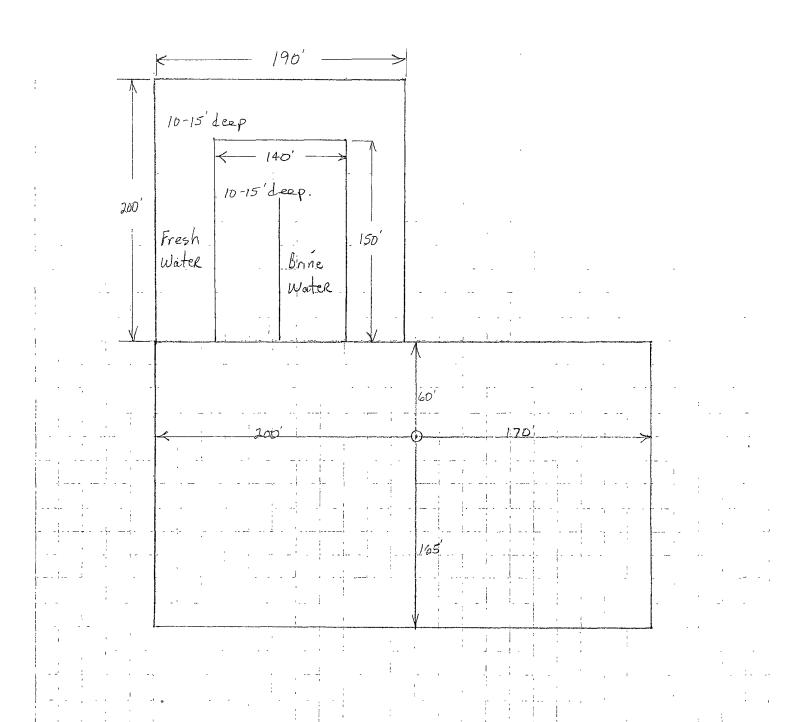
MIDLAND, TX OKLAHOMA CITY, OK VICTORIA, TX

(915) 684-7446 (405) 810-0021 (361) 576-5297

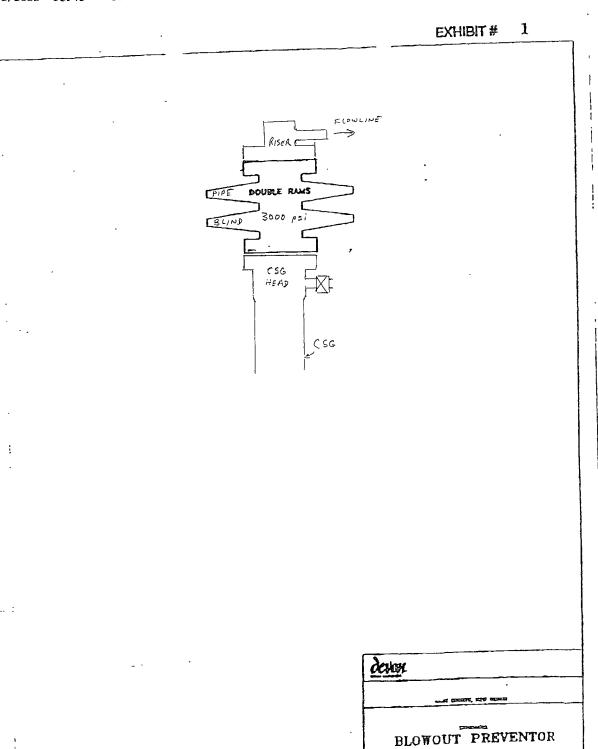


HOUSTON, TX LAFAYETTE, LA NEW ORLEANS, LA (281) 877-1200 (337) 237-5300 (504) 566-0411

Subject	Nabors Rig # 730	Page No.	of
File	d	Ву	Date 5-10-06



BOP L Manifold to meet C.C. Z reguirements. To Mud Tanks or Burner Downstream Manifold Option Positive or Adjustable Choke Rain BOP Remotely Operated Cnoke Ram BOP Eppla CKYALE Pressuite Caupe 3/10/6 Bleed Line Adjustable Chake Ram SOP not connected Snale Shaker Casing Speci From
Auxiliary Pump



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REENTRY PROGRAM

Devon Energy Production Company, LP **Starman Federal Unit 1**

Surface Location: 1980' FNL & 1980' FEL, Unit G, Sec 28 T26S R35E, Lea, NM Bottom Hole Location: 1880' FNL & 1980' FEL, Unit G, Sec 28 T26S R35E, Lea, NM

<u>Operations Plan</u> This well was plugged in 1988. A well bore schematic showing the method of plugging is attached as Exhibit A. The purpose of the following work is to reenter this plugged well to a depth of 13,723' to test the mechanical integrity of the well bore. The reentry work outlined below will be performed with a workover rig.

Should the well bore prove to be mechanically sound Devon may propose to utilize this well bore for a sidetrack.

- a. Prep location, dig out original cellar, remove marker and surface plug and extend 13-3/8" casing to surface. Install 3M casing head.
- b. MIRU workover rig and reverse unit.
- c. RIH with 12-1/4" bit and drill out cement plugs to the top of the existing 9-5/8" casing stub at 5,136'.
- d. RIH with 8-3/4" bit and drill out cement plugs to top of 7-3/4" liner at 13.100'.
- e. RIH with 6-1/8" bit and tag plug at 13,723'. Do not drill out this plug.
- f. RIH with mill assembly to determine length and size of tie back assembly on 7-3/4" liner hanger. If it determined that the well bore is suitable for a sidetrack, a tie back string of 7-3/4" casing will be run and cemented prior sidetracking.
- g. If it is determined that the well is not a suitable candidate for a sidetrack, the well will be plugged as follows: RIH with tubing and spot 110 sx. cement from 5221' to cover the 9-5/8" casing stub, spot 80 sx cement from 1555' to 1455', spot 40 sx. cement from 50' to surface. Cut off casing and install dry hole marker.



Planned Wellpath Report Plan #2 Page 1 of 3

BAKER HUGHES

INTEQ

Radari	ENCENMELERATHEDENTIE (CA	TION	
	Devon Energy		#1_SHL
	Andrews County, TX	Well	#1
'\	Arena Roja South (Starman)	Wellbore	#1 ST01 PWB
Facility	Starman Federal #1		

DIRONDARSONNE	INFORMATION		
Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect™ 1.2
		User	Gomeoscr
TTOTAL TESTS TO		Report Generated	06/28/07 at 11:01:37
Scale		Database/Source file	WA_Midland/#1_ST01_PV
Wellbore last revised	VO/13/V /		<u></u>

WELLPATH LOCA	IIION (
Washington.	Local coo		Grid co	ordinates	Geographi	c coordinates
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
G1 + T tion	0.00	0.00	1223409.25	371535.84	32 00 00.000N	102 00 00.000W
Slot Location	0.00	0.00	1223409.25	371535.84	32 00 00.000N	102 00 00.000W
Facility Reference Pt			1223409.25	371535.84	32 00 00,000N	102 00 00.000W
Field Reference Pt			1223407.23	371335.01		<u> </u>

WELLPATH DATUM		The state of the s	
Calculation method	Minimum curvature	Rig on #1_SHL (R1) to Facility Vertical Datum	0.00 lect
Horizontal Reference Pt	Slot	Rig on #1_STED (101) to CTE !! ZEE	3140.00 feet
Vertical Reference Pt	Rig on #1_SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	
MD Reference Pt	Rig on #1_SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	GRN. ELEV.	Section Azimuth	0.00°



Planned Wellpath Report

Plan #2 Page 2 of 3



PEFERENCE WELLSPATH IDENTIFICATION Operator Devon Energy Slot #1_SHL Area Andrews County, TX Well #1 Field Arena Roja South (Starman) Wellbore #1 ST01 PWB Facility Starman Federal #1

MD	TA (26 station	Azimuth	TVD	Vert Sect	North	East	DLS	Design
[feet]	[°]	[°]	[feet]	[feet]	[feet]	[feet]	[°/100ft]	Comments
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00	
13600.00	0.000	0.000	13600.00	0.00	0.00	0.00		Tie On
13630.00	0.000	0.000	13630.00	0.00	0.00	0.00		KOP
13700.00†	2.100	0.000	13699.98	1.28	1.28	0.00	3.00	(merconer an area cases making as a residual and second
34413800:00†	5:100	0.000	Alt #10 137991781	7.56	7.56			
13900.00†	8.100	0.000	13899.10	19.05	19.05	0.00	3.00	
14000.00†	11.100	0.000	13997.69	35.73	35.73	0.00	3.00	
14041.62	12.349	0.000	14038.44	44.19	44.19	0.00		EOB
14095.99	12.349	0.000	14091.56	55.81	55.81	0.00		EOH
43.214100:00f	12.228	. 0.000	14095,474	7 × 56.67/	56.67		Control of the last of the las	
14200.00†	9.228	0.000	14193.71	75.28	75.28	0.00	3.00	
14300.00†	6.228	0.000	14292.79	88.73	88.73	0.00	3.00	
14400.00†	3.228	0.000	14392.44	96.97	96.97	0.00	3.00	
14500.00†	0.228	0.000	14492.38	99.98	99.98	0.00	3.00	
0 4014507/62	0.000	14.7 0 0 000	14500.00 ¹	100,00				EOD/#il Target (//////
14600.00†	0.000	0.000	14592.38	100.00	100.00	0.00	0.00	
14700.00†	0.000	0.000	14692.38	100.00	100.00	0.00	0.00	
14800.00†	0.000	0.000	14792.38	100.00	100.00	0.00	0.00	
14900.00†	0.000	0.000	14892.38	100.00	100.00	0.00	0.00	
15000!00ii	0.000	######0!000		Carried and the same of the sa	100:00			
15100.00†	0.000	0.000	15092.38	100.00	100.00	0.00	0.00	
15200.00†	0.000	0.000	15192.38	100.00	100.00	0.00	0.00	<u> </u>
15300.00†	0.000		15292.38	100.00	100.00	0.00	0.00	
15400.00†	0.000	·	15392.38	100.00	100.00	0.00	0.00	
15500.001	0.000	0.000	15492.38	#100:00		Part of the contract of the co		
15507.62	0.000		15500.00	100.00	100.00	0.00	0.00	#1 BHL

HOLE & CASING S String/Diameter	Start MD	End MD [feet]	Interval [feet]	Start TVD [feet]	End TVD [feet]	Start N/S [feet]	Start E/W [feet]	End N/S [feet]	End E/W [feet]
26in Open Hole	0,00	1505.00	1505.00		1505.00		0.00	0.00	0.00
20in Casing	0.00	1505.00	1505.00	0.00	1505.00	0.00	0.00	0.00	0.00
17.5in Open Hole	0.00	5200.00	5200.00	0.00	5200.00	0.00	0.00	0.00	0.00
13.375in Open Hole	0.00	5200.00	5200.00	0.00	5200.00	0.00	0.00	0.00	0.00
12.25in Open Hole	0.00	13500.00	13500.00	0.00	13500.00	0.00	0.00	0.00	0.00
9.625in Casing	0.00	13500.00	13500.00	0.00	13500.00	0.00	0.00	0:00	0.00
8.5in Open Hole	13500.00	13630.00	130.00	13500.00	13630.00	0.00	0.00	0.00	0.00
7.75in Casing	13100.00	13630.00	530.00	13100.00	13630.00	0.00	0.00	0.00	0.00
6.5in Open Hole	13630.00	15507.62	1877.62	13630.00	NA	0.00	0.00	NA	NA



Planned Wellpath Report Plan #2 Page 3 of 3



INTEQ

Radar	ENCEAVEEPATHIDENTIFICATION		
	Devon Energy	Slot	#1_SHL
· · · · · · · · · · · · · · · · · · ·	Andrews County, TX	Well	#1
Field	Arena Roja South (Starman)	Wellbore	#1 ST01 PWB
Facility	Starman Federal #1		

TARGETS#								1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
Name	MD [feet]	TVD [feet]	[feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) #1 Target	14507.62	14500:00	100.00	0.00	1223409:25	37.1635.89	32/00:00!989N	#101#59#59#975W	A point

MOORE MCCORMACK ENERGY INC Field: ARENA ROJA SOUTH Well Name: STARMAN FEDERAL UNIT 1 State: NM County: LEA Location: 1980' FNL & 1980' FEL; SEC 28-T265-R35E Compl Date: 3/28/83 Spud Date: 2/25/82 Elevation: 3140' GR Date: 11/28/06 Rev: API#: 30-025-27752 Prepared by: Ronnie Slack 40 Sx cement plug from surface to 60' 26" Hole 80 Sx cement plug from 1,455' to 1,555' 20", 94# & 133#, @ 1,505' Cmt'd w/2500 Sx 9-5/8" casing cut @ 5,136'. POOH. 17-1/2" Hole 110 Sx cement plug @ 5,221' 13-3/8", 61# & 68#, @ 5,200' Cmt'd w/4500 Sx TOC @ 7,080' on 9-5/8" Top of 7-3/4" Liner @ 13,100' 12-1/4" Hole 9-5/8", 47# & 53.5#, @ 13,500' Cmt'd w/2850 Sx 40 Sx cement plug 13,723' - 13,955' 3-1/2" Tbg cut 1-1/2 Jts above packer Baker Model D Packer @ 14,000' **STRAWN** Plug in R nipple. EOA @ 14,028' 14,092'-14,118'; 14,230'-14,244' 14,270'-14,278; 14,694'-14,700' 14,848'-14854'; 14,868'-14,884' Perf & Sqz 15048-50' w/100 Sx 14,970'-14,976; 15,044'-15,050' 8 Sx cement on packer. TOC 15,065' Baker Model D Packer @ 15,100 w/plug **ATOKA** 15,200' - 15,229; 15,236' - 15,242' 41 Mcf, 2550 psi Perf & Sqz 15330-32' w/100 Sx 15,246' - 15,251'; 15,664' - 15,708' 200# sand on top of packer Baker Model D Packer @ 15,420' w/plug **ATOKA** 15,664' - 15,708' (tested wet) 8-1/2" Hole 7-3/4", 46.1#, P110', @ 16,460' Cmt'd w/ 600 Sx Open hole cement plug from 16,460' to 16,820'

18,535' TD

Devon Energy Location: Andrews County, TX Flett Arena Roja South (Starman) Fadility: Starman Federal #1 Wellibore: #1 ST01

Wellbore: #1 ST01 PWB



