

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/04/2014
Report No: 10

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	2:30	2.50	21INDR	TRIP		P	CONTINUE TO TOOH FROM 6,465' TO 1,644' NO DRAG HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.
2:30	3:00	0.50	21INDR	TRIP	DRILL	P	REMOVE ROTATING HEAD, INSTALL TRIP NIPPLE & FLOW CHECK AT THE SHOE (GOOD)
3:00	4:00	1.00	21INDR	TRIP	DRILL	P	CONTINUE TO TOOH FROM 1,644' TO HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.
4:00	4:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON LAYING DOWN 6.5" AND 8" DRILL COLLARS
4:30	6:00	1.50	21INDR	TRIP	DRILL	P	LAY DOWN 6- 6.5" DC'S, 1 JAR, 6-8" DC'S
Total Time		6.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
Total Time		0.00					

Safety Incident?	N	Days since Last RI:	57.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	57.00	
Incident Comments:				
No incidents reported last 24 hours.				

Other Remarks:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/03/2014
Report No: 9

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	8.50
Today's MD:	8700 ft	Progress:	1300 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$45,362
Prev MD:	7400 ft	Rot Hrs Today:	18.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$897,425
PBMD:		Avg ROP Today:	70.3 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation: SPRABERRY@8,535.0 Lithology: 90% SH, 10% LS

Current Ops:
24-Hr Summary: DRILL 12.25" HOLE FROM 7,400' TO 8,700' (TD INT SECTION), PUMP 2 HI VIS SWEEPS CBUX2, FLOW CHECK, TOO H F/ 8,700' TO 6,465'
24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONT TO TOO H, PULL WEAR BUSH, RU CSG CREW, DRY RUN MANDREL AND RUN 9 5/8" CASING

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	230.0/ 215.0 kip	Pump Rate:	582.9	Conn:			84
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	222.0 kip	Pump Press:	2241	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3,100.0 ft-lbf			Backgr:			112
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	12,200.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	MANUEL CASTANUELA	8,700.0	2.00	304.30	8,696.75	110.1	121.4	110.1	0.11	-0.10
Supervisor 2:	JEFF ROZELLE	8,504.0	2.20	305.70	8,500.88	106.0	127.3	106.0	1.03	1.01
Engineer:	KEVIN THREADGILL	8,315.0	0.30	276.80	8,311.93	103.8	130.7	103.8	0.37	-0.05
Geologist:	SUMIYAH AHMED	8,126.0	0.40	112.70	8,122.93	104.0	130.6	104.0	0.64	-0.26
Oxy Personnel:	2	7,937.0	0.90	340.90	7,933.94	102.9	130.5	102.9	0.46	0.44
Contractor Personnel:	12	7,748.0	0.06	33.10	7,744.95	101.4	130.9	101.4	0.55	-0.55
Total on Site:	14									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
4	12.250	HALLIBURTON	MM65D	12520014	M323	9x12	7355	8700	1-1-NO-A	X-I-NO-TD
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB	RPM	TFA	P Drop Bit	Noz Vel	HHPSI
							min/max	min/max				
4	18.50	19.50	1300	1345	70.3	69.0	15.0/30.0	65/75	0.994	288	188.1	0.8

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA								
Engineer:	BUCK HOSKIN	MBT:	0.0 lbm/bbl	BHA No:	4	Bit No:	4	MD In:	7355 ft				
Sample From:	In (Suction Pit)	pH:	10.0	Purpose:	DRILL INTERMEDIATE HOLE				MD Out:	8700 ft			
Mud Type:	Spud Mud	Pm / Pom:		Component						OD	ID	Jts	Length
Time / MD:	0:01 / 8,700.0	Pf / Mf:	0.1 / 0.2	PDC BIT	12.250	2.000	1	1.50					
Density @ Temp:	9.10 / 85	Chlorides:	500	VERTICAL DRILLING TOOL	8.000	2.000	1	34.94					
Rheology Temp:	120	Ca++ / K+:	0 / 0	CROSSOVER	8.000	2.875	1	3.65					
Viscosity:	48.00	CaCl2:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63					
PV / YP:	4 / 19	Cl- in water phase:		TELEDRIFT	8.000	2.500	1	28.60					
Gels 10s/10m/30m:	9 / 10 / 12	Lime:	0.00	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91					
API WL:	17.00	ES:		DRILL COLLAR	8.000	2.875	6	183.79					
HTHP WL:	0.00	ECD:	9.28	CROSSOVER	8.000	3.000	1	3.60					
Cake API / HTHP:	2.0 / 0	n / K:	0.00 / 0.00	DRILL COLLAR	6.500	3.000	1	30.28					
Solids / Sol Corr:	5.00 / 2.30	Carbonate:		DRILLING JAR	6.500	3.000	1	32.30					
Oil / Water:	0.0 / 93.0	Bicarbonate:	0 ppm	DRILL COLLAR	6.500	3.000	5	152.85					
Oil / Water % for OWR:	/	Form Loss / Cum Loss:	0.0 / 0.0	DRILL COLLAR	6.500	2.875	27	833.71					
Sand:	0.01	Fluid Disch:	/	HWDP									
Water Added:		Daily Mud Cost:	\$5,163										
Oil Added:		Cum Mud Cost:	\$32,701										
LGS:	2.30 / 21.20												
VG Meter:	13@3 / 15@6 / 20@100 / 21@200 / 23@300 / 27@600			Total Length:	1,320.76 ft		Wt below Jars:	40.0 kip					

Comments: DRILLED AHEAD TO TD OF 8700' TVD. DISPLACED ACTIVE SYSTEM WITH 1500 BBLs PREHYDRATED GEL MUD FROM EPAC TANKS. REDUCED MW TO 0.1 PPG. 48 SEC/QT VIS TREATED.

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Caustic Soda	50.00	lb	15.00
M-I Wate	100.00	lb	40.00
My-Lo-Jel	50.00	lb	110.00
Pecan Nut Plug Fine	50.00	lb	6.00
Soda Ash	50.00	kg	22.00

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ST ANDREWS UNIT 320LH
 USA

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 Report No: 9

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,400' TO 7,715', TOTAL 315', AVG. ROP 79' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,970 PSI., ON BOTTOM-3,500, DIFF 530, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9-10K. MUD WEIGHT IN-9.5 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.4 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT 7,600' DOL 60%, LS 30%, SH 10%
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,715' TO 7,860', TOTAL 145', AVG. ROP 73' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,900 PSI., ON BOTTOM-3,600, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 7,748', INC 0.6°, AZI 33.1
6:00	10:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,860' TO 8,130', TOTAL 270', AVG. ROP 67.5' HR, W.O.B. 28K, GPM'S-700, SRPM-75, MRPMS-119, TOTAL RPMS=194, PUMP PRESSURE OFF BOTTOM- 2,785 PSI., ON BOTTOM-3,485, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 8,126', INC 0.4°, AZI 112.7 SAFETY BRAKE: TRANSFERING MUD
10:00	14:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 8,130' TO 8,475', TOTAL 345', AVG. ROP 86' HR, W.O.B. 28K, GPM'S-700, SRPM-75, MRPMS-119, TOTAL RPMS=194, PUMP PRESSURE OFF BOTTOM- 2,785 PSI., ON BOTTOM-3,485, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 8,315', INC 0.3°, AZI 276.8 SAFETY BRAKE: FORKLIFT OPERATIONS

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ST ANDREWS UNIT 320LH
 USA

Date: 11/03/2014
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From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
14:00	18:30	4.50	21INDR	DRILL	MTRVER	P	*DRILL 12 1/4" INTERMEDIATE HOLE FROM 8,475' TO 8,700', TOTAL 225', AVG. ROP 50' HR, W.O.B. 28K, GPM'S-600, SRPM-75, MRPMS-102, TOTAL RPMS=177, PUMP PRESSURE OFF BOTTOM- 2,385 PSI., ON BOTTOM-2,701, DIFF 316, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.1 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.0 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 8,700', INC 2.0°, AZI 304.3 **NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109 SAFETY BRAKE: LAYING DOWN DRILL COLLARS	
18:30	22:30	4.00	21INDR	CIRC	CNDHOL	P	PUMP AND CIRCULATE OUT 2- 50 BBL HI VIS SWEEPS PLUS CALCULATED STROKES FOR 500 BBL'S OF WASH OUT. ROTATE AND RECIPROCATE PIPE WHILE CIRCULATING 600 GPM, 2300 PSI, 60 RPM, 2500 TORQUE INITIAL BG GAS 100u FINAL BG GAS 11u.	
22:30	23:00	0.50	21INDR	WLCNTL	CHKFLOW	P	FLOW CHECK (GOOD) AND PUMP SLUG	
23:00	0:00	1.00	21INDR	TRIP	DRILL	P	TOO H F/ 8,700' TO 6,465' PROPER FILL AND NO OVERPULL *DID NOT SEE ANYTHING AT 6,580' WHERE WE GOT STUCK ON PREVIOUS TRIP SAFETY BREAK: SLIPS TRIPS & FALLS	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:30	2.50	21INDR	TRIP		P	CONTINUE TO TOO H FROM 6,465' TO 1,644' NO DRAG HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.	
2:30	3:00	0.50	21INDR	TRIP	DRILL	P	REMOVE ROTATING HEAD, INSTALL TRIP NIPPLE & FLOW CHECK AT THE SHOE (GOOD)	
3:00	4:00	1.00	21INDR	TRIP	DRILL	P	CONTINUE TO TOO H FROM 1,644' TO HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.	
4:00	4:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON LAYING DOWN 6.5" AND 8" DRILL COLLARS	
4:30	6:00	1.50	21INDR	TRIP	DRILL	P	LAY DOWN 6- 6.5" DC'S, 1 JAR, 6-8" DC'S	
Total Time		6.00						

Safety Incident? N **Days since Last RI:** 56.00
Environ Incident? N **Days since Last LTA:** 56.00
Incident Comments:
 No incidents reported last 24 hours.

Weather Comments:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/03/2014
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Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 8
SAFE ACTS: 8
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 13
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 0
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE NOT WEARING PERSONAL H2S MONITOR, STOPPED JOB EXPLAINED
DANGERS AND POLICY, HE COMPLIED GOT MONITOR AND JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL: ON BOTTOM WITH CASING BY MIDNIGHT

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/02/2014
Report No: 8

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	7.50
Today's MD:	7400 ft	Progress:	145 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$60,566
Prev MD:	7255 ft	Rot Hrs Today:	7.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$852,062
PBMD:		Avg ROP Today:	20.7 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation: CLEARFORK@7,100.0 Lithology: 70% SS, 20% SH, 10% LS

Current Ops:

24-Hr Summary: DRILL 12.25" HOLE FROM 7,255' TO 7,355', MAKE BIT TRIP DUE TO PENETRATION RATE, DRILL FROM 7,355' TO 7,400'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE TO DRILL 12.25" HOLE

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	220.0/ 200.0 kip	Pump Rate:	707.8	Conn:		18
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	210.0 kip	Pump Press:	3530	Trip:		100
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2,900.0 ft-lbf			Backgr:		24
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	9,500.0 ft-lbf					

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	MANUEL CASTANUELA	7,337.0	1.60	45.10	7,334.02	96.6	125.6	96.6	0.78	-0.16
Supervisor 2:	JEFF ROZELLE	7,148.0	1.90	356.40	7,145.10	91.7	123.9	91.7	0.98	-0.26
Engineer:	KEVIN THREADGILL	6,959.0	2.40	45.80	6,956.22	85.8	121.3	85.8	0.00	0.00
Geologist:	SUMIYAH AHMED	6,881.0	2.40	45.80	6,878.29	83.5	118.9	83.5	0.15	-0.05
Oxy Personnel:	2	6,691.0	2.50	52.10	6,688.46	78.2	112.8	78.2	0.06	-0.05
Contractor Personnel:	13	6,502.0	2.60	51.40	6,499.65	73.0	106.2	73.0	0.06	0.05
Total on Site:	15									

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
4	12.250	HALLIBURTON	MM65D	12520014	M323	9x12	7355	8700	1-1-NO-A	X-I-NO-TD
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB	RPM	TFA	P Drop Bit	Noz Vel	HHPSI
							min/max	min/max				
4	1.00	1.00	45	45	45.0	45.0	5.0/15.0	60/70	0.994	434	228.5	1.5
3	6.00	30.00	100	1640	16.7	54.7	30.0/39.0	70/85	1.037	399	219.0	1.4

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA								
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	4	Bit No:	4	MD In:	7355 ft			
Sample From:	Out (Shaker Underflow)	pH:	10.0	Purpose:	DRILL INTERMEDIATE HOLE			MD Out:	8700 ft			
Mud Type:	Spud Mud	Pm / Pom:		Component					OD	ID	Jts	Length
Time / MD:	0:01 / 7,255.0	Pf / Mf:	0.1 / 0.2	PDC BIT	12.250	2.000	1	1.50				
Density @ Temp:	9.30 / 85	Chlorides:	50,000	VERTICAL DRILLING TOOL	8.000	2.000	1	34.94				
Rheology Temp:	120	Ca++ / K+:	0 / 0	CROSSOVER	8.000	2.875	1	3.65				
Viscosity:	49.00	CaCl2:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63				
PV / YP:	5 / 20	Cl- in water phase:		TELEDRIFT	8.000	2.500	1	28.60				
Gels 10s/10m/30m:	18 / 12 / 13	Lime:	0.00	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91				
API WL:	60.00	ES:		DRILL COLLAR	8.000	2.875	6	183.79				
HTHP WL:	0.00	ECD:	9.53	CROSSOVER	8.000	3.000	1	3.60				
Cake API / HTHP:	1.0 / 0	n / K:	0.00 / 0.00	DRILL COLLAR	6.500	3.000	1	30.28				
Solids / Sol Corr:	5.00 / 5.00	Carbonate:		DRILLING JAR	6.500	3.000	1	32.30				
Oil / Water:	0.0 / 95.0	Bicarbonate:	0 ppm	DRILL COLLAR	6.500	3.000	5	152.85				
Oil / Water % for OWR:	/	Form Loss / Cum Loss:	0.0 / 0.0	DRILL COLLAR	6.500	3.000	27	833.71				
Sand:	0.01	Fluid Disch:	/	HWDP	6.500	2.875						
Water Added:		Daily Mud Cost:	\$7,437									
Oil Added:		Cum Mud Cost:	\$27,538									
LGS:	3.90 / 35.40											
VG Meter:	20@3 / 21@6 / 22@100 / 24@200 / 25@300 / 30@600			Total Length:	1,320.76 ft		Wt below Jars:	40.0 kip				

Comments: Last 24 hrs: Drilled ahead to 7355' TVD circulating 9.2-9.4 ppg 45 sec/qt vis gel mud. Fighting MW all night. Dump 75 bbls from Active/Add 75 bbls from Premix. Adding fresh water at 1.2 bbls per hour

MUD PRODUCTS

Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Caustic Soda	50.00	lb	7.00
Defoam-A	5.00	gal	7.00
Lime	50.00	lb	1.00
M-I Gel	1.00	ton (short)	18.54
M-I Wate	100.00	lb	128.00
Pecan Nut Plug Fine	50.00	lb	12.00
Soda Ash	50.00	kg	21.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

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Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/02/2014
Report No: 8

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	2:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,255' TO 7,300', TOTAL 45', AVG. ROP 15' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 5-6K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.1PPG. W/ 49 VIS- PH. 9.5</p> <p>*PUMPED 40 BBL NUT PLUG SWEEP TO CLEAN BIT</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>60% DOLONITE, 40% LIMESTONE @ 7,280'</p> <p>***1HR FOR DAYLIGHT SAVINGS***</p>
2:00	5:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,300' TO 7,355', TOTAL 45', AVG. ROP 18' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 4-8K.</p> <p>MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p>
5:00	7:00	2.00	21INDR	CIRC	CNDHOL	PT	CIRCULATE BOTTOMS UP, BUILD SLUG, FILL TRIP TANKS IN PREPARATION FOR BIT TRIP, FLOW CHECK, WELL STATIC, PUMP SLUG.
7:00	7:30	0.50	21INDR	TRIP	DRILL	PT	T.O.H. F/ 7,355' TO 6,580'. HOLE TAKING PROPER FILL
7:30	8:00	0.50	21INDR	REAM	RMTGT	PT	AT 6,580' PULLED INTO TIGHT SPOT, 50K OVER. WORKED BOTH WAYS UP & DOWN SITTING 75 TO 100K DOWN & PULLING 80 OVER. WOULD NOT COME FREE. SET SLIPS & SCREWED TOP DRIVE INTO STRING. PIPE WOULD ROTATE FREE 55 RPM, INDICATING THAT WE WAS STUCK AT BIT. ATTEMPT TO BREAK CIRCULATION & WAS PACKED OFF. WORK PIPE WHILE ROTATING & WORKING PUMPS ON & OFF, 30 SPM W/ 650-850 PSI. PIPE CAME FREE WITH FULL RETURNS.
8:00	9:00	1.00	21INDR	CIRC	CNDHOL	PT	CIRCULATE HOLE CLEAN, BOTTOMS UP. REAM THROUGH TIGHT SPOT W/ 700 GPM & 70 RPM. F/ 6,580' TO 6,550'.
9:00	12:00	3.00	21INDR	TRIP	DRILL	PT	PUMP SLUG & CONT. TO T.O.H. F/ 6,516' TO 1,419'
12:00	12:30	0.50	21INDR	TRIP	DRILL	PT	REMOVE ROTATING HEAD BEARING ASSEMBLY & INSTALL TRIP NIPPLE
12:30	14:00	1.50	21INDR	TRIP	DRILL	PT	CONT. T.O.H. FOR BIT F/ 1,419' TO BIT.
14:00	15:00	1.00	21INDR	TRIP	BHA	PT	DRAIN MUD MOTOR, BREAK BIT, MAKE UP BIT #4. CLEAN OFF RIG FLOOR
15:00	15:30	0.50	21INDR	RIGMT	SRVRIG	PT	SERVICE RIG
15:30	16:00	0.50	21INDR	TRIP	DRILL	PT	T.I.H. F/ BIT TO 301'
16:00	17:00	1.00	21INDR	TRIP	BHA	PT	BUILD 100 BBL HIGH VIS SWEEP. UNLOAD DRILLING JARS, STRAP & PICK UP.
17:00	22:00	5.00	21INDR	TRIP	DRILL	PT	CONT. T.I.H. F/ 301' TO 7,315' PROPER DISPLACEMENT, NO EXCESSIVE DRAG DID NOT SEE ANYTHING AT 6,580' (TIGHT SPOT ON TRIP OUT)
22:00	23:00	1.00	21INDR	REAM	PRRM	PT	<p>WASH AND REAM FROM 7,315' TO 7,355' FANNED BOTTOM 4 TIMES, PUMPED 50 BBL HI VIS SWEEP AND LET IT CLEAR BIT PRIOR TO DRILLING</p> <p>700 GPM, 65 RPM, 3165 PSI</p>
23:00	0:00	1.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,355' TO 7,400', TOTAL 45', AVG. ROP 45' HR, W.O.B. 5-15K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,970 PSI., ON BOTTOM-3,500, DIFF 530, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9-10K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.1PPG. W/ 49 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p>
Total Time		25.00					

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/02/2014
Report No: 8

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,400' TO 7,715', TOTAL 315', AVG. ROP 79' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,970 PSI., ON BOTTOM-3,500, DIFF 530, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9-10K. MUD WEIGHT IN-9.5 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.4 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT 7,600' DOL 60%, LS 30%, SH 10%	
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,715' TO 7,860', TOTAL 145', AVG. ROP 73' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,900 PSI., ON BOTTOM-3,600, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 7,748', INC 0.6°, AZI 33.1	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	55.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	55.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks: Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
 SAFE ACTS: 6
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 2
 LO/TO'S: 0
 PERMIT'S TO WORK: 0
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE USING WRONG TOOL FOR THE JOB, STOPPED JOB EXPLAINED DANGERS OF USING THE WRONG TOOL, HE COMPLIED AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL: DRILLED TO 8500' BY 12:00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING ST ANDREWS UNIT 320LH Date: 11/01/2014
 Prim. Reason: ORIG DRILL HORIZ USA Report No: 7

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 6.50
 Today's MD: 7255 ft Progress: 1515 ft Ground Elev: 3,079.10 ft Daily Cost: \$54,261
 Prev MD: 5740 ft Rot Hrs Today: 23.50 hr AFE MD/Days: 17,037.0 / 33.6 days Cum Cost: \$791,496
 PBMD: Avg ROP Today: 64.5 ft/hr AFE Number: 1189081#0102 AFE Cost: \$4,401,747

Current Formation: CLEARFORK@7,100.0 Lithology: 70% SS, 20% SH, 10% LS

Current Ops:
 24-Hr Summary: DRILL 12.25" INTERMEDIATE HOLE FROM 5,740' TO 7,255'
 24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) MAKE BIT TRIP AND CONTINUE DRILLING 12.25" INTERMEDIATE HOLE

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	228.0/ 208.0 kip	Pump Rate:	582.9	Conn:			25
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	218.0 kip	Pump Press:	2407	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	1,200.0 ft-lbf			Backgr:			17
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	6,500.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	7,148.0	1.90	356.40	7,145.10	91.7	123.9	91.7	0.98	-0.26
Engineer:	KEVIN THREADGILL	6,959.0	2.40	45.80	6,956.22	85.8	121.3	85.8	0.00	0.00
Geologist:	SUMIYAH AHMED	6,881.0	2.40	45.80	6,878.29	83.5	118.9	83.5	0.15	-0.05
Oxy Personnel:	2	6,691.0	2.50	52.10	6,688.46	78.2	112.8	78.2	0.06	-0.05
Contractor Personnel:	16	6,502.0	2.60	51.40	6,499.65	73.0	106.2	73.0	0.06	0.05
Total on Site:	18	6,313.0	2.50	52.10	6,310.83	67.8	99.6	67.8	0.06	0.05

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR
2	12.250	VAREL	RS616DHUX	4007267	S323	9x12	1765	5715	2-8-RO-G	X-16-RO-PR

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB	RPM	TFA	P Drop Bit	Noz Vel	HHPSI
3	23.50	24.00	1515	1540	64.5	64.2	15.0/35.0	60/100	1.037	369	211.7	1.1

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	3	Bit No:	3	MD In:	5715 ft
Sample From:	In (Suction Pit)	pH:	10.0	Purpose:	MD Out: 7355 ft				
Mud Type:	Spud Mud	Pm / Pom:		Component		OD	ID	Jts	Length
Time / MD:	0:01 / 5,740.0	Pf / Mf:	0.1 / 0.2	PDC BIT	12.250	2.000	1	1.50	
Density @ Temp:	9.20 /	Chlorides:	51,000	VERTICAL DRILLING TOOL	8.000	2.000	1	34.94	
Rheology Temp:	120	Ca++ / K+:	0 / 0	CROSSOVER	8.000	2.875	1	3.65	
Viscosity:	48.00	CaCl2:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63	
PV / YP:	5 / 20	Cl- in water phase:		TELEDRIFT	8.000	2.500	1	28.60	
Gels 10s/10m/30m:	19 / 12 / 13	Lime:	0.00	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91	
API WL:	25.00	ES:		DRILL COLLAR	8.000	2.875	6	183.79	
HTHP WL:	0.00	ECD:	9.43	CROSSOVER	8.000	3.000	1	3.60	
Cake API / HTHP:	2.0 / 0	n / K:	0.00 / 0.00	DRILL COLLAR	6.500	3.000	6	183.13	
Solids / Sol Corr:	5.00 / 5.00	Carbonate:		HWDP	6.500	2.875	27	833.71	
Oil / Water:	0.0 / 95.0	Bicarbonate:	0 ppm						
Oil / Water % for OWR:	/	Form Loss / Cum Loss:	0.0 / 0.0						
Sand:	0.01	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$4,247						
Oil Added:		Cum Mud Cost:	\$20,101						
LGS:	27.70 / 3.00								
VG Meter:	20@3 / 21@6 / 22@100 / 24@200 / 25@300 / 30@600			Total Length:	1,288.46 ft	Wt below Jars:			

Comments: IAST 24 HRS: mixed 1850 bbls of 45 vis gel mud. 1500 bbls in the frac tanks and 350 bbls in the premix pit. Additions of starch for FL, Caustic soda for pH and Soda Ash for hardness. Dumped 75 bbls from

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Caustic Soda	50.00	lb	25.00
My-Lo-Jel	50.00	lb	90.00
Soda Ash	50.00	kg	32.00

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/01/2014
Report No: 7

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,740' TO 6,012', TOTAL 272', AVG. ROP 68' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-2,600, DIFF 250, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MAKING CONNECTIONS</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,012' TO 6,202', TOTAL 190', AVG. ROP 95' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,328 PSI., ON BOTTOM-2,890, DIFF 562, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MAKING CONNECTIONS</p>
6:00	10:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,202' TO 6,580', TOTAL 378', AVG. ROP 94.5' HR, W.O.B. 25-30K, GPM'S-650, SRPM-100, MRPMS-110, TOTAL RPMS=210, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-3,060, DIFF 710, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K.</p> <p>MUD WEIGHT IN-9.1 PPG. W/ 42 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 42 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: HOUSE KEEPING</p>
10:00	12:30	2.50	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,580' TO 6,769', TOTAL 189', AVG. ROP 75.6' HR, W.O.B. 28K, GPM'S-700, SRPM-80, MRPMS-119, TOTAL RPMS=199, PUMP PRESSURE OFF BOTTOM- 2,420 PSI., ON BOTTOM-3,125, DIFF 675, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K.</p> <p>MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>45% SANDSTONE, 45% SHALE, 5% DOLOMITE @ 6,600'</p> <p>SAFETY BREAK: MIXING CHEMICALS</p>
12:30	13:00	0.50	21INDR	RIGMT	SRVRIG	P	SERVICE RIG
13:00	17:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,769' TO 7,053', TOTAL 284', AVG. ROP 71' HR, W.O.B. 15-30K, GPM'S-700, SRPM-80, MRPMS-119, TOTAL RPMS=199, PUMP PRESSURE OFF BOTTOM- 2,420 PSI., ON BOTTOM-3,125, DIFF 675, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K.</p> <p>MUD WEIGHT IN-8.9 PPG. W/ 44 VIS- PH- 9.5 MUD WEIGHT OUT-9.5PPG. W/ 45 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>80% SANDSTONE, 15% SHALE, 5% LIMESTONE @ 6,950'</p> <p>SURVEY @ 6,881' 2.4° / 45.8 AZI.</p> <p>SAFETY BREAK: MANLIFT OPERATIONS</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/01/2014
Report No: 7

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
17:00	18:00	1.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,053' TO 7,085', TOTAL 32', AVG. ROP 32' HR, W.O.B. 28K, GPM'S-650, SRPM-70, MRPMS-108, TOTAL RPMS=178, PUMP PRESSURE OFF BOTTOM- 2,075 PSI., ON BOTTOM-2,870, DIFF 795, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K. MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS 65% SANDSTONE,30 SHALE, 5% LIMESTONE @ 7,040' SAFETY BREAK: PSI WASHING	
18:00	22:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,085' TO 7,220, TOTAL 135', AVG. ROP 34' HR, W.O.B. 15-35K, GPM'S-585, SRPM-80, MRPMS-99, TOTAL RPMS=180, PUMP PRESSURE OFF BOTTOM- 2,165 PSI., ON BOTTOM-2,340, DIFF 175, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K. MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS 70% SANDSTONE, 20% SHALE, 10% LIMESTONE @ 7,100' SURVEY @7,148 1.9° / 356.4 AZI. SAFETY BREAK: GENERAL HOUSEKEEPING	
22:00	0:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,220' TO 7,255', TOTAL 35', AVG. ROP 18' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 5-6K. MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS 60% SANDSTONE, 10% SHALE, 30% LIMESTONE @ 7,320'	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/01/2014
 Report No: 7

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:00	3.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,255' TO 7,300', TOTAL 45', AVG. ROP 15' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 5-6K. MUD WEIGHT IN-9.4 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.1PPG. W/ 49 VIS- PH. 9.5 *PUMPED 40 BBL NUT PLUG SWEEP TO CLEAN BIT PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT 60% DOLONITE, 40% LIMESTONE @ 7,280' ***1HR FOR DAYLIGHT SAVINGS***	
2:00	5:00	3.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,300' TO 7,355', TOTAL 45', AVG. ROP 18' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 4-8K. MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS	
5:00	7:00	2.00	21INDR	CIRC	CNDHOL	PT	CIRCULATE BOTTOMS UP, BUILD SLUG, FILL TRIP TANKS IN PREPARATION FOR BIT TRIP, FLOW CHECK, WELL STATIC, PUMP SLUG.	
Total Time		8.00						

Safety Incident?	N	Days since Last RI:	54.00
Environ Incident?	N	Days since Last LTA:	54.00
Incident Comments: No incidents reported last 24 hours.			

Weather Comments:

Other Remarks:

Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" E ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
 SAFE ACTS: 6
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 2
 LO/TO'S: 0
 PERMIT'S TO WORK: 0
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE WEARING PROPER PPE WHILE MIXING CAUSTIC, STOPPED JOB AND EXPLAINED POLICY, HE AGREED AND JOB CONTINUED INCIDENT FREE
 24 HOUR GOAL: DRILLED TO 8100' BY 00:00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/31/2014
 Report No: 6

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	5.50
Today's MD:	5740 ft	Progress:	570 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$68,556
Prev MD:	5170 ft	Rot Hrs Today:	9.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$737,236
PBMD:		Avg ROP Today:	60.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation: SA@5,264.0 Lithology: SAND AND LIMESTONE

Current Ops:

24-Hr Summary: DRILL FROM 5,170' TO 5,715', TRIP FOR BIT DUE TO LOW PENETRATION RATE, DRILL 12.25" HOLE FROM 5,715' TO 5,740'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE TO DRILL 12.25" INTERMEDIATE HOLE SECTION

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	220.0/ 200.0 kip	Pump Rate:	649.5	Conn:		0
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	210.0 kip	Pump Press:	2600	Trip:		0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2,200.0 ft-lbf			Backgr:		0
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	8,750.0 ft-lbf					

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	5,557.0	2.60	52.10	5,555.52	48.0	74.1	48.0	0.40	0.36
Engineer:	KEVIN THREADGILL	5,446.0	2.20	57.00	5,444.62	45.3	70.3	45.3	0.15	-0.11
Geologist:	SUMIYAH AHMED	5,257.0	2.40	52.10	5,255.77	40.9	64.2	40.9	0.21	0.16
Oxy Personnel:	3	5,068.0	2.10	45.10	5,066.92	36.0	58.6	36.0	0.01	0.00
Contractor Personnel:	25	4,879.0	2.10	44.40	4,878.05	31.1	53.7	31.1	0.09	-0.05
Total on Site:	28	4,690.0	2.20	40.80	4,689.18	25.8	48.9	25.8	0.16	0.16

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR
2	12.250	VAREL	RS616DHUX	4007267	S323	9x12	1765	5715	2-8-RO-G	X-16-RO-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
3	0.50	0.50	25	25	50.0	50.0	5.0/15.0	80/100	1.037	354	209.6	1.1
2	9.00	37.50	545	3950	60.6	105.3	15.0/35.0	85/187	0.994	302	193.7	1.0

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	3	Bit No:	3	MD In:	5715 ft
Sample From:	Out (Shaker Underflow)	pH:	9.0	Purpose:	MD Out: 7355 ft				
Mud Type:	Spud Mud	Pm / Pom:		Component					
Time / MD:	0:01 / 5,715.0	Pf / Mf:	0.1 / 0.2		OD	ID	Jts	Length	
Density @ Temp:	9.00 / 85	Chlorides:	37,000	PDC BIT	12.250	2.000	1	1.50	
Rheology Temp:	120	Ca++ / K+:	0 / 0	VERTICAL DRILLING TOOL	8.000	2.000	1	34.94	
Viscosity:	45.00	CaCl2:		CROSSOVER	8.000	2.875	1	3.65	
PV / YP:	4 / 22	Cl- in water phase:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63	
Gels 10s/10m/30m:	12 / 12 / 14	Lime:	0.00	TELEDRIIFT	8.000	2.500	1	28.60	
API WL:	35.00	ES:		INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91	
HTHP WL:	0.00	ECD:	0.00	DRILL COLLAR	8.000	2.875	6	183.79	
Cake API / HTHP:	3.0 / 0	n / K:	0.00 / 0.00	CROSSOVER	8.000	3.000	1	3.60	
Solids / Sol Corr:	5.00 / 5.00	Carbonate:		DRILL COLLAR	6.500	3.000	6	183.13	
Oil / Water:	0.0 / 95.0	Bicarbonate:	0 ppm	HWDP	6.500	2.875	27	833.71	
Oil / Water % for OWR:	/	Form Loss / Cum Loss:	0.0 / 0.0						
Sand:	0.01	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$8,541						
Oil Added:		Cum Mud Cost:	\$15,854						
LGS:	22.40 / 2.50								

VG Meter: 14@3 / 19@6 / 24@100 / 25@200 / 26@300 / 30@600

Comments: Last 24 hours: Treated active system with Caustic Soda, Whit Starch, and Soda Ash. Cir active with 9.0 ppg 45 sec/qt vis prehydrated gel mud. Continued to make prehydrated gel mud in the

Total Length: 1,288.46 ft Wt below Jars:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Caustic Soda	50.00	lb	13.00
D-D	5.00	gal	2.00
Fed Flocc	5.00	gal	2.00
M-I Gel	1.00	ton (short)	29.61
M-I Wate	100.00	lb	32.00
My-Lo-Jel	50.00	lb	20.00
Soda Ash	50.00	kg	15.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/31/2014
 Report No: 6

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,170' TO 5,425', TOTAL 255', AVG. ROP 64' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 44 VIS- PH- 10 MUD WEIGHT OUT-8.8 PPG. W/ 44 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS</p> <p>SAFETY BREAK: MIXING CHEMICALS</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,425' TO 5,530', TOTAL 105', AVG. ROP 53' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.0 PPG. W/ 44 VIS- PH- 10.5 MUD WEIGHT OUT-9.1+ PPG. W/ 44 VIS- PH. 10.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MEET AND GREET</p>
6:00	9:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,530' TO 5,715', TOTAL 185', AVG. ROP 61' HR, W.O.B. 30-35K, GPM'S-600, SRPM-85, MRPMS-132, TOTAL RPMS=217, PUMP PRESSURE OFF BOTTOM- 2,550 PSI., ON BOTTOM-3,230, DIFF 680, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.0 PPG. W/ 44 VIS- PH- 10.5 MUD WEIGHT OUT-9.1+ PPG. W/ 44 VIS- PH. 10.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: HOUSE KEEPING</p>
9:00	10:00	1.00	21INDR	CIRC	CNDHOL	PT	<p>CIRCULATE BOTTOMS UP, FLOW CHECK, WELL STATIC, PUMP SLUG TOO HIGH FOR BIT DUE TO PENETRATION RATE</p> <p>SAFETY BRAKE: TRIPPING PIPE</p>
10:00	12:30	2.50	21INDR	TRIP	DRILL	PT	T.O.O.H. F/ 5,715' TO 1,477'. HOLE TAKEN PROPER FILL & NO EXCESS DRAG.
12:30	13:00	0.50	21INDR	TRIP	DRILL	PT	<p>PULL ROTATING HEAD & INSTALL TRIP NIPPLE</p> <p>SAFETY BRAKE: STAYING FOCUSED</p>
13:00	15:00	2.00	21INDR	TRIP	DRILL	PT	CONT. TO T.O.H. F/ 1,477' TO BIT.
15:00	17:30	2.50	21INDR	TRIP	BHA	PT	<p>L/D BIT & MOTOR, MAKE UP NEW BIT & MOTOR.</p> <p>12-1/4" PDC BIT (MM65DM) 8" BAKER 7/8 4.0 MUD MOTOR 0.17 REV/GAL (W/ SLICK SLEEVE STAB) XO 12-1/8" IBS (DIRECTIONAL RENTALS) ISYS TOOL (INC/AZI FROM AIM DIRECTIONAL) 1 - 8" NMDC (MWD) 12-1/8" IBS (DIRECTIONAL RENTALS) 6 - 8" DC XO 6 - 6-1/2" DC 27 JTS HWDP</p>
17:30	23:30	6.00	21INDR	TRIP	DRILL	PT	<p>TIH F/ 88' TO 5,655' PROPER DISPLACEMENT, NO DRAG WASH AND REAM LAST 60' AND FAN BOTTOM PRIOR TO DRILLING 600 GPM, 80 RPM, 1995 PSI</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/31/2014
Report No: 6

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
23:30	0:00	0.50	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,715' TO 5,740', TOTAL 255', AVG. ROP 50' HR, W.O.B. 5-15K, GPM'S-650, SRPM-80, MRPMS-143, TOTAL RPMS=223, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-2,600, DIFF 250, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.3 PPG. W/ 38 VIS- PH- 10 MUD WEIGHT OUT-9.3PPG. W/ 37 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MIXING CHEMICALS
Total Time		24.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,740' TO 6,012', TOTAL 272', AVG. ROP 68' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-2,600, DIFF 250, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MAKING CONNECTIONS
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,012' TO 6,202', TOTAL 190', AVG. ROP 95' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,328 PSI., ON BOTTOM-2,890, DIFF 562, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MAKING CONNECTIONS
Total Time		6.00					

Safety Incident?	N	Days since Last RI:	53.00
Environ Incident?	N	Days since Last LTA:	53.00
Incident Comments:			
No incidents reported last 24 hours.			

Weather Comments:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/31/2014
Report No: 6

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
SAFE ACTS: 6
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 13
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: ON HAZARD HUNT FOUND HIGH PSI MUD LINE MISSING NUT AND KEEPER, TOLD MOTOR MAN AND HE FIXED SAME, JOB CONTINUED INCIDENT FREE
24 HOUR GOAL: DRILLED TO 7000' BY 1800

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING ST ANDREWS UNIT 320LH Date: 10/30/2014
 Prim. Reason: ORIG DRILL HORIZ USA Report No: 5

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 4.50
 Today's MD: 5170 ft Progress: 2180 ft Ground Elev: 3,079.10 ft Daily Cost: \$64,610
 Prev MD: 2990 ft Rot Hrs Today: 22.00 hr AFE MD/Days: 17,037.0 / 33.6 days Cum Cost: \$668,680
 PBMD: Avg ROP Today: 99.1 ft/hr AFE Number: 1189081#0102 AFE Cost: \$4,401,747

Current Formation: QUEEN@4,427.0 Lithology:

Current Ops:

24-Hr Summary: DRILL 12.25" INT HOLE FROM 2,990' TO 5,170' DISPLACED TO GEL MUD AND BEGAN CIRCULATING ON STEEL PITS AT 5,000'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE TO DRILL 12.25 INT HOLE SECTION

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	193.0/ 172.0 kip	Pump Rate:	607.9	Conn:			0
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	183.0 kip	Pump Press:	2683	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3,100.0 ft-lbf			Backgr:			0
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	8,200.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	5,068.0	2.10	45.10	5,066.92	36.0	58.6	36.0	0.01	0.00
Engineer:	KEVIN THREADGILL	4,879.0	2.10	44.40	4,878.05	31.1	53.7	31.1	0.09	-0.05
Geologist:	SUMIYAH AHMED	4,690.0	2.20	40.80	4,689.18	25.8	48.9	25.8	0.16	0.16
Oxy Personnel:	2	4,501.0	1.90	41.50	4,500.30	20.7	44.5	20.7	0.07	-0.05
Contractor Personnel:	12	4,312.0	2.00	39.40	4,311.41	15.9	40.3	15.9	0.07	0.05
Total on Site:	14	4,123.0	1.90	36.60	4,122.52	10.8	36.3	10.8	0.05	0.05

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
2	12.250	VAREL	RS616DHUX	4007267	S323	9x12	1765	5715	2-8-RO-G	X-16-RO-PR

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
2	22.00	28.50	2180	3405	99.1	119.5	15.0/33.0	70/100	0.994	303	196.2	0.9

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	2	Bit No:	2	MD In:	1765 ft
Sample From:	Out (Shaker Underflow)	pH:	9.0	Purpose:	DRILL INTERMEDIATE HOLE	MD Out:	5715 ft		
Mud Type:	Spud Mud	Pm / Pom:							
Time / MD:	0:01 / 2,990.0	Pf / Mf:	0.1 / 0.5						
Density @ Temp:	8.80 / 85	Chlorides:	15,000						
Rheology Temp:	120	Ca++ / K+:	0 / 0						
Viscosity:	45.00	CaCl2:							
PV / YP:	3 / 17	Cl- in water phase:							
Gels 10s/10m/30m:	14 / 15 / 23	Lime:	0.00						
API WL:	35.00	ES:							
HTHP WL:	0.00	ECD:	9.02						
Cake API / HTHP:	2.0 / 0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	5.00 / 5.00	Carbonate:							
Oil / Water:	0.0 / 95.0	Bicarbonate:	0 ppm						
Oil / Water % for OWR:	/	Form Loss / Cum Loss:	0.0 / 0.0						
Sand:	0.01	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$5,717						
Oil Added:		Cum Mud Cost:	\$7,313						
LGS:	2.70 / 24.40								

VG Meter: 17@3 / 17@6 / 18@100 / 19@200 / 20@300 / 23@600 Total Length: 1,288.50 ft Wt below Jars:

Comments: Drilled from 2423' to 5121' TVD. Displaced 1100 bbls of prehydrated gel to Active at 500'TVD. Hole washout through Yates section at 75%. Next 24 hrs: Treat active with Caustic Soda to bring pH up to 10-11

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	6.00
M-I Gel	1.00	ton (short)	26.00

Component	OD	ID	Jts	Length
PDC BIT	12.250	2.000	1	1.50
VERTICAL DRILLING TOOL	8.000	2.000	1	34.98
CROSSOVER	8.000	2.875	1	3.65
INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63
TELEDRIFT	8.000	2.500	1	28.60
INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91
DRILL COLLAR	8.000	2.875	6	183.79
CROSSOVER	8.000	3.000	1	3.60
DRILL COLLAR	6.500	3.000	6	183.13
HWDP	6.500	2.875	27	833.71

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/30/2014
Report No: 5

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,990' TO 3,580', TOTAL 590', AVG. ROP 148' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-90, MRPMS-154, TOTAL RPMS=244, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5</p> <p>*DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING.</p> <p>PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 3,580' TO 3,770', TOTAL 190', AVG. ROP 95' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-80, MRPMS-154, TOTAL RPMS=234, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5</p> <p>*DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING.</p> <p>PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
6:00	9:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 3,770' TO 4,122', TOTAL 352', AVG. ROP 117' HR, W.O.B. 28K, GPM'S-650, SRPM-80, MRPMS-143, TOTAL RPMS=223, PUMP PRESSURE OFF BOTTOM- 2,057 PSI., ON BOTTOM-2,700, DIFF. 643, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 CIRCULATING OUTSIDE RESERVE PIT. PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
9:00	9:30	0.50	21INDR	CIRC	CNDHOL	P	REMOVE TRIP NIPPLE & INSTALL ROTATING HEAD BEARING ASSEMBLY.
9:30	13:30	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 4,122' TO 4,615', TOTAL 493', AVG. ROP 123' HR, W.O.B. 28K, GPM'S-700, SRPM-95, MRPMS-154, TOTAL RPMS=249, PUMP PRESSURE OFF BOTTOM- 2,550 PSI., ON BOTTOM-3,230, DIFF. 680, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 CIRCULATING OUTSIDE RESERVE PIT. PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
13:30	17:30	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 4,615' TO 4,911', TOTAL 296', AVG. ROP 74' HR, W.O.B. 28K, GPM'S-700, SRPM-95, MRPMS-154, TOTAL RPMS=249, PUMP PRESSURE OFF BOTTOM- 2,550 PSI., ON BOTTOM-3,230, DIFF. 680, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 OUTSIDE RESERVE PIT BANK BROKE, CIRCULATE STEEL PITS. LOST 927 BBL'S ON GROUND.</p>
17:30	18:00	0.50	21INDR	RIGMT	SRVRIG	P	SERVICE TOP DRIVE
18:00	21:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 4,911' TO 5,094', TOTAL 183', AVG. ROP 61' HR, W.O.B. 28K, GPM'S-600, SRPM-90, MRPMS-132, TOTAL RPMS=222, PUMP PRESSURE OFF BOTTOM- 2,179 PSI., ON BOTTOM-2,691, DIFF. 512, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/30/2014
Report No: 5

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
21:00	22:00	1.00	21INDR	CIRC	CHOVR	P	HAD TROUBLE KEEPING UP WITH PUMPS DUE TO TRANSFER PUMPS LOSING PRIME, CIRCULATED AT REDUCED RATE AND SWAPPED TRANSFER PUMP OUT **DISPLACED WELL TO 8.8 PPG, 44 VIS, 10 PH GEL MUD AT 5,000' TOOK 1100 BBBL'S TO GET GEL MUD AROUND, ESTIMATED WASHOUT OF 390 BBL'S	
22:00	0:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,094' TO 5,170', TOTAL 76', AVG. ROP 38' HR, W.O.B. 28-32K, GPM'S-600, SRPM-90, MRPMS-132, TOTAL RPMS=222, PUMP PRESSURE OFF BOTTOM- 2,179 PSI., ON BOTTOM-2,691, DIFF. 512, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K. MUD WEIGHT IN-8.8 PPG. W/ 44 VIS- PH- 10 MUD WEIGHT OUT-8.9 PPG. W/ 44 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,170' TO 5,425', TOTAL 255', AVG. ROP 64' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-8.8 PPG. W/ 44 VIS- PH- 10 MUD WEIGHT OUT-8.8 PPG. W/ 44 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S SAFETY BREAK: MIXING CHEMICALS	
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,425' TO 5,530', TOTAL 105', AVG. ROP 53' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.0 PPG. W/ 44 VIS- PH- 10.5 MUD WEIGHT OUT-9.1+ PPG. W/ 44 VIS- PH. 10.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MEET AND GREET	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	52.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	52.00	
Incident Comments: No incidents reported last 24 hours.				

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/30/2014
Report No: 5

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 6
SAFE ACTS: 9
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE DISCONNECTED TRANSFER PUMP WITH PUMP RUNNING, STOPPED JOB EXPLAINED
DANGERS, HE AGREED AND JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL: DRILLED TO 6500' BY 1800

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/29/2014
Report No: 4

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	3.50
Today's MD:	2990 ft	Progress:	1225 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$55,481
Prev MD:	1765 ft	Rot Hrs Today:	6.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$604,070
PBMD:		Avg ROP Today:	188.5 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation: @ Lithology:

Current Ops:

24-Hr Summary: FINISH BOPE TEST & RU, MU BHA, TIH, TST CSG, DRLOUT+10' NEW FORM, FIT 13.1 EMW, DRILL FROM 1,770' T/ 2,990'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONT TO DRILL 12.25" INTERMEDIATE HOLE, DISPLACE TO PRE-HYDRATED BENTONITE @ 5,000'

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	20.000in @ 40ft	Str Wt Up/Dn:	153.0/ 138.0 kip	Pump Rate:	353.9	Conn:			0
Next Casing:	13.625in @ 1,750ft	Str Wt Rot:	145.0 kip	Pump Press:	2377	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2,300.0 ft-lbf			Backgr:			0
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	10,200.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	2,894.0	0.90	58.40	2,893.89	-10.0	16.1	-10.0	0.12	0.05
Engineer:	KEVIN THREADGILL	2,705.0	0.80	72.50	2,704.91	-11.2	13.6	-11.2	0.03	0.00
Geologist:	SUMIYAH AHMED	2,516.0	0.80	76.80	2,515.93	-11.9	11.0	-11.9	0.22	0.21
Oxy Personnel:	2	2,327.0	0.40	88.00	2,326.94	-12.2	9.1	-12.2	0.36	-0.21
Contractor Personnel:	13	2,138.0	0.80	146.50	2,137.95	-11.2	7.7	-11.2	0.21	0.21
Total on Site:	15	1,949.0	0.40	152.80	1,948.96	-9.5	6.7	-9.5	0.06	-0.04

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
2	12.250	VAREL	RS616DHUX	4007267	S323	9x12	1765	5715	2-8-RO-G	X-16-RO-PR

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB	RPM	TFA	P Drop Bit	Noz Vel	HHPSI
2	6.50	6.50	1225	1225	188.5	188.5	15.0/30.0	80/100	0.994	397	228.5	1.4

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA				
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	2	Bit No:	2	MD In:	1765 ft
Sample From:	In (Suction Pit)	pH:	10.5	Purpose:	DRILL INTERMEDIATE HOLE				
Mud Type:	Clear Water	Pm / Pom:		Component	OD	ID	Jts	Length	
Time / MD:	0:01 / 1,765.0	Pf / Mf:	0.1 / 0.3	PDC BIT	12.250	2.000	1	1.50	
Density @ Temp:	8.50 / 75	Chlorides:	9,500	VERTICAL DRILLING TOOL	8.000	2.000	1	34.98	
Rheology Temp:	120	Ca++ / K+:	0 / 0	CROSSOVER	8.000	2.875	1	3.65	
Viscosity:	29.00	CaCl2:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63	
PV / YP:	1 / 1	Cl- in water phase:		TELEDRIFT	8.000	2.500	1	28.60	
Gels 10s/10m/30m:	1 / 1 / 1	Lime:	0.00	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91	
API WL:	0.00	ES:		DRILL COLLAR	8.000	2.875	6	183.79	
HTHP WL:	0.00	ECD:	8.48	CROSSOVER	8.000	3.000	1	3.60	
Cake API / HTHP:	1.0 / 0	n / K:	0.00 / 0.00	DRILL COLLAR	6.500	3.000	6	183.13	
Solids / Sol Corr:	0.60 / 0.60	Carbonate:		HWDP	6.500	2.875	27	833.71	
Oil / Water:	0.0 / 99.0	Bicarbonate:	0 ppm						
Oil / Water % for OWR:	/	Form Loss / Cum Loss:	0.0 / 0.0						
Sand:	0.02	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$860						
Oil Added:		Cum Mud Cost:	\$1,596						
LGS:	0.60 / 5.40								

VG Meter: 1@3 / 1@6 / 1@100 / 1@200 / 2@300 / 3@600

Comments: Built 1850 bbls prehydrated bentonite gel mud for displacement at 5000'. Drilled from 1765' to 2423' TVD circulating 8.5 ppg 20 sec/at vis. 10.5 pH fresh water from outer reservoir pits. Built 100 bbls of

Total Length: 1,288.50 ft Wt below Jars:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Rapid Sweep	20.00	each	1.00
SAPP	50.00	lb	6.00
Soda Ash	50.00	kg	9.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/29/2014
Report No: 4

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	0:30	0.50	14SURC	BOP	TSTBOP	P	RIG DOWN TESTERS	
0:30	2:00	1.50	14SURC	BOP	RUBOP	P	HOOK UP FILL UP LINE, INSTALL TURN BUCKLES AND CENTER STACK, CLOSE CASING VALVE, AND INSTALL TRIP NIPPLE	
2:00	2:30	0.50	14SURC	WLHD	RWH	P	INSTALL WEAR BUSHING	
2:30	3:30	1.00	14SURC	TRIP	BHA	P	STRAP AND CALLIPER BHA PICK UP TO THE RIG FLOOR	
3:30	5:30	2.00	14SURC	TRIP	BHA	P	MU BHAS FOLLOWS: 12-1/4" PDC BIT 8" BAKER 7/8 4.0 MUD MOTOR 0.17 REV/GAL (W/ SLICK SLEEVE STAB) XO 12-1/8" IBS (DIRECTIONAL RENTALS) ISYS TOOL (INC/AZI FROM AIM DIRECTIONAL) 1 - 8" NMDC (MWD) 12-1/8" IBS (DIRECTIONAL RENTALS) 6 - 8" DC XO 6 - 6-1/2" DC 27 JTS HWDP	
5:30	6:00	0.50	14SURC	RIGMT	REP	P	SERVICE RIG	
6:00	10:00	4.00	14SURC	TRIP	DRILL	P	T.I.H. F/ 88' TO 1,650' SAFETY BRAKE: PINCH POINTS & BODY PLACEMENT	
10:00	10:30	0.50	14SURC	CSG	PIPE	P	TEST CASING TO 1,600 PSI & CHART FOR 30 MINS.	
10:30	11:30	1.00	14SURC	CSG	PIPE	P	PERFORM CHOKE DRILL 13.375" CASING, BIT DEPTH 1,650'. 20 SPM W/ 509 PSI. 16 TOTAL STROKES. 2 SEC. LAG TIME W/ CHOKE OPENING 5% EVERY TIME YOU BUMP IT IN EITHER DIRECTION. FCCP= 400 PSI W/ CHOKE 24% OPEN.	
11:30	12:00	0.50	14SURC	TRIP	DRILL	P	CONT. T.I.H. F/ 1,650' TO 1,708'. TAG FLOAT COLLAR. SAFETY BRAKE: TEAM WORK.	
12:00	13:00	1.00	14SURC	DRLOUT	DOCMT	P	DRILL FLOAT COLLAR, SHOE TRACK, SHOE & 10' OF NEW FORMATION F/ 1,765' TO 1,775'.	
13:00	13:30	0.50	14SURC	DRLOUT	FST	P	CIRCULATE BOTTOMS UP & PERFORM FIT. EQUIVALENT TO 13.1 PPG. OMW=8.8 PPG SHOE SET @ 1,760'=395 PSI	
13:30	15:00	1.50	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 1,775' TO 2,044', TOTAL 269', AVG. ROP 179' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-100, MRPMS-157, TOTAL RPMS=254, PUMP PRESSURE OFF BOTTOM- 1,810 PSI., ON BOTTOM-2,460, DIFF. 650, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.5 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.6 PPG. W/ 28 VIS- PH. 9.5 DUMPING AND DILUTING TO CUT MUD WEIGHT PUMP SWEEPS AS NEEDED SAFETY BREAK: HOUSEKEEPING	
15:00	19:00	4.00	21INDR	SRFEQ	REPR	PT	WAIT ON ISYS TOOL TECH TO CHANGE OUT SURVEY SCREEN ON RIG FLOOR.	
19:00	22:00	3.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,044' TO 2,575', TOTAL 531', AVG. ROP 177' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-100, MRPMS-157, TOTAL RPMS=254, PUMP PRESSURE OFF BOTTOM- 1,810 PSI., ON BOTTOM-2,460, DIFF. 650, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.5 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.6 PPG. W/ 28 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED SAFETY BREAK: LIGHTING	
22:00	0:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,575' TO 2,990', TOTAL 415', AVG. ROP 207' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-90, MRPMS-154, TOTAL RPMS=244, PUMP PRESSURE OFF BOTTOM- 2,220 PSI., ON BOTTOM-2,835, DIFF. 615, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/29/2014
 Report No: 4

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,990' TO 3,580', TOTAL 590', AVG. ROP 148' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-90, MRPMS-154, TOTAL RPMS=244, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5</p> <p>*DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING.</p> <p>PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS</p>	
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 3,580' TO 3,770', TOTAL 190', AVG. ROP 95' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-80, MRPMS-154, TOTAL RPMS=234, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5</p> <p>*DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING.</p> <p>PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS</p>	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	51.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	51.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks: Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 6
 SAFE ACTS: 4
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 9
 SAFETY MEETINGS: 2
 LO/TO'S: 0
 PERMIT'S TO WORK: 1
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE NOTICED HAMMER WITH BROKEN HANDLE, STOPPED JOB EXPLAINED DANGERS, TOOK HAMMER OUT OF SERVICE AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL: DRILLED TO 2500' BY 1800 HRS'

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/28/2014
Report No: 3

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	2.50
Today's MD:	1765 ft	Progress:	0 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$197,189
Prev MD:	1765 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$548,589
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation: @ Lithology:

Current Ops:

24-Hr Summary: CEMENT SURFACE CSG., INSTALL WELL HEAD, N/U, TEST BOP'S.

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) RD TESTERS, H/U MISC BOPE EQUIP, INST. WEAR BUSH, PU BHA, TIH, TST CSG, DRL OUT, FIT, DRILL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	20.000in @ 40ft	Str Wt Up/Dn:	/	Pump Rate:	0.0	Conn:			0
Next Casing:	13.625in @ 1,750ft	Str Wt Rot:		Pump Press:	0	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			0
Form Test/EMW:		Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	AJ DAVEY	1,701.0	0.50	136.60	1,700.97	-7.9	5.5	-7.9	0.04	0.03
Supervisor 2:	JEFF ROZELLE	1,398.0	0.40	128.90	1,397.98	-6.3	3.8	-6.3	0.01	0.00
Engineer:	KEVIN THREADGILL	1,172.0	0.40	131.00	1,171.98	-5.3	2.6	-5.3	0.01	0.00
Geologist:	TIM LYONS	991.0	0.40	133.80	990.99	-4.4	1.7	-4.4	0.04	0.00
Oxy Personnel:	2	864.0	0.40	140.90	863.99	-3.8	1.1	-3.8	0.06	0.03
Contractor Personnel:	12	556.0	0.30	164.10	555.99	-2.2	0.2	-2.2	0.08	-0.06
Total on Site:	14									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
1	16.000	CAPROCK BITS	616-SR9	39830	S232	9x12	40	1765	0-0-NO-A	0-1-NO-TD

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA				
Engineer: Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No: 1	Bit No: 1	MD In: 40 ft			
Sample From: In (Suction Pit)	pH:	8.0	Purpose: DRILL SURFACE HOLE	MD Out: 1765 ft				
Mud Type: Spud Mud	Pm / Pom:		Component		OD	ID	Jts	Length
Time / MD: 0:01 / 1,765.0	Pf / Mf:	0.1 / 0.3	PDC BIT	16.000	2.000	1	1.50	
Density @ Temp: 9.20 / 0	Chlorides:	1,600	NEAR BIT STABILIZER	8.000	2.875	1	7.45	
Rheology Temp: 75	Ca++ / K+:	340 / 0	SHOCK SUB	8.125	3.000	1	11.62	
Viscosity: 32.00	CaCl2:		INTEGRAL BLADE STABILIZER	8.000	3.000	1	6.40	
PV / YP: 3 / 6	Cl- in water phase:		UBHO SUB	8.000	2.500	1	2.58	
Gels 10s/10m/30m: 1 / 1 / 3	Lime:	0.00	MWD TOOL	8.000	2.876	1	28.60	
API WL: 10.50	ES:		INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.48	
HTHP WL: 0.00	ECD:	0.00	DRILL COLLAR	8.000	2.875	6	183.79	
Cake API / HTHP: 1.0 / 0	n / K:	0.00 / 0.00	CROSSOVER	8.000	3.000	1	3.60	
Solids / Sol Corr: 5.00 / 5.00	Carbonate:		DRILL COLLAR	6.500	3.000	6	183.13	
Oil / Water: 0.0 / 95.0	Bicarbonate:	0 ppm	HWDP	6.500	2.875	30	926.30	
Oil / Water % for OWR: /	Form Loss / Cum Loss:	0.0 / 0.0						
Sand: 0.25	Fluid Disch:	/						
Water Added:	Daily Mud Cost:	\$124						
Oil Added:	Cum Mud Cost:	\$737						
LGS: 6.40 / 58.40								
VG Meter: 1@3 / 2@6 / 5@100 / 7@200 / 9@300 / 12@600			Total Length:	1,362.45 ft	Wt below Jars:			

Comments: Last 24 hour: No treatment necessary. Run Casing/cement.
Next 24 hours: Displace 550 bbls from active to reserve pits. Fill active with 350 bbls of fresh water for next interval. Build 1500 bbls of prehydrated

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/28/2014
Report No: 3

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:00	1.00	14SURC	CSG	RUNCSG	P	WASH LAST JOINT OF CASING FROM 1,710' TO 1,765' 9 BPM, 151 PSI
1:00	2:00	1.00	14SURC	CIRC	CNDHOL	P	CIRCULATE AND CONDITION HOLE THROUGH VALONT TOOL 9 BPM 50 PSI RECIPROCATATE CASING WHILE CIRCULATING P/U 130 S/O 102 S/W 115 HOLD SAFETY MEETING WITH HALLIBURTON WHILE CIRCULATING
2:00	2:30	0.50	14SURC	CMT	RIGUP	P	RIG DOWN VOLANT TOOL AND RIG UP HALLIBURTON CEMENTING EQUIPMENT
2:30	4:30	2.00	14SURC	CMT	PRIM	P	PERFORM CEMENT JOB ON 13 3/8" SURFACE AS FOLLOWS: TEST LINES TO 1,500 PSI PUMP 20 BBLS OF 8.3 PPG WATER SPACER PUMP LEAD, 197 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (630 SACKS) OF CLASS C CEMENT, 13.5 PPG, 1.759 YIELD, 9.37 GAL/SK PUMP TAIL, 67 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (280 SACKS) OF CLASS C CEMENT, 14.8 PPG, 1.342 YIELD, 6.43 GAL/SK DROP PLUG AT 03:45 PUMP DISPLACEMENT, 265 BBLS OF 8.3 PPG WATER. PUMP RATE WAS 8 BPM AND 2 BPM LAST 10 BBL'S PUMPED BUMPED PLUG @ 4:28 HRS, WITH 500 PSI OVER, PUMP PRESSURE WAS 750 PSI AND PRESSURED UP TO 1250 PSI WHEN BUMPED. HELD FOR 5 MINUTES (GOOD) BLED BACK 1.5 BBLS. KEPT FULL RETURNS THROUGH JOB GOT CEMENT BACK 180 BBLS INTO DISPLACEMENT, GOT BACK 85 BBLS OF CEMENT (268 SACKS)
4:30	5:00	0.50	14SURC	CMT	RIGUP	P	RIG DOWN HALLIBURTON CEMENT EQUIPMENT
5:00	6:00	1.00	14SURC	GP	RUDSEQ	P	RIG DOWN KOSERCA HYDRAULIC CELLAR PUMPS
6:00	9:00	3.00	14SURC	WLHD	RWH	P	DO A ROUGH CUT ON CASING, LAY DOWN CUT JOINT, CUT AND DRESS CONDUCTOR AND 13 3/8" CASING FOR MULTI BOWL WELL HEAD, SET THE TOP OF THE "B" SECTION 2" INCHES BELOW GROUND LEVEL. SAFETY BREAK: FIRE HAZARDS
9:00	13:00	4.00	14SURC	WLHD	RWH	P	PRE HEAT WELL HEAD PER CAMERON'S PROCEDURES AND INSTALL WELL HEAD, CHECK FOR LEVEL, (GOOD) WELD WELL HEAD TO CASING. TEST WELL HEAD TO 800 PSI FOR 15 MINUTES, TEST (GOOD). SAFETY BREAK: CONFINE SPACE ENTRY
13:00	19:00	6.00	14SURC	BOP	RUBOP	P	INSTALL SPOOL AND DSA, SET BOP'S ON TOP OF DSA, AND TORQUE ALL BREAKS ON BOPS, INSTALL HCR LINE, KILL LINE AND KOOMEY LINES. FUNCTION TEST BOP'S (GOOD)

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/28/2014
Report No: 3

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
19:00	0:00	5.00	14SURC	BOP	TSTBOP	P	TEST BOP AS FOLLOWED: TEST #1 BLIND RAMS, INSIDE KILL VALVE AND PRIMARY CLUSTER OF CHOKE MANIFOLD VALVES 250 LOW, 5000 HIGH, 5 MIN'S OK RUN TEST PLUG ON DRILL PIPE TEST #2 ANNULAR, 250 LOW, 3500 HIGH, 5 MIN'S OK TEST #3 OUTSIDE KILL LINE VALVE, MANUAL CHOKE VALVE 250 LOW, 5000 HIGH, 5 MIN'S OK TEST #4 PIPE RAMS, INSIDE KILL; CHOKE LINE HCR 250 LOW, 5000 HIGH, 5 MIN'S OK TEST #5 PIPE RAMS, INSIDE KILL LINE VALVE, SECONDARY CLUSTER OF CHOKE MANIFOLD VALVES. 250 LOW, 5000 HIGH, 5 MIN'S OK TEST #6 PIPE RAMS, INSIDE KILL LINE VALVE, SUPER CHOKE AND LAST CHOKE MANIFOLD VALVE 250 LOW, 5000 HIGH OK TEST #7 GRAY INSIDE BOP VALVE 250 LOW, 5000 HIGH 5 MIN'S OK TEST #8 TIW FLOOR VALVE 250 LOW 5000 HIGH 5 MIN'S OK TEST #9 BACK TO MUD PUMPS 250 LOW, 4000 HIGH OK TEST ACCUMULATOR (GOOD)

Total Time 24.00

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	0:30	0.50	14SURC	BOP	TSTBOP	P	RIG DOWN TESTERS
0:30	2:00	1.50	14SURC	BOP	RUBOP	P	HOOK UP FILL UP LINE, INSTALL TURN BUCKLES AND CENTER STACK, CLOSE CASING VALVE, AND INSTALL TRIP NIPPLE
2:00	2:30	0.50	14SURC	WLHD	RWH	P	INSTALL WEAR BUSHING
2:30	3:30	1.00	14SURC	TRIP	BHA	P	STRAP AND CALLIPER BHA PICK UP TO THE RIG FLOOR
3:30	5:30	2.00	14SURC	TRIP	BHA	P	MU BHA AS FOLLOWS: 12-1/4" PDC BIT 8" BAKER 7/8 4.0 MUD MOTOR 0.17 REV/GAL (W/ SLICK SLEEVE STAB) XO 12-1/8" IBS (DIRECTIONAL RENTALS) ISYS TOOL (INC/AZI FROM AIM DIRECTIONAL) 1 - 8" NMDC (MWD) 12-1/8" IBS (DIRECTIONAL RENTALS) 6 - 8" DC XO 6 - 6-1/2" DC 27 JTS HWDP
5:30	6:00	0.50	14SURC	RIGMT	REP	P	SERVICE RIG

Total Time 6.00

Safety Incident? N **Days since Last RI:** 50.00
Environ Incident? N **Days since Last LTA:** 50.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/28/2014
Report No: 3

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 8

SAFE ACTS: 7

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 12

SAFETY MEETINGS: 2

LO/TO'S: 0

PERMIT'S TO WORK: 1

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: THIRD PARTY EMPLOYEE PSI WASHING IN A HIGH PSI AREA, STOPPED JOB EXPLAINED POLICY
AND JOB CONTINUED INCIDENT FREE

24 HOUR GOAL: DRILLED TO 2500' BY 1800 HRS

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/27/2014
 Report No: 2

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	14SUDR	DRILL	ROTVR	P	<p>DRILLED 16" SURFACE HOLE' F/ 475' T/ 1,120', AS FOLLOWS:</p> <p>PROGRESS: 645 FT ROP AVG: 162 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG</p> <p>DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES</p> <p>SAFETY BREAK: FORKLIFT OPS</p>
4:00	5:30	1.50	14SUDR	DRILL	ROTVR	P	<p>DRILLED 16" SURFACE HOLE' F/ 1,120' T/ 1,378', AS FOLLOWS:</p> <p>PROGRESS: 258 FT ROP AVG: 172 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG</p> <p>SWAP TO STEEL PITS AT 1,378'</p> <p>DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES</p>
5:30	6:00	0.50	14SUDR	RIGMT	SRVRIG	P	SERVICE RIG, HOOK UP AIRLINE TO FLOWLINE AND FIX LEAK ON 2" ON #1 MUD PUMP
6:00	9:00	3.00	14SUDR	DRILL	ROTVR	P	<p>DRILL 16" SURFACE HOLE FROM 1,378' TO 1,765', TOTAL=387' (129' AVG. ROP), PUMPING 750 GPM'S, PUMP PRESSURE OFF BOTTOM- 2,200 PSI., ON BOTTOM-2,500 PSI., RPM'S TOTAL- 120, WOB- 20-25K, TORQUE OFF BOTTOM- 2-3K, ON BOTTOM- 14-16K.</p> <p>MUD IN- 8.9 PPG. WITH 38 VIS MUD OUT- 9.2 PPG. WITH 42 VIS</p> <p>P/U- 145K, ROT- 130K, S/O- 125K</p> <p>DROPPING RAPID SWEEP AND SOAP STICKS EVERY CONNECTION. PUMP HIGH VIS SWEEPS AS NEEDED. TD SURFACE @ 09:00 AM ON 10-27-2014</p>
9:00	10:00	1.00	14SUDR	CIRC	CNDHOL	P	<p>PUMP HIGH VIS SWEEP AROUND @ 1,765' WITH 748 GPM'S WITH 2,200 PSI., BUILD 50 BBL. SWEEP WITH 10 SACKS OF SAPP AND 10 BUCKETS OF DD, PUMP 50 SWEEP AROUND.</p> <p>DOUBLE CHECK PIPE COUNT WHILE CIRCULATING. (GOOD)</p>
10:00	14:00	4.00	14SUDR	TRIP	DRILL	P	<p>PULL OUT OF THE HOLE FROM 1,765' TO 68'.</p> <p>HOLE IS TAKING PROPER DISPLACEMENT.</p>
14:00	16:00	2.00	14SUDR	TRIP	DRILL	P	<p>BREAK OUT AND LAY DOWN, 15 3/4" STABILIZERS, ISYS TOOL, BIT AND SHOCK SUB.</p> <p>SAFETY BREAK: PINCH POINT AND WORKING WITH HEAVY EQUIPMENT</p>
16:00	18:00	2.00	14SURC	CSG	RUNCSG	P	PJSM WITH B&L CASING CREW, H&P EMPLOYEE'S, TOOLPUSHER AND DSM AND RIG UP CASING CREW, GET SHOE, FLOAT AND CENTERLIZERS ON RIG FLOOR.
18:00	18:30	0.50	14SURC	SAFE	PJSM	P	SAFETY MEETING WITH ONCOMING CREW

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/27/2014
Report No: 2

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
18:30	22:00	3.50	14SURC	CSG	RUNCSG	P	<p>PICK UP AND RUN 13 3/8" 54.5# J-55 BTC CASING AS FOLLOWS:</p> <p>1- 13 3/8" SHOE SET @- 1,755' 1- 13 3/8" 54.5# J-55 BTC SET @- 1,753' 1- 13 3/8" FLOAT COLLAR SET @- 1,708' 38- 13 3/8" 54.5# J-55 BTC SET @- 1,702'</p> <p>CHECK FLOATS AFTER MAKE UP, (GOOD)</p> <p>RUN CASING FROM 0' TO 1,355'</p> <p>RUN RIGID BOW SPRING CENTRALIZER, 2 ON THE THE FIRST JOINT AND THEN ON EVERY 4 TH JOINT.</p> <p>CIRCULATE BOTTOMS UP AT 1,355' WITH 7 BPM DUE TO DRAG 25K SLACK OFF AND 35K PICK UP. AFTER CIRCULATING 8 K PU AND SLACK OFF.</p>	
22:00	0:00	2.00	14SURC	CSG	RUNCSG	P	<p>CONTINUE RUNNING 13 3/8" SURFACE CASING FROM 1,355' TO 1,710' WASHED WITH VALONT TOOL FROM 1,692' TO 1,710' AT 9 BPM, 155 PSI</p>	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	1:00	1.00	14SURC	CSG	RUNCSG	P	<p>WASH LAST JOINT OF CASING FROM 1,710' TO 1,765' 9 BPM, 151 PSI</p>	
1:00	2:00	1.00	14SURC	CIRC	CNDHOL	P	<p>CIRCULATE AND CONDITION HOLE THROUGH VALONT TOOL 9 BPM 50 PSI RECIPROCATATE CASING WHILE CIRCULATING P/U 130 S/O 102 S/W 115 HOLD SAFETY MEETING WITH HALLIBURTON WHILE CIRCULATING</p>	
2:00	2:30	0.50	14SURC	CMT	RIGUP	P	<p>RIG DOWN VOLANT TOOL AND RIG UP HALLIBURTON CEMENTING EQUIPMENT</p>	
2:30	4:30	2.00	14SURC	CMT	PRIM	P	<p>PERFORM CEMENT JOB ON 13 3/8" SURFACE AS FOLLOWS:</p> <p>TEST LINES TO 1,500 PSI</p> <p>PUMP 20 BBLS OF 8.3 PPG WATER SPACER</p> <p>PUMP LEAD, 197 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (630 SACKS) OF CLASS C CEMENT, 13.5 PPG, 1.759 YIELD, 9.37 GAL/SK</p> <p>PUMP TAIL, 67 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (280 SACKS) OF CLASS C CEMENT, 14.8 PPG, 1.342 YIELD, 6.43 GAL/SK</p> <p>DROP PLUG AT 03:45</p> <p>PUMP DISPLACEMENT, 265 BBLS OF 8.3 PPG WATER. PUMP RATE WAS 8 BPM AND 2 BPM LAST 10 BBL'S PUMPED</p> <p>BUMPED PLUG @ 4:28 HRS. WITH 500 PSI OVER, PUMP PRESSURE WAS 750 PSI AND PRESSURED UP TO 1250 PSI WHEN BUMPED. HELD FOR 5 MINUTES (GOOD) BLED BACK 1.5 BBLS.</p> <p>KEPT FULL RETURNS THROUGH JOB GOT CEMENT BACK 180 BBLS INTO DISPLACEMENT, GOT BACK 85 BBLS OF CEMENT (268 SACKS)</p>	
4:30	5:00	0.50	14SURC	CMT	RIGUP	P	<p>RIG DOWN HALLIBURTON CEMENT EQUIPMENT</p>	
5:00	6:00	1.00	14SURC	GP	RUDSEQ	P	<p>RIG DOWN KOSERCA HYDRAULIC CELLAR PUMPS</p>	
Total Time		6.00						

Safety Incident? N Days since Last RI: 49.00 Weather Comments:
 Environ Incident? N Days since Last LTA: 49.00
 Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/27/2014
Report No: 2

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 8
SAFE ACTS: 3
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 3
LO/TO'S: 1
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION: 1
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE SAW AIRLINE WITHOUT WHIP CHECK ON IT, STOPPED JOB AND PUT ONE ON, JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL: BOP TESTED BY 1800 HOURS

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/26/2014
 Report No: 1

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	0.50
Today's MD:	475 ft	Progress:	475 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$77,018
Prev MD:	0 ft	Rot Hrs Today:	4.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$153,679
PBMD:		Avg ROP Today:	105.6 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation: @ Lithology:

Current Ops:

24-Hr Summary: FINISH RIGGING UP AND PERFORM PRE SPUD CHECKLIST, ACCEPTED RIG @ 12:00, P/U AND M/U 16" BHA. DRILL T/ 475'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) DRILL 16" SURFACE TO ~1755', PUMP SWEEP, TOOH, LD STAB'S, RU AND RUN 13 3/8" CSG & CMT

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:		Str Wt Up/Dn:	93.0/ 89.0 kip	Pump Rate:	749.5	Conn:			0
Next Casing:		Str Wt Rot:	91.0 kip	Pump Press:	1310	Trip:			0
Last BOP Press Test:	09/18/2014	Torq Off Btm:	1,200.0 ft-lbf			Backgr:			0
Form Test/EMW:		Torq On Btm:	4,700.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.00
Engineer:	KEVIN THREADGILL	402.0	0.40	176.10	402.00	-1.2	0.0	-1.2	0.13	0.13
Geologist:	TIM LYONS	245.0	0.20	181.00	245.00	-0.4	0.0	-0.4	0.08	0.08
Oxy Personnel:	2									
Contractor Personnel:	15									
Total on Site:	17									

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
1	16.000	CAPROCK BITS	616-SR9	39830	S232	9x12	40	1765	0-0-NO-A	0-1-NO-TD

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
1	4.50	4.50	475	475	105.6	105.6	5.0/15.0	50/100	0.994	445	241.9	1.0

MUD DATA - M-I LLC (Schlumberger)

Engineer: Nels Hansen	MBT:
Sample From: Other	pH:
Mud Type: Clear Water	Pm / Pom:
Time / MD: 19:00 / .0	Pf / Mf:
Density @ Temp: 8.30 /	Chlorides:
Rheology Temp:	Ca++ / K+:
Viscosity:	CaCl2:
PV / YP: /	Cl- in water phase:
Gels 10s/10m/30m: //	Lime:
API WL:	ES:
HTHP WL:	ECD:
Cake API / HTHP: /	n / K:
Solids / Sol Corr: /	Carbonate:
Oil / Water: /	Bicarbonate:
Oil / Water % for OWR: /	Form Loss / Cum Loss: 0.0 / 0.0
Sand:	Fluid Disch: /
Water Added:	Daily Mud Cost: \$613
Oil Added:	Cum Mud Cost: \$613
LGS: /	

LAST OR CURRENT BHA

BHA No: 1	Bit No: 1	MD In: 40 ft		
Purpose: DRILL SURFACE HOLE	MD Out: 1765 ft			
Component	OD	ID	Jts	Length
PDC BIT	16.000	2.000	1	1.50
NEAR BIT STABILIZER	8.000	2.875	1	7.45
SHOCK SUB	8.125	3.000	1	11.62
INTEGRAL BLADE STABILIZER	8.000	3.000	1	6.40
UBHO SUB	8.000	2.500	1	2.58
MWD TOOL	8.000	2.876	1	28.60
INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.48
DRILL COLLAR	8.000	2.875	6	183.79
CROSSOVER	8.000	3.000	1	3.60
DRILL COLLAR	6.500	3.000	6	183.13
HWDP	6.500	2.875	30	926.30

VG Meter: ?@300 / ?@600

Total Length: 1,362.45 ft Wt below Jars:

Comments: Check well water supply

MUD PRODUCTS

Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	2.00
Bulk Tank Rental	1.00	each	4.00
Pallet	1.00	each	5.00
Shrink Wrap	1.00	each	22.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/26/2014
Report No: 1

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	01MIRU	LOCMOV	RU	P	SPOOL UP DRAWWORKS, UN DOG TOP DRIVE, FUNCTION TEST TOP DRIVE RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %	
4:00	6:00	2.00	01MIRU	LOCMOV	RU	P	PICKED UP ALL TOOLS OFF RIG FLOOR BROUGHT TOP DRIVE DOWN AND BEGAN CHANGING OUT THE SAVER SUB. FILLED PITS WITH WATER RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %	
6:00	10:00	4.00	01MIRU	LOCMOV	RU	P	FINSH POWERING UP RIG, SWAP POWER FOR TRAILERS FROM PORTABLE GENS TO RIG POWER. INSTALL PVC PIPE ON DUMP LINES, INSTALL CAUSTIC BARREL. OFF LOAD SURFACE CASING. 100% RIGGED UP, JUST MISC. EQUIPMENT AND GROUND RODS.	
10:00	12:00	2.00	01MIRU	LOCMOV	RU	P	FINSH RIGGING UP MISC. EQUIPMENT AROUND LOCATION, WALKED AROUND WITH TOOLPUSHER AND TIGHTY UP AROUND LOCATION.	
12:00	16:00	4.00	14SUDR	SAFE	PJSM	P	PERFORMED PRE SPUD CHECKLIST WITH TOOLPUSHER, DRILLER AND DSM, STRAPPING AND CALIBRATING ALL BHA. RIG H&P 629 ACCEPTED AT 12:00 ON 10/26/2014 RIG MOVE 48 MILES IN 70 HOURS.	
16:00	19:30	3.50	14SUDR	TRIP	BHA	P	PICK UP AND MAKE 16" BHA AS FOLLOWS: 1- 16" CAPROCK BIT-616-SR9 WITH 9-12'S 1-15 3/4" NEAR BIT STAB. 1- 8" SHOCK SUB 1- 15 3/4" STAB 1- ISYS TOOL 1- 15 3/4" STAB 6-8" DRILL COLLARS 1-X/O 6- 6 1/2" DRILL COLLARS 30- HWDP TEST LINES TO 2,000 PSI	
19:30	0:00	4.50	14SUDR	DRILL	ROTVER	P	DRILLED 16" SURFACE HOLE F/ SURFACE T/ 475', AS FOLLOWS: PROGRESS: 475 FT ROP AVG: 105 FT/HR WOB: 5-15 KLBS RPM: 40-100 FLOW RATE: 500-750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1250 PSI / 1310 PSI TORQUE ON / OFF BTM: 5 - 6 KLB.FT / 1-2 KLB.FT P/U WT: 93 KIPS S/O WT: 89 KIPS ROT WT: 91 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG DRILLED WITH 500 GPM AND 50 RPM UNTIL TOP STABILIZER 20' BELOW CONDUCTOR DROPPING RAPID SWEEPS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 500' OR AS HOLE DICTATES SAFETY BREAK: HANDLING BHA	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/26/2014
Report No: 1

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	14SUDR	DRILL	ROTVR	P	DRILLED 16" SURFACE HOLE' F/ 475' T/ 1,120', AS FOLLOWS: PROGRESS: 645 FT ROP AVG: 162 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES SAFETY BREAK: FORKLIFT OPS	
4:00	5:30	1.50	14SUDR	DRILL	ROTVR	P	DRILLED 16" SURFACE HOLE' F/ 1,120' T/ 1,378', AS FOLLOWS: PROGRESS: 258 FT ROP AVG: 172 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG SWAP TO STEEL PITS AT 1,378' DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES	
5:30	6:00	0.50	14SUDR	RIGMT	SRVRIG	P	SERVICE RIG, HOOK UP AIRLINE TO FLOWLINE AND FIX LEAK ON 2" ON #1 MUD PUMP	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	48.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	48.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks:

Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
 SAFE ACTS: 5
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 14
 SAFETY MEETINGS: 4
 LO/TO'S: 1
 PERMIT'S TO WORK: 1
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION: 1
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: NOTICED 3RD PARTY EMPLOYEE SITTING UNDER V-DOOR, STOPPED JOB EXPLAINED POLICY AND DANGERS HE COMPLIED MOVED OUT OF WAY AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL:TD SURFACE BY 1200 HRS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/25/2014
Report No: 3M

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	6:00	6.00	01MIRU	LOCMOV	RU	P	PLUG IN VFD CABLE TRAY, PLUG IN MCC SERVICE ARM TO PITS, INSTALL GROUND RODS TO BACKYARD, PLUG HOOK UP DWKS, MAKE UP MUD PUMP VIBRATOR HOSES AND VIBRATOR ON TOP OF MCC HOUSE. RIGGED DOWN- 100% RIG MOVED- 95% RIGGED UP- 40 %
6:00	9:00	3.00	01MIRU	LOCMOV	RU	P	RIG UP SOLIDS CONTROLS, INSTALL MUD LINES ON THE PUMPS AND PITS. RAISE SHAKER SKIDS AND PIN SAME PJSM WITH H&P MOVERS AND OXY EMPLOYEE'S OVER SPOTTING AND RIGGING UP RIGGED DOWN- 100% RIG MOVED- 95% RIGGED UP- 40 %
9:00	12:00	3.00	01MIRU	LOCMOV	RU	P	INSTALL CENTER STEEL AND PREP TO RAISE SUBS RAISE SUBS AND DRILLER'S CABIN INSTALL STAIRS TO TRIP TANK SKID AND FLOWLINE RIGGED DOWN- 100 % RIG MOVED- 100% RIGGED UP- 60 % SIMOPS: RETROFIT ON DERRICK CAMERAS BY H&P ELECTRICIANS
12:00	16:00	4.00	01MIRU	LOCMOV	RU	P	RAISE AND PIN MONKEY BOARD, PIN BOOMLINE ARMS, REPLACE CLIMB ASSIST ON DERRICK, AND PREP TO RAISE. RAISE DERRICK AT 1600 RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 70 %
16:00	20:00	4.00	01MIRU	LOCMOV	RU	P	UNPIN AND RETRACT SUB AND DERRICK CYLINDER'S. ROLL UP ALL HYDRAULIC LINES. SCOPE OUT J-ARM ON OFF DRILLER'S SIDE OF RIG FLOOR. RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 75 %
20:00	0:00	4.00	01MIRU	LOCMOV	RU	P	REPLACED DAMAGED HYDRAULIC HOSE THAT SUPPLIES HYDRAULICS TO ODS OF RIG FLOOR. POWER UP HPU SPOOL UP AIR AND BOOM HOIST. RUN AIR TO RIG FLOOR, SCOPE OUT AND HOOK UP ELECTRICAL LINES FROM DRILLERS CABIN SERVICE ARM. RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 80 % SIMOPS: H&P ELECTRICIANS UNLOCKING EQUIPMENT AND RUNNING IT OUT WELDERS MODIFYING SHAKER TROUGH AND INSTALLING A REDUCER ON SAND TRAP FOR DUMPING

Total Time 24.00

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	01MIRU	LOCMOV	RU	P	SPOOL UP DRAWWORKS, UN DOG TOP DRIVE, FUNCTION TEST TOP DRIVE RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %
4:00	6:00	2.00	01MIRU	LOCMOV	RU	P	PICKED UP ALL TOOLS OFF RIG FLOOR BROUGHT TOP DRIVE DOWN AND BEGAN CHANGING OUT THE SAVER SUB. FILLED PITS WITH WATER RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %

Total Time 6.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/25/2014
Report No: 3M

Safety Incident? N **Days since Last RI:** 47.00
Environ Incident? N **Days since Last LTA:** 47.00

Weather Comments:**Incident Comments:**

No incidents reported last 24 hours.

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 11
 SAFE ACTS: 4
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 4
 LO/TO'S: 3
 PERMIT'S TO WORK: 2
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE WORKING UNDER A SUSPENDED LOAD, STOPPED JOB AND EXPLAINED DANGER AND POLICY, EMPLOYEE AGREED RELOCATED AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL:SPUD BY 1500

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/24/2014
Report No: 2M

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	6:00	6.00	01MIRU	LOCMOV	RD	P	RIG DOWN ELECTRICAL TO FLOOR, GRASSHOPPER, AND J-ARM ON RIG FLOOR. PREP DERRICK TO BE LOWERED, BLED CYLINDERS. SWAP POWER OVER TO PORTABLE GENERATOR, RIG DOWN GENERATOR PACKAGE. PICK UP AND CLEAN UP MISC. TRASH AROUND LOCATION. RIGGED DOWN- 85% RIG MOVED-50% RIGGED UP- 0%	
6:00	10:00	4.00	01MIRU	LOCMOV	MOVE	P	LOAD OUT BACK YARD AND GENERATORS AND MOVE FROM DRRU #2123MH TO ST. ANDREWS 320LH. PREP DERRICK TO BE LOWERED, RIG MOVE DISTANCE 48 MILES. RIGGED DOWN- 90% RIG MOVED- 60% RIGGED UP- 10%	
10:00	14:00	4.00	01MIRU	LOCMOV	MOVE	P	LOAD OUT AND MOVE, CREW HOUSE, TOOLPUSHER HOUSE AND CHANGE HOUSE AND MOVE TO ST. ANDREWS 320 LH. PJSM WITH EVERYBODY ON LOCATION ON LOWERING DRRICK, LOWERED DERRICK @ NOON. RIG IS BEING PRESSURE WASHED AS LOADED OUT. RIGGED DOWN- 90% RIG MOVED- 70% RIGGED UP-20%	
14:00	18:00	4.00	01MIRU	LOCMOV	MOVE	P	SPOT BACK YARD, GENERATORS, VFD HOUSE, MCC HOUSE AND SHAKERS, RIG UP WHAT HANDRAILS AND LINES WE CAN RIG UP ON ST. ANDREWS #320LH. REMOVED DERRICK OFF OF SUB, LOWER SUB AND PULL CENTER STEEL ON DRRU #2123MH, WASH SUB AND DERRICK WITH PRESSURE WASHING CREW. MOVE SAME TO ST. ANDREWS #320LH AND SPOT MUDBOAT, DWKS, AND SUBS. RIGGED DOWN- 100 % RIG MOVED- 95% RIGGED UP- 30 %	
18:00	22:00	4.00	01MIRU	LOCMOV	RU	P	INSTALL NEW RIG SIGNS ON STANDS, SET UP LIGHT TOWERS, PSI WASH SUBS. RIG UP GENS, SCR HOUSE, ELECTRICAL LINES TO PUMPS AND MUD TANKS. RIGGED DOWN- 100 % RIG MOVED- 95% RIGGED UP- 35 %	
22:00	0:00	2.00	01MIRU	LOCMOV	RU	P	PSI WASH DERRICK, CONT TO RIG UP ELECTRICAL LINES AND MISC EQUIPMENT RIGGED DOWN- 100 % RIG MOVED- 95% RIGGED UP- 35 %	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	6:00	6.00	01MIRU	LOCMOV	RU	P	PLUG IN VFD CABLE TRAY, PLUG IN MCC SERVICE ARM TO PITS, INSTALL GROUND RODS TO BACKYARD, PLUG HOOK UP DWKS, MAKE UP MUD PUMP VIBRATOR HOSES AND VIBRATOR ON TOP OF MCC HOUSE. RIGGED DOWN- 100% RIG MOVED- 95% RIGGED UP- 40 %	
Total Time		6.00						

Safety Incident? N **Days since Last RI:** 46.00 **Weather Comments:**

Environ Incident? N **Days since Last LTA:** 46.00

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/24/2014
Report No: 2M

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
SAFE ACTS: 6
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 5
LO/TO'S: 5
PERMIT'S TO WORK: 2
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEES WORKED TOGETHER ON RIG MOVE, EXPLAINED TO THEM THE GOOD WORK WAS APPRECIATED, EMPLOYEES AGREED AND JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL:DERRICK IN THE AIR BY 1200

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/23/2014
 Report No: 1M

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
14:00	19:00	5.00	01MIRU	LOCMOV	RD	P	RIG DOWN 3RD PARTY OBM EQUIPMENT, RIG DOWN BACKYARD AND MOVE PUMPS, TANKS, PDS, DRILLPIPE, PREMIX TANK, AND GEL BINS TO NEW LOCATION. PSI WASH ALL LOADS LEAVING LOCATION. RIGGED DOWN- 75% RIG MOVED-50% RIGGED UP- 0%	
19:00	0:00	5.00	01MIRU	LOCMOV	RD	P	RIG DOWN GENERATOR'S, PIN TOP DRIVE, & UNSPOOL DRILL LINE, CLEAN ON ALL LOADS LOADED AND SUB. RIGGED DOWN- 80% RIG MOVED-50% RIGGED UP- 0%	
Total Time		10.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	6:00	6.00	01MIRU	LOCMOV	RD	P	RIG DOWN ELECTRICAL TO FLOOR, GRASSHOPPER, AND J-ARM ON RIG FLOOR. PREP DERRICK TO BE LOWERED, BLEED CYLINDERS. SWAP POWER OVER TO PORTABLE GENERATOR, RIG DOWN GENERATOR PACKAGE. PICK UP AND CLEAN UP MISC. TRASH AROUND LOCATION. RIGGED DOWN- 85% RIG MOVED-50% RIGGED UP- 0%	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	45.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	45.00	
Incident Comments:				

Other Remarks:	<p>Driving Directions for St. Andrews Unit 320LH From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.</p> <p>LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" E ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'</p> <p>OXY DSM TRAILER: 432-253-7382</p> <p>UNSAFE ACTS: 10 SAFE ACTS: 6 UNSAFE EQUIPMENT: SWA'S:0 NEAR MISSES: 0</p> <p>JSA'S: 11 SAFETY MEETINGS: 5 LO/TO'S: 0 PERMIT'S TO WORK: 1 POWER LINE CHECKLIST: 10/21/2014 PRE SPUD/RIG INSPECTION: HAZARD ID'S: 0 EP2 OBSERVATIONS: 0</p> <p>NOTIFIED TRRC:</p> <p>BEST STOP CARD: EMPLOYEE WAS PLACING CLEANING PDS WITHOUT FACE SHIELD STOPPED JOB EXPLAINED DANGERS AND POLICY, HE COMPLIED AND JOB CONT INCIDENT FREE. 24 HOUR GOAL:RELEASE RIG BY NOON</p>
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DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/04/2014
Report No: 10

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	2:30	2.50	21INDR	TRIP		P	CONTINUE TO TOOH FROM 6,465' TO 1,644' NO DRAG HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.
2:30	3:00	0.50	21INDR	TRIP	DRILL	P	REMOVE ROTATING HEAD, INSTALL TRIP NIPPLE & FLOW CHECK AT THE SHOE (GOOD)
3:00	4:00	1.00	21INDR	TRIP	DRILL	P	CONTINUE TO TOOH FROM 1,644' TO HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.
4:00	4:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON LAYING DOWN 6.5" AND 8" DRILL COLLARS
4:30	6:00	1.50	21INDR	TRIP	DRILL	P	LAY DOWN 6- 6.5" DC'S, 1 JAR, 6-8" DC'S
Total Time		6.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
Total Time		0.00					

Safety Incident?	N	Days since Last RI:	57.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	57.00	
Incident Comments:				
No incidents reported last 24 hours.				

Other Remarks:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/03/2014
Report No: 9

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 8.50
Today's MD: 8700 ft Progress: 1300 ft Ground Elev: 3,079.10 ft
Prev MD: 7400 ft Rot Hrs Today: 18.50 hr AFE MD/Days: 17,037.0 / 33.6 days
PBMD: Avg ROP Today: 70.3 ft/hr AFE Number: 1189081#0102

Current Formation: SPRABERRY@8,535.0 Lithology: 90% SH, 10% LS

Current Ops:

24-Hr Summary: DRILL 12.25" HOLE FROM 7,400' TO 8,700' (TD INT SECTION), PUMP 2 HI VIS SWEEPS CBUX2, FLOW CHECK, TOO H F/ 8,700' TO 6,465'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONT TO TOO H, PULL WEAR BUSH, RU CSG CREW, DRY RUN MANDREL AND RUN 9 5/8" CASING

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	230.0/ 215.0 kip	Pump Rate:	582.9	Conn:			84
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	222.0 kip	Pump Press:	2241	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3,100.0 ft-lbf			Backgr:			112
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	12,200.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	MANUEL CASTANUELA	8,700.0	2.00	304.30	8,696.75	110.1	121.4	110.1	0.11	-0.10
Supervisor 2:	JEFF ROZELLE	8,504.0	2.20	305.70	8,500.88	106.0	127.3	106.0	1.03	1.01
Engineer:	KEVIN THREADGILL	8,315.0	0.30	276.80	8,311.93	103.8	130.7	103.8	0.37	-0.05
Geologist:	SUMIYAH AHMED	8,126.0	0.40	112.70	8,122.93	104.0	130.6	104.0	0.64	-0.26
Oxy Personnel:	2	7,937.0	0.90	340.90	7,933.94	102.9	130.5	102.9	0.46	0.44
Contractor Personnel:	12	7,748.0	0.06	33.10	7,744.95	101.4	130.9	101.4	0.55	-0.55
Total on Site:	14									

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
4	12.250	HALLIBURTON	MM65D	12520014	M323	9x12	7355	8700	1-1-NO-A	X-I-NO-TD
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB	RPM	TFA	P Drop Bit	Noz Vel	HHPSI
							min/max	min/max				
4	18.50	19.50	1300	1345	70.3	69.0	15.0/30.0	65/75	0.994	288	188.1	0.8

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	BUCK HOSKIN	MBT:	0.0 lbm/bbl	BHA No:	4	Bit No:	4	MD In:	7355 ft
Sample From:	In (Suction Pit)	pH:	10.0	Purpose:	DRILL INTERMEDIATE HOLE			MD Out:	8700 ft
Mud Type:	Spud Mud	Pm / Pom:		Component					
Time / MD:	0:01 / 8,700.0	Pf / Mf:	0.1 / 0.2		OD	ID	Jts	Length	
Density @ Temp:	9.10 / 85	Chlorides:	500	PDC BIT	12.250	2.000	1	1.50	
Rheology Temp:	120	Ca+ / K+:	0 / 0	VERTICAL DRILLING TOOL	8.000	2.000	1	34.94	
Viscosity:	48.00	CaCl2:		CROSSOVER	8.000	2.875	1	3.65	
PV / YP:	4 / 19	Clom:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63	
Gels 10s/10m/30m:	9 / 10 / 12	Lime:	0.00	TELEDRIFT	8.000	2.500	1	28.60	
API WL:	17.00	ES:		INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91	
HTHP WL:	0.00	ECD:	9.28	DRILL COLLAR	8.000	2.875	6	183.79	
Cake API / HTHP:	2.0 / .0	n / K:	0.00 / 0.000	CROSSOVER	8.000	3.000	1	3.60	
Solids / Sol Corr:	5.00 / 2.30	Carbonate:		DRILL COLLAR	6.500	3.000	1	30.28	
Oil / Water:	0.0 / 93.0	Bicarbonate:	0 ppm	DRILLING JAR	6.500	3.000	1	32.30	
Sand:	0.01	Form Loss:	0.0 / 0.0	DRILL COLLAR	6.500	3.000	5	152.85	
Water Added:		Fluid Disch:	/	HWDP	6.500	2.875	27	833.71	
Oil Added:									
LGS:	2.30 / 21.20								

VG Meter: 13@3 / 15@6 / 20@100 / 21@200 / 23@300 / 27@600

Comments: DRILLED AHEAD TO TD OF 8700' TVD. DISPLACED ACTIVE SYSTEM WITH 1500 BBLs PREHYDRATED GEL MUD FROM FRAC TANKS. REDUCED MW TO 9.1 PPG 48 SEC/QT VIS.TREATED ACTIVE WITH CAUSTIC SODA AND SODA ASH. AT 300' FROM TD

Total Length: 1,320.76 ft Wt below Jars: 40.0 kip

MUD PRODUCTS

Product	Units	Qty Used
Blower Rental	each	1.00
Bulk Tank Rental	each	2.00
Caustic Soda	lb	15.00
M-I Wate	lb	40.00
My-Lo-Jel	lb	110.00
Pecan Nut Plug Fine	lb	6.00
Soda Ash	kg	22.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/03/2014
 Report No: 9

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,400' TO 7,715', TOTAL 315', AVG. ROP 79' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,970 PSI., ON BOTTOM-3,500, DIFF 530, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9-10K.</p> <p>MUD WEIGHT IN-9.5 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.4 PPG. W/ 40 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>7,600' DOL 60%, LS 30%, SH 10%</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,715' TO 7,860', TOTAL 145', AVG. ROP 73' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,900 PSI., ON BOTTOM-3,600, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>SURVEY @ 7,748', INC 0.6°, AZI 33.1</p>
6:00	10:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,860' TO 8,130', TOTAL 270', AVG. ROP 67.5' HR, W.O.B. 28K, GPM'S-700, SRPM-75, MRPMS-119, TOTAL RPMS=194, PUMP PRESSURE OFF BOTTOM- 2,785 PSI., ON BOTTOM-3,485, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>SURVEY @ 8,126', INC 0.4°, AZI 112.7</p> <p>SAFETY BRAKE: TRANSFERING MUD</p>
10:00	14:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 8,130' TO 8,475', TOTAL 345', AVG. ROP 86' HR, W.O.B. 28K, GPM'S-700, SRPM-75, MRPMS-119, TOTAL RPMS=194, PUMP PRESSURE OFF BOTTOM- 2,785 PSI., ON BOTTOM-3,485, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>SURVEY @ 8,315', INC 0.3°, AZI 276.8</p> <p>SAFETY BRAKE: FORKLIFT OPERATIONS</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/03/2014
Report No: 9

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
14:00	18:30	4.50	21INDR	DRILL	MTRVER	P	*DRILL 12 1/4" INTERMEDIATE HOLE FROM 8,475' TO 8,700', TOTAL 225', AVG. ROP 50' HR, W.O.B. 28K, GPM'S-600, SRPM-75, MRPMS-102, TOTAL RPMS=177, PUMP PRESSURE OFF BOTTOM- 2,385 PSI., ON BOTTOM-2,701, DIFF 316, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.1 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.0 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 8,700', INC 2.0°, AZI 304.3 **NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109 SAFETY BRAKE: LAYING DOWN DRILL COLLARS	
18:30	22:30	4.00	21INDR	CIRC	CNDHOL	P	PUMP AND CIRCULATE OUT 2- 50 BBL HI VIS SWEEPS PLUS CALCULATED STROKES FOR 500 BBL'S OF WASH OUT. ROTATE AND RECIPROCATATE PIPE WHILE CIRCULATING 600 GPM, 2300 PSI, 60 RPM, 2500 TORQUE INITIAL BG GAS 100u FINAL BG GAS 11u.	
22:30	23:00	0.50	21INDR	WLCNTL	CHKFLOW	P	FLOW CHECK (GOOD) AND PUMP SLUG	
23:00	0:00	1.00	21INDR	TRIP	DRILL	P	TOOH F/ 8,700' TO 6,465' PROPER FILL AND NO OVERPULL *DID NOT SEE ANYTHING AT 6,580' WHERE WE GOT STUCK ON PREVIOUS TRIP SAFETY BREAK: SLIPS TRIPS & FALLS	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:30	2.50	21INDR	TRIP		P	CONTINUE TO TOO H FROM 6,465' TO 1,644' NO DRAG HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.	
2:30	3:00	0.50	21INDR	TRIP	DRILL	P	REMOVE ROTATING HEAD, INSTALL TRIP NIPPLE & FLOW CHECK AT THE SHOE (GOOD)	
3:00	4:00	1.00	21INDR	TRIP	DRILL	P	CONTINUE TO TOO H FROM 1,644' TO HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.	
4:00	4:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON LAYING DOWN 6.5" AND 8" DRILL COLLARS	
4:30	6:00	1.50	21INDR	TRIP	DRILL	P	LAY DOWN 6- 6.5" DC'S, 1 JAR, 6-8" DC'S	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	56.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	56.00	
Incident Comments: No incidents reported last 24 hours.				

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/03/2014
Report No: 9

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 8
SAFE ACTS: 8
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 13
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 0
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE NOT WEARING PERSONAL H2S MONITOR, STOPPED JOB EXPLAINED
DANGERS AND POLICY, HE COMPLIED GOT MONITOR AND JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL: ON BOTTOM WITH CASING BY MIDNIGHT

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/02/2014
Report No: 8

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 7.50
Today's MD: 7400 ft Progress: 145 ft Ground Elev: 3,079.10 ft
Prev MD: 7255 ft Rot Hrs Today: 7.00 hr AFE MD/Days: 17,037.0 / 33.6 days
PBMD: Avg ROP Today: 20.7 ft/hr AFE Number: 1189081#0102

Current Formation: CLEARFORK@7,100.0 Lithology: 70% SS, 20% SH, 10% LS

Current Ops:

24-Hr Summary: DRILL 12.25" HOLE FROM 7,255' TO 7,355', MAKE BIT TRIP DUE TO PENETRATION RATE, DRILL FROM 7,355' TO 7,400'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE TO DRILL 12.25" HOLE

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	220.0/ 200.0 kip	Pump Rate:	707.8	Conn:		18
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	210.0 kip	Pump Press:	3530	Trip:		100
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2,900.0 ft-lbf			Backgr:		24
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	9,500.0 ft-lbf					

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	MANUEL CASTANUELA	7,337.0	1.60	45.10	7,334.02	96.6	125.6	96.6	0.78	-0.16
Supervisor 2:	JEFF ROZELLE	7,148.0	1.90	356.40	7,145.10	91.7	123.9	91.7	0.98	-0.26
Engineer:	KEVIN THREADGILL	6,959.0	2.40	45.80	6,956.22	85.8	121.3	85.8	0.00	0.00
Geologist:	SUMIYAH AHMED	6,881.0	2.40	45.80	6,878.29	83.5	118.9	83.5	0.15	-0.05
Oxy Personnel:	2	6,691.0	2.50	52.10	6,688.46	78.2	112.8	78.2	0.06	-0.05
Contractor Personnel:	13	6,502.0	2.60	51.40	6,499.65	73.0	106.2	73.0	0.06	0.05
Total on Site:	15									

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
4	12.250	HALLIBURTON	MM65D	12520014	M323	9x12	7355	8700	1-1-NO-A	X-I-NO-TD
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB	RPM	TFA	P Drop Bit	Noz Vel	HHPSI
							min/max	min/max				
4	1.00	1.00	45	45	45.0	45.0	5.0/15.0	60/70	0.994	434	228.5	1.5
3	6.00	30.00	100	1640	16.7	54.7	30.0/39.0	70/85	1.037	399	219.0	1.4

MUD DATA - M-I LLC (Schlumberger)

Engineer: Buck Hoskin
Sample From: Out (Shaker Underflow)
Mud Type: Spud Mud
Time / MD: 0:01 / 7,255.0
Density @ Temp: 9.30 / 85
Rheology Temp: 120
Viscosity: 49.00
PV / YP: 5 / 20
Gels 10s/10m/30m: 18 / 12 / 13
API WL: 60.00
HTHP WL: 0.00
Cake API / HTHP: 1.0 / .0
Solids / Sol Corr: 5.00 / 5.00
Oil / Water: 0.0 / 95.0
Sand: 0.01
Water Added:
Oil Added:
LGS: 3.90 / 35.40

MBT: 0.0 lbm/bbl
pH: 10.0
Pm / Pom:
Pf / Mf: 0.1 / 0.2
Chlorides: 50,000
Ca+ / K+: 0 / 0
CaCl2:
Clom:
Lime: 0.00
ES:
ECD: 9.53
n / K: 0.00 / 0.000
Carbonate:
Bicarbonate: 0 ppm
Form Loss: 0.0 / 0.0
Fluid Disch: /

LAST OR CURRENT BHA

BHA No: 4 Bit No: 4 MD In: 7355 ft
Purpose: DRILL INTERMEDIATE HOLE MD Out: 8700 ft

Component	OD	ID	Jts	Length
PDC BIT	12.250	2.000	1	1.50
VERTICAL DRILLING TOOL	8.000	2.000	1	34.94
CROSSOVER	8.000	2.875	1	3.65
INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63
TELEDRIFT	8.000	2.500	1	28.60
INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91
DRILL COLLAR	8.000	2.875	6	183.79
CROSSOVER	8.000	3.000	1	3.60
DRILL COLLAR	6.500	3.000	1	30.28
DRILLING JAR	6.500	3.000	1	32.30
DRILL COLLAR	6.500	3.000	5	152.85
HWDP	6.500	2.875	27	833.71

VG Meter: 20@3 / 21@6 / 22@100 / 24@200 / 25@300 / 30@600

Comments: Last 24 hrs: Drilled ahead to 7355' TVD circulating 9.2-9.4 ppg 45 sec/qt vis gel mud. Fighting MW all night. Dump 75 bbls from Active/Add 75 bbls from Premix. Adding fresh water at 1-2 bbls per hour. Lowest MW was 9.1 coming out and 9.3 going in. POOH @ 6:00 to change

Total Length: 1,320.76 ft Wt below Jars: 40.0 kip

MUD PRODUCTS

Product	Units	Qty Used
Blower Rental	each	1.00
Bulk Tank Rental	each	2.00
Caustic Soda	lb	7.00
Defoam-A	gal	7.00
Lime	lb	1.00
M-I Gel	ton (short)	18.54
M-I Wate	lb	128.00
Pecan Nut Plug Fine	lb	12.00
Soda Ash	kg	21.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/02/2014
Report No: 8

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,255' TO 7,300', TOTAL 45', AVG. ROP 15' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 5-6K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.1PPG. W/ 49 VIS- PH. 9.5</p> <p>*PUMPED 40 BBL NUT PLUG SWEEP TO CLEAN BIT</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>60% DOLONITE, 40% LIMESTONE @ 7,280'</p> <p>***1HR FOR DAYLIGHT SAVINGS***</p>	
2:00	5:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,300' TO 7,355', TOTAL 45', AVG. ROP 18' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 4-8K.</p> <p>MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p>	
5:00	7:00	2.00	21INDR	CIRC	CNDHOL	PT	CIRCULATE BOTTOMS UP, BUILD SLUG, FILL TRIP TANKS IN PREPARATION FOR BIT TRIP, FLOW CHECK, WELL STATIC, PUMP SLUG.	
7:00	7:30	0.50	21INDR	TRIP	DRILL	PT	T.O.H. F/ 7,355' TO 6,580'. HOLE TAKING PROPER FILL	
7:30	8:00	0.50	21INDR	REAM	RMTGT	PT	AT 6,580' PULLED INTO TIGHT SPOT, 50K OVER. WORKED BOTH WAYS UP & DOWN SITTING 75 TO 100K DOWN & PULLING 80 OVER. WOULD NOT COME FREE. SET SLIPS & SCREWED TOP DRIVE INTO STRING. PIPE WOULD ROTATE FREE 55 RPM, INDICATING THAT WE WAS STUCK AT BIT. ATTEMPT TO BREAK CIRCULATION & WAS PACKED OFF. WORK PIPE WHILE ROTATING & WORKING PUMPS ON & OFF, 30 SPM W/ 650-850 PSI. PIPE CAME FREE WITH FULL RETURNS.	
8:00	9:00	1.00	21INDR	CIRC	CNDHOL	PT	CIRCULATE HOLE CLEAN, BOTTOMS UP. REAM THROUGH TIGHT SPOT W/ 700 GPM & 70 RPM. F/ 6,580' TO 6,550'.	
9:00	12:00	3.00	21INDR	TRIP	DRILL	PT	PUMP SLUG & CONT. TO T.O.H. F/ 6,516' TO 1,419'	
12:00	12:30	0.50	21INDR	TRIP	DRILL	PT	REMOVE ROTATING HEAD BEARING ASSEMBLY & INSTALL TRIP NIPPLE	
12:30	14:00	1.50	21INDR	TRIP	DRILL	PT	CONT. T.O.H. FOR BIT F/ 1,419' TO BIT.	
14:00	15:00	1.00	21INDR	TRIP	BHA	PT	DRAIN MUD MOTOR, BREAK BIT, MAKE UP BIT #4. CLEAN OFF RIG FLOOR	
15:00	15:30	0.50	21INDR	RIGMT	SRVRIG	PT	SERVICE RIG	
15:30	16:00	0.50	21INDR	TRIP	DRILL	PT	T.I.H. F/ BIT TO 301'	
16:00	17:00	1.00	21INDR	TRIP	BHA	PT	BUILD 100 BBL HIGH VIS SWEEP. UNLOAD DRILLING JARS, STRAP & PICK UP.	
17:00	22:00	5.00	21INDR	TRIP	DRILL	PT	CONT. T.I.H. F/ 301' TO 7,315' PROPER DISPLACEMENT, NO EXCESSIVE DRAG DID NOT SEE ANYTHING AT 6,580' (TIGHT SPOT ON TRIP OUT)	
22:00	23:00	1.00	21INDR	REAM	PRRM	PT	<p>WASH AND REAM FROM 7,315' TO 7,355' FANNED BOTTOM 4 TIMES, PUMPED 50 BBL HI VIS SWEEP AND LET IT CLEAR BIT PRIOR TO DRILLING</p> <p>700 GPM, 65 RPM, 3165 PSI</p>	
23:00	0:00	1.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,355' TO 7,400', TOTAL 45', AVG. ROP 45' HR, W.O.B. 5-15K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,970 PSI., ON BOTTOM-3,500, DIFF 530, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9-10K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.1PPG. W/ 49 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p>	
Total Time		25.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/02/2014
Report No: 8

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,400' TO 7,715', TOTAL 315', AVG. ROP 79' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,970 PSI., ON BOTTOM-3,500, DIFF 530, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9-10K. MUD WEIGHT IN-9.5 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.4 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT 7,600' DOL 60%, LS 30%, SH 10%	
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,715' TO 7,860', TOTAL 145', AVG. ROP 73' HR, W.O.B. 15-29K, GPM'S-700, SRPM-65, MRPMS-119, TOTAL RPMS=184, PUMP PRESSURE OFF BOTTOM- 2,900 PSI., ON BOTTOM-3,600, DIFF 700, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 12-13K. MUD WEIGHT IN-9.4 PPG. W/ 40 VIS- PH- 10 MUD WEIGHT OUT-9.3 PPG. W/ 40 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT SURVEY @ 7,748', INC 0.6°, AZI 33.1	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	55.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	55.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks: Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
 SAFE ACTS: 6
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 2
 LO/TO'S: 0
 PERMIT'S TO WORK: 0
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE USING WRONG TOOL FOR THE JOB, STOPPED JOB EXPLAINED DANGERS OF USING THE WRONG TOOL, HE COMPLIED AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL: DRILLED TO 8500' BY 12:00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/01/2014
Report No: 7

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,740' TO 6,012', TOTAL 272', AVG. ROP 68' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-2,600, DIFF 250, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MAKING CONNECTIONS</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,012' TO 6,202', TOTAL 190', AVG. ROP 95' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,328 PSI., ON BOTTOM-2,890, DIFF 562, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MAKING CONNECTIONS</p>
6:00	10:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,202' TO 6,580', TOTAL 378', AVG. ROP 94.5' HR, W.O.B. 25-30K, GPM'S-650, SRPM-100, MRPMS-110, TOTAL RPMS=210, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-3,060, DIFF 710, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K.</p> <p>MUD WEIGHT IN-9.1 PPG. W/ 42 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 42 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: HOUSE KEEPING</p>
10:00	12:30	2.50	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,580' TO 6,769', TOTAL 189', AVG. ROP 75.6' HR, W.O.B. 28K, GPM'S-700, SRPM-80, MRPMS-119, TOTAL RPMS=199, PUMP PRESSURE OFF BOTTOM- 2,420 PSI., ON BOTTOM-3,125, DIFF 675, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K.</p> <p>MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>45% SANDSTONE, 45% SHALE, 5% DOLOMITE @ 6,600'</p> <p>SAFETY BREAK: MIXING CHEMICALS</p>
12:30	13:00	0.50	21INDR	RIGMT	SRVRIG	P	SERVICE RIG
13:00	17:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,769' TO 7,053', TOTAL 284', AVG. ROP 71' HR, W.O.B. 15-30K, GPM'S-700, SRPM-80, MRPMS-119, TOTAL RPMS=199, PUMP PRESSURE OFF BOTTOM- 2,420 PSI., ON BOTTOM-3,125, DIFF 675, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K.</p> <p>MUD WEIGHT IN-8.9 PPG. W/ 44 VIS- PH- 9.5 MUD WEIGHT OUT-9.5PPG. W/ 45 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>80% SANDSTONE, 15% SHALE, 5% LIMESTONE @ 6,950'</p> <p>SURVEY @ 6,881' 2.4° / 45.8 AZI.</p> <p>SAFETY BREAK: MANLIFT OPERATIONS</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/01/2014
Report No: 7

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
17:00	18:00	1.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,053' TO 7,085', TOTAL 32', AVG. ROP 32' HR, W.O.B. 28K, GPM'S-650, SRPM-70, MRPMS-108, TOTAL RPMS=178, PUMP PRESSURE OFF BOTTOM- 2,075 PSI., ON BOTTOM-2,870, DIFF 795, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K. MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS 65% SANDSTONE,30 SHALE, 5% LIMESTONE @ 7,040' SAFETY BREAK: PSI WASHING	
18:00	22:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,085' TO 7,220, TOTAL 135', AVG. ROP 34' HR, W.O.B. 15-35K, GPM'S-585, SRPM-80, MRPMS-99, TOTAL RPMS=180, PUMP PRESSURE OFF BOTTOM- 2,165 PSI., ON BOTTOM-2,340, DIFF 175, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 9K. MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS 70% SANDSTONE, 20% SHALE, 10% LIMESTONE @ 7,100' SURVEY @7,148 1.9° / 356.4 AZI. SAFETY BREAK: GENERAL HOUSEKEEPING	
22:00	0:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,220' TO 7,255', TOTAL 35', AVG. ROP 18' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 5-6K. MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS 60% SANDSTONE, 10% SHALE, 30% LIMESTONE @ 7,320'	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/01/2014
Report No: 7

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,255' TO 7,300', TOTAL 45', AVG. ROP 15' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 5-6K.</p> <p>MUD WEIGHT IN-9.4 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.1PPG. W/ 49 VIS- PH. 9.5</p> <p>*PUMPED 40 BBL NUT PLUG SWEEP TO CLEAN BIT</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DUMPING AND DILUTING TO CONTROL MUD WEIGHT</p> <p>60% DOLONITE, 40% LIMESTONE @ 7,280'</p> <p>***1HR FOR DAYLIGHT SAVINGS***</p>	
2:00	5:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 7,300' TO 7,355', TOTAL 45', AVG. ROP 18' HR, W.O.B. 15-35K, GPM'S-600, SRPM-65, MRPMS-102, TOTAL RPMS=167, PUMP PRESSURE OFF BOTTOM- 2,296 PSI., ON BOTTOM-2,480, DIFF 180, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 4-8K.</p> <p>MUD WEIGHT IN-9.2 PPG. W/ 49 VIS- PH- 10 MUD WEIGHT OUT-9.5PPG. W/ 49 VIS- PH. 9.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p>	
5:00	7:00	2.00	21INDR	CIRC	CNDHOL	PT	CIRCULATE BOTTOMS UP, BUILD SLUG, FILL TRIP TANKS IN PREPARATION FOR BIT TRIP, FLOW CHECK, WELL STATIC, PUMP SLUG.	
Total Time		8.00						

Safety Incident?	N	Days since Last RI:	54.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	54.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks: Driving Directions for St. Andrews Unit 320LH
From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" E ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
SAFE ACTS: 6
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 0
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE WEARING PROPER PPE WHILE MIXING CAUSTIC, STOPPED JOB AND EXPLAINED POLICY, HE AGREED AND JOB CONTINUED INCIDENT FREE
24 HOUR GOAL: DRILLED TO 8100' BY 00:00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/31/2014
Report No: 6

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 5.50
Today's MD: 5740 ft Progress: 570 ft Ground Elev: 3,079.10 ft
Prev MD: 5170 ft Rot Hrs Today: 9.50 hr AFE MD/Days: 17,037.0 / 33.6 days
PBMD: Avg ROP Today: 60.0 ft/hr AFE Number: 1189081#0102

Current Formation: SA@5,264.0 Lithology: SAND AND LIMESTONE

Current Ops:

24-Hr Summary: DRILL FROM 5,170' TO 5,715', TRIP FOR BIT DUE TO LOW PENETRATION RATE, DRILL 12.25" HOLE FROM 5,715' TO 5,740'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE TO DRILL 12.25" INTERMEDIATE HOLE SECTION

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	220.0/ 200.0 kip	Pump Rate:	649.5	Conn:		0
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:	210.0 kip	Pump Press:	2600	Trip:		0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2,200.0 ft-lbf			Backgr:		0
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	8,750.0 ft-lbf					

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	5,557.0	2.60	52.10	5,555.52	48.0	74.1	48.0	0.40	0.36
Engineer:	KEVIN THREADGILL	5,446.0	2.20	57.00	5,444.62	45.3	70.3	45.3	0.15	-0.11
Geologist:	SUMIYAH AHMED	5,257.0	2.40	52.10	5,255.77	40.9	64.2	40.9	0.21	0.16
Oxy Personnel:	3	5,068.0	2.10	45.10	5,066.92	36.0	58.6	36.0	0.01	0.00
Contractor Personnel:	25	4,879.0	2.10	44.40	4,878.05	31.1	53.7	31.1	0.09	-0.05
Total on Site:	28	4,690.0	2.20	40.80	4,689.18	25.8	48.9	25.8	0.16	0.16

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
3	12.250	HALLIBURTON	MM65DM	12564597	M424	8x13	5715	7355	5-1-BT-N	X-I-CT-PR
2	12.250	VAREL	RS616DHUX	4007267	S323	9x12	1765	5715	2-8-RO-G	X-16-RO-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
3	0.50	0.50	25	25	50.0	50.0	5.0/15.0	80/100	1.037	354	209.6	1.1
2	9.00	37.50	545	3950	60.6	105.3	15.0/35.0	85/187	0.994	302	193.7	1.0

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	3	Bit No:	3	MD In:	5715 ft
Sample From:	Out (Shaker Underflow)	pH:	9.0	Purpose:		MD Out:	7355 ft		
Mud Type:	Spud Mud	Pm / Pom:							
Time / MD:	0:01 / 5,715.0	Pf / Mf:	0.1 / 0.2						
Density @ Temp:	9.00 / 85	Chlorides:	37,000						
Rheology Temp:	120	Ca+ / K+:	0 / 0						
Viscosity:	45.00	CaCl2:							
PV / YP:	4 / 22	Clom:							
Gels 10s/10m/30m:	12 / 12 / 14	Lime:	0.00						
API WL:	35.00	ES:							
HTHP WL:	0.00	ECD:	0.00						
Cake API / HTHP:	3.0 / .0	n / K:	0.00 / 0.000						
Solids / Sol Corr:	5.00 / 5.00	Carbonate:							
Oil / Water:	0.0 / 95.0	Bicarbonate:	0 ppm						
Sand:	0.01	Form Loss:	0.0 / 0.0						
Water Added:		Fluid Disch:	/						
Oil Added:									
LGS:	22.40 / 2.50								

VG Meter: 14@3 / 19@6 / 24@100 / 25@200 / 26@300 / 30@600
Comments: Last 24 hours: Treated active system with Caustic Soda, Whit Starch, and Soda Ash. Cir active with 9.0 ppg 45 sec/qt vis prehydrated gel mud. Conntinued to make prehydrated gel mud in the premix pit and transferring to the WBM frac tanks. Next 24 hrs: TIH and

Total Length: 1,288.46 ft Wt below Jars:

MUD PRODUCTS		
Product	Units	Qty Used
Blower Rental	each	1.00
Bulk Tank Rental	each	2.00
Caustic Soda	lb	13.00
D-D	gal	2.00
Fed Flocc	gal	2.00
M-I Gel	ton (short)	29.61
M-I Wate	lb	32.00
My-Lo-Jel	lb	20.00
Soda Ash	kg	15.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/31/2014
Report No: 6

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,170' TO 5,425', TOTAL 255', AVG. ROP 64' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 44 VIS- PH- 10 MUD WEIGHT OUT-8.8 PPG. W/ 44 VIS- PH. 10</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS</p> <p>SAFETY BREAK: MIXING CHEMICALS</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,425' TO 5,530', TOTAL 105', AVG. ROP 53' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.0 PPG. W/ 44 VIS- PH- 10.5 MUD WEIGHT OUT-9.1+ PPG. W/ 44 VIS- PH. 10.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MEET AND GREET</p>
6:00	9:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,530' TO 5,715', TOTAL 185', AVG. ROP 61' HR, W.O.B. 30-35K, GPM'S-600, SRPM-85, MRPMS-132, TOTAL RPMS=217, PUMP PRESSURE OFF BOTTOM- 2,550 PSI., ON BOTTOM-3,230, DIFF 680, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K.</p> <p>MUD WEIGHT IN-9.0 PPG. W/ 44 VIS- PH- 10.5 MUD WEIGHT OUT-9.1+ PPG. W/ 44 VIS- PH. 10.5</p> <p>PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: HOUSE KEEPING</p>
9:00	10:00	1.00	21INDR	CIRC	CNDHOL	PT	<p>CIRCULATE BOTTOMS UP, FLOW CHECK, WELL STATIC, PUMP SLUG TOO HIGH FOR BIT DUE TO PENETRATION RATE</p> <p>SAFETY BRAKE: TRIPPING PIPE</p>
10:00	12:30	2.50	21INDR	TRIP	DRILL	PT	T.O.O.H. F/ 5,715' TO 1,477'. HOLE TAKEN PROPER FILL & NO EXCESS DRAG.
12:30	13:00	0.50	21INDR	TRIP	DRILL	PT	<p>PULL ROTATING HEAD & INSTALL TRIP NIPPLE</p> <p>SAFETY BRAKE: STAYING FOCUSED</p>
13:00	15:00	2.00	21INDR	TRIP	DRILL	PT	CONT. TO T.O.H. F/ 1,477' TO BIT.
15:00	17:30	2.50	21INDR	TRIP	BHA	PT	<p>L/D BIT & MOTOR, MAKE UP NEW BIT & MOTOR.</p> <p>12-1/4" PDC BIT (MM65DM) 8" BAKER 7/8 4.0 MUD MOTOR 0.17 REV/GAL (W/ SLICK SLEEVE STAB) XO 12-1/8" IBS (DIRECTIONAL RENTALS) ISYS TOOL (INC/AZI FROM AIM DIRECTIONAL) 1 - 8" NMDC (MWD) 12-1/8" IBS (DIRECTIONAL RENTALS) 6 - 8" DC XO 6 - 6-1/2" DC 27 JTS HWDP</p>
17:30	23:30	6.00	21INDR	TRIP	DRILL	PT	<p>TIH F/ 88' TO 5,655' PROPER DISPLACEMENT, NO DRAG WASH AND REAM LAST 60' AND FAN BOTTOM PRIOR TO DRILLING 600 GPM, 80 RPM, 1995 PSI</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/31/2014
Report No: 6

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
23:30	0:00	0.50	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,715' TO 5,740', TOTAL 255', AVG. ROP 50' HR, W.O.B. 5-15K, GPM'S-650, SRPM-80, MRPMS-143, TOTAL RPMS=223, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-2,600, DIFF 250, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.3 PPG. W/ 38 VIS- PH- 10 MUD WEIGHT OUT-9.3PPG. W/ 37 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MIXING CHEMICALS	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,740' TO 6,012', TOTAL 272', AVG. ROP 68' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,350 PSI., ON BOTTOM-2,600, DIFF 250, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MAKING CONNECTIONS	
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 6,012' TO 6,202', TOTAL 190', AVG. ROP 95' HR, W.O.B. 5-15K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,328 PSI., ON BOTTOM-2,890, DIFF 562, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.3 PPG. W/ 45 VIS- PH- 10 MUD WEIGHT OUT-9.4PPG. W/ 47 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MAKING CONNECTIONS	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	53.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	53.00	
Incident Comments: No incidents reported last 24 hours.				

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/31/2014
Report No: 6

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
SAFE ACTS: 6
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 13
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: ON HAZARD HUNT FOUND HIGH PSI MUD LINE MISSING NUT AND KEEPER, TOLD MOTOR MAN AND HE FIXED SAME, JOB CONTINUED INCIDENT FREE
24 HOUR GOAL: DRILLED TO 7000' BY 1800

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/30/2014
Report No: 5

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,990' TO 3,580', TOTAL 590', AVG. ROP 148' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-90, MRPMS-154, TOTAL RPMS=244, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5</p> <p>*DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING.</p> <p>PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 3,580' TO 3,770', TOTAL 190', AVG. ROP 95' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-80, MRPMS-154, TOTAL RPMS=234, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K.</p> <p>MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5</p> <p>*DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING.</p> <p>PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
6:00	9:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 3,770' TO 4,122', TOTAL 352', AVG. ROP 117' HR, W.O.B. 28K, GPM'S-650, SRPM-80, MRPMS-143, TOTAL RPMS=223, PUMP PRESSURE OFF BOTTOM- 2,057 PSI., ON BOTTOM-2,700, DIFF. 643, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 CIRCULATING OUTSIDE RESERVE PIT. PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
9:00	9:30	0.50	21INDR	CIRC	CNDHOL	P	REMOVE TRIP NIPPLE & INSTALL ROTATING HEAD BEARING ASSEMBLY.
9:30	13:30	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 4,122' TO 4,615', TOTAL 493', AVG. ROP 123' HR, W.O.B. 28K, GPM'S-700, SRPM-95, MRPMS-154, TOTAL RPMS=249, PUMP PRESSURE OFF BOTTOM- 2,550 PSI., ON BOTTOM-3,230, DIFF. 680, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 CIRCULATING OUTSIDE RESERVE PIT. PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>
13:30	17:30	4.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 4,615' TO 4,911', TOTAL 296', AVG. ROP 74' HR, W.O.B. 28K, GPM'S-700, SRPM-95, MRPMS-154, TOTAL RPMS=249, PUMP PRESSURE OFF BOTTOM- 2,550 PSI., ON BOTTOM-3,230, DIFF. 680, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 OUTSIDE RESERVE PIT BANK BROKE, CIRCULATE STEEL PITS. LOST 927 BBL'S ON GROUND.</p>
17:30	18:00	0.50	21INDR	RIGMT	SRVRIG	P	SERVICE TOP DRIVE
18:00	21:00	3.00	21INDR	DRILL	MTRVER	P	<p>DRILL 12 1/4" INTERMEDIATE HOLE FROM 4,911' TO 5,094', TOTAL 183', AVG. ROP 61' HR, W.O.B. 28K, GPM'S-600, SRPM-90, MRPMS-132, TOTAL RPMS=222, PUMP PRESSURE OFF BOTTOM- 2,179 PSI., ON BOTTOM-2,691, DIFF. 512, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K.</p> <p>MUD WEIGHT IN-9.6 PPG. W/ 28 VIS- PH- 10 MUD WEIGHT OUT-9.6 PPG. W/ 28 VIS- PH. 10 PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/30/2014
Report No: 5

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
21:00	22:00	1.00	21INDR	CIRC	CHOVR	P	HAD TROUBLE KEEPING UP WITH PUMPS DUE TO TRANSFER PUMPS LOSING PRIME, CIRCULATED AT REDUCED RATE AND SWAPPED TRANSFER PUMP OUT **DISPLACED WELL TO 8.8 PPG, 44 VIS, 10 PH GEL MUD AT 5,000' TOOK 1100 BBBL'S TO GET GEL MUD AROUND, ESTIMATED WASHOUT OF 390 BBL'S	
22:00	0:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,094' TO 5,170', TOTAL 76', AVG. ROP 38' HR, W.O.B. 28-32K, GPM'S-600, SRPM-90, MRPMS-132, TOTAL RPMS=222, PUMP PRESSURE OFF BOTTOM- 2,179 PSI., ON BOTTOM-2,691, DIFF. 512, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 10K. MUD WEIGHT IN-8.8 PPG. W/ 44 VIS- PH- 10 MUD WEIGHT OUT-8.9 PPG. W/ 44 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,170' TO 5,425', TOTAL 255', AVG. ROP 64' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-8.8 PPG. W/ 44 VIS- PH- 10 MUD WEIGHT OUT-8.8 PPG. W/ 44 VIS- PH. 10 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTION'S SAFETY BREAK: MIXING CHEMICALS	
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 5,425' TO 5,530', TOTAL 105', AVG. ROP 53' HR, W.O.B. 28-32K, GPM'S-650, SRPM-100, MRPMS-143, TOTAL RPMS=243, PUMP PRESSURE OFF BOTTOM- 2,206 PSI., ON BOTTOM-2,506, DIFF 300, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 8K. MUD WEIGHT IN-9.0 PPG. W/ 44 VIS- PH- 10.5 MUD WEIGHT OUT-9.1+ PPG. W/ 44 VIS- PH. 10.5 PUMP SWEEPS AS NEEDED CIRCULATING STEEL PITS SAFETY BREAK: MEET AND GREET	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	52.00
Environ Incident?	N	Days since Last LTA:	52.00
Incident Comments: No incidents reported last 24 hours.			

Weather Comments:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/30/2014
Report No: 5

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 6
SAFE ACTS: 9
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE DISCONNECTED TRANSFER PUMP WITH PUMP RUNNING, STOPPED JOB EXPLAINED
DANGERS, HE AGREED AND JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL: DRILLED TO 6500' BY 1800

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/29/2014
Report No: 4

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 3.50
Today's MD: 2990 ft Progress: 1225 ft Ground Elev: 3,079.10 ft
Prev MD: 1765 ft Rot Hrs Today: 6.50 hr AFE MD/Days: 17,037.0 / 33.6 days
PBMD: Avg ROP Today: 188.5 ft/hr AFE Number: 1189081#0102

Current Formation: @ Lithology:

Current Ops:

24-Hr Summary: FINISH BOPE TEST & RU, MU BHA, TIH, TST CSG, DRLOUT+10' NEW FORM, FIT 13.1 EMW, DRILL FROM 1,770' T/ 2,990'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONT TO DRILL 12.25" INTERMEDIATE HOLE, DISPLACE TO PRE-HYDRATED BENTONITE @ 5,000'

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	20.000in @ 40ft	Str Wt Up/Dn:	153.0/ 138.0 kip	Pump Rate:	353.9	Conn:			0
Next Casing:	13.625in @ 1,750ft	Str Wt Rot:	145.0 kip	Pump Press:	2377	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2,300.0 ft-lbf			Backgr:			0
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:	10,200.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	MANUEL CASTANUELA	2,894.0	0.90	58.40	2,893.89	-10.0	16.1	-10.0	0.12	0.05
Supervisor 2:	JEFF ROZELLE	2,705.0	0.80	72.50	2,704.91	-11.2	13.6	-11.2	0.03	0.00
Engineer:	KEVIN THREADGILL	2,516.0	0.80	76.80	2,515.93	-11.9	11.0	-11.9	0.22	0.21
Geologist:	SUMIYAH AHMED	2,327.0	0.40	88.00	2,326.94	-12.2	9.1	-12.2	0.36	-0.21
Oxy Personnel:	2	2,138.0	0.80	146.50	2,137.95	-11.2	7.7	-11.2	0.21	0.21
Contractor Personnel:	13	1,949.0	0.40	152.80	1,948.96	-9.5	6.7	-9.5	0.06	-0.04
Total on Site:	15									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
2	12.250	VAREL	RS616DHUX	4007267	S323	9x12	1765	5715	2-8-RO-G	X-16-RO-PR

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
2	6.50	6.50	1225	1225	188.5	188.5	15.0/30.0	80/100	0.994	397	228.5	1.4

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA																																																												
Engineer:	Buck Hoskin	MBT:	0.0 lbm/bbl	BHA No:	2	Bit No:	2	MD In:	1765 ft																																																							
Sample From:	In (Suction Pit)	pH:	10.5	Purpose:	DRILL INTERMEDIATE HOLE			MD Out:	5715 ft																																																							
Mud Type:	Clear Water	Pm / Pom:		<table border="1"> <thead> <tr> <th>Component</th> <th>OD</th> <th>ID</th> <th>Jts</th> <th>Length</th> </tr> </thead> <tbody> <tr> <td>PDC BIT</td> <td>12.250</td> <td>2.000</td> <td>1</td> <td>1.50</td> </tr> <tr> <td>VERTICAL DRILLING TOOL</td> <td>8.000</td> <td>2.000</td> <td>1</td> <td>34.98</td> </tr> <tr> <td>CROSSOVER</td> <td>8.000</td> <td>2.875</td> <td>1</td> <td>3.65</td> </tr> <tr> <td>INTEGRAL BLADE STABILIZER</td> <td>8.000</td> <td>2.875</td> <td>1</td> <td>7.63</td> </tr> <tr> <td>TELEDRIFT</td> <td>8.000</td> <td>2.500</td> <td>1</td> <td>28.60</td> </tr> <tr> <td>INTEGRAL BLADE STABILIZER</td> <td>7.750</td> <td>2.875</td> <td>1</td> <td>7.91</td> </tr> <tr> <td>DRILL COLLAR</td> <td>8.000</td> <td>2.875</td> <td>6</td> <td>183.79</td> </tr> <tr> <td>CROSSOVER</td> <td>8.000</td> <td>3.000</td> <td>1</td> <td>3.60</td> </tr> <tr> <td>DRILL COLLAR</td> <td>6.500</td> <td>3.000</td> <td>6</td> <td>183.13</td> </tr> <tr> <td>HWDP</td> <td>6.500</td> <td>2.875</td> <td>27</td> <td>833.71</td> </tr> </tbody> </table>						Component	OD	ID	Jts	Length	PDC BIT	12.250	2.000	1	1.50	VERTICAL DRILLING TOOL	8.000	2.000	1	34.98	CROSSOVER	8.000	2.875	1	3.65	INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63	TELEDRIFT	8.000	2.500	1	28.60	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91	DRILL COLLAR	8.000	2.875	6	183.79	CROSSOVER	8.000	3.000	1	3.60	DRILL COLLAR	6.500	3.000	6	183.13	HWDP	6.500	2.875	27	833.71
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Time / MD:	0:01 / 1,765.0	Pf / Mf:	0.1 / 0.3																																																													
Density @ Temp:	8.50 / 75	Chlorides:	9,500																																																													
Rheology Temp:	120	Ca+ / K+:	0 / 0																																																													
Viscosity:	29.00	CaCl2:																																																														
PV / YP:	1 / 1	Clom:																																																														
Gels 10s/10m/30m:	1 / 1 / 1	Lime:	0.00																																																													
API WL:	0.00	ES:																																																														
HTHP WL:	0.00	ECD:	8.48																																																													
Cake API / HTHP:	1.0 / .0	n / K:	0.00 / 0.000																																																													
Solids / Sol Corr:	0.60 / 0.60	Carbonate:																																																														
Oil / Water:	0.0 / 99.0	Bicarbonate:	0 ppm																																																													
Sand:	0.02	Form Loss:	0.0 / 0.0																																																													
Water Added:		Fluid Disch:	/																																																													
Oil Added:																																																																
LGS:	0.60 / 5.40																																																															

VG Meter: 1@3 / 1@6 / 1@100 / 1@200 / 2@300 / 3@600
 Comments: Built 1850 bbls prehydrated bentonite gel mud for displacement at 5000'. Drilled from 1765' to 2423' TVD circulating 8.5 ppg 29 sec/qt vis, 10.5 pH fresh water from outer reserve pits. Built 100 bbls of 70 sec/qt vis sweeps for hole cleaning every 300'. Next 24 hrs: Continue

Total Length: 1,288.50 ft Wt below Jars:

MUD PRODUCTS		
Product	Units	Qty Used
Blower Rental	each	1.00
Bulk Tank Rental	each	2.00
Rapid Sweep	each	1.00
SAPP	lb	6.00
Soda Ash	kg	9.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/29/2014
Report No: 4

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	0:30	0.50	14SURC	BOP	TSTBOP	P	RIG DOWN TESTERS	
0:30	2:00	1.50	14SURC	BOP	RUBOP	P	HOOK UP FILL UP LINE, INSTALL TURN BUCKLES AND CENTER STACK, CLOSE CASING VALVE, AND INSTALL TRIP NIPPLE	
2:00	2:30	0.50	14SURC	WLHD	RWH	P	INSTALL WEAR BUSHING	
2:30	3:30	1.00	14SURC	TRIP	BHA	P	STRAP AND CALLIPER BHA PICK UP TO THE RIG FLOOR	
3:30	5:30	2.00	14SURC	TRIP	BHA	P	MU BHAS FOLLOWS: 12-1/4" PDC BIT 8" BAKER 7/8 4.0 MUD MOTOR 0.17 REV/GAL (W/ SLICK SLEEVE STAB) XO 12-1/8" IBS (DIRECTIONAL RENTALS) ISYS TOOL (INC/AZI FROM AIM DIRECTIONAL) 1 - 8" NMDC (MWD) 12-1/8" IBS (DIRECTIONAL RENTALS) 6 - 8" DC XO 6 - 6-1/2" DC 27 JTS HWDP	
5:30	6:00	0.50	14SURC	RIGMT	REP	P	SERVICE RIG	
6:00	10:00	4.00	14SURC	TRIP	DRILL	P	T.I.H. F/ 88' TO 1,650' SAFETY BRAKE: PINCH POINTS & BODY PLACEMENT	
10:00	10:30	0.50	14SURC	CSG	PIPE	P	TEST CASING TO 1,600 PSI & CHART FOR 30 MINS.	
10:30	11:30	1.00	14SURC	CSG	PIPE	P	PERFORM CHOKE DRILL 13.375" CASING, BIT DEPTH 1,650'. 20 SPM W/ 509 PSI. 16 TOTAL STROKES. 2 SEC. LAG TIME W/ CHOKE OPENING 5% EVERY TIME YOU BUMP IT IN EITHER DIRECTION. FCCP= 400 PSI W/ CHOKE 24% OPEN.	
11:30	12:00	0.50	14SURC	TRIP	DRILL	P	CONT. T.I.H. F/ 1,650' TO 1,708'. TAG FLOAT COLLAR. SAFETY BRAKE: TEAM WORK.	
12:00	13:00	1.00	14SURC	DRLOUT	DOCMT	P	DRILL FLOAT COLLAR, SHOE TRACK, SHOE & 10' OF NEW FORMATION F/ 1,765' TO 1,775'.	
13:00	13:30	0.50	14SURC	DRLOUT	FST	P	CIRCULATE BOTTOMS UP & PERFORM FIT. EQUIVALENT TO 13.1 PPG. OMW=8.8 PPG SHOE SET @ 1,760'=395 PSI	
13:30	15:00	1.50	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 1,775' TO 2,044', TOTAL 269', AVG. ROP 179' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-100, MRPMS-157, TOTAL RPMS=254, PUMP PRESSURE OFF BOTTOM- 1,810 PSI., ON BOTTOM-2,460, DIFF. 650, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.5 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.6 PPG. W/ 28 VIS- PH. 9.5 DUMPING AND DILUTING TO CUT MUD WEIGHT PUMP SWEEPS AS NEEDED SAFETY BREAK: HOUSEKEEPING	
15:00	19:00	4.00	21INDR	SRFEQ	REPR	PT	WAIT ON ISYS TOOL TECH TO CHANGE OUT SURVEY SCREEN ON RIG FLOOR.	
19:00	22:00	3.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,044' TO 2,575', TOTAL 531', AVG. ROP 177' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-100, MRPMS-157, TOTAL RPMS=254, PUMP PRESSURE OFF BOTTOM- 1,810 PSI., ON BOTTOM-2,460, DIFF. 650, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.5 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.6 PPG. W/ 28 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED SAFETY BREAK: LIGHTING	
22:00	0:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,575' TO 2,990', TOTAL 415', AVG. ROP 207' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-90, MRPMS-154, TOTAL RPMS=244, PUMP PRESSURE OFF BOTTOM- 2,220 PSI., ON BOTTOM-2,835, DIFF. 615, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5 PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/29/2014
Report No: 4

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,990' TO 3,580', TOTAL 590', AVG. ROP 148' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-90, MRPMS-154, TOTAL RPMS=244, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5 *DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING. PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS
4:00	6:00	2.00	21INDR	DRILL	MTRVER	P	DRILL 12 1/4" INTERMEDIATE HOLE FROM 3,580' TO 3,770', TOTAL 190', AVG. ROP 95' HR, W.O.B. 15-25 K, GPM'S-700, SRPM-80, MRPMS-154, TOTAL RPMS=234, PUMP PRESSURE OFF BOTTOM- 2,264 PSI., ON BOTTOM-2,665, DIFF. 400, TORQUE OFF BOTTOM 3K, TORQUE ON BOTTOM 7-10K. MUD WEIGHT IN-8.8 PPG. W/ 28 VIS- PH- 9.5 MUD WEIGHT OUT-8.9 PPG. W/ 28 VIS- PH. 9.5 *DRILLING PARAMETERS LIMITED DUE TO GENERATOR KICKING OFFLINE CAUSING RIG TO BE AT POWER LIMIT. H&P ELECTRICIAN AND MECHANIC ON LOCATION TROUBLESHOOTING. PUMP SWEEPS AS NEEDED DROPPING RAPID SWEEP AND SOAP STICKS ON CONNECTIONS
Total Time		6.00					

Safety Incident?	N	Days since Last RI:	51.00
Environ Incident?	N	Days since Last LTA:	51.00
Incident Comments: No incidents reported last 24 hours.			

Weather Comments:

Other Remarks: Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

 LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

 OXY DSM TRAILER: 432-253-7382

 UNSAFE ACTS: 6
 SAFE ACTS: 4
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

 JSA'S: 9
 SAFETY MEETINGS: 2
 LO/TO'S: 0
 PERMIT'S TO WORK: 1
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

 NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

 BEST STOP CARD: EMPLOYEE NOTICED HAMMER WITH BROKEN HANDLE, STOPPED JOB EXPLAINED DANGERS, TOOK HAMMER OUT OF SERVICE AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL: DRILLED TO 2500' BY 1800 HRS'

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/28/2014
Report No: 3

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:00	1.00	14SURC	CSG	RUNCSG	P	WASH LAST JOINT OF CASING FROM 1,710' TO 1,765' 9 BPM, 151 PSI
1:00	2:00	1.00	14SURC	CIRC	CNDHOL	P	CIRCULATE AND CONDITION HOLE THROUGH VALONT TOOL 9 BPM 50 PSI RECIPROCATATE CASING WHILE CIRCULATING P/U 130 S/O 102 S/W 115 HOLD SAFETY MEETING WITH HALLIBURTON WHILE CIRCULATING
2:00	2:30	0.50	14SURC	CMT	RIGUP	P	RIG DOWN VOLANT TOOL AND RIG UP HALLIBURTON CEMENTING EQUIPMENT
2:30	4:30	2.00	14SURC	CMT	PRIM	P	PERFORM CEMENT JOB ON 13 3/8" SURFACE AS FOLLOWS: TEST LINES TO 1,500 PSI PUMP 20 BBLS OF 8.3 PPG WATER SPACER PUMP LEAD, 197 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (630 SACKS) OF CLASS C CEMENT, 13.5 PPG, 1.759 YIELD, 9.37 GAL/SK PUMP TAIL, 67 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (280 SACKS) OF CLASS C CEMENT, 14.8 PPG, 1.342 YIELD, 6.43 GAL/SK DROP PLUG AT 03:45 PUMP DISPLACEMENT, 265 BBLS OF 8.3 PPG WATER. PUMP RATE WAS 8 BPM AND 2 BPM LAST 10 BBL'S PUMPED BUMPED PLUG @ 4:28 HRS, WITH 500 PSI OVER, PUMP PRESSURE WAS 750 PSI AND PRESSURED UP TO 1250 PSI WHEN BUMPED. HELD FOR 5 MINUTES (GOOD) BLED BACK 1.5 BBLS. KEPT FULL RETURNS THROUGH JOB GOT CEMENT BACK 180 BBLS INTO DISPLACEMENT, GOT BACK 85 BBLS OF CEMENT (268 SACKS)
4:30	5:00	0.50	14SURC	CMT	RIGUP	P	RIG DOWN HALLIBURTON CEMENT EQUIPMENT
5:00	6:00	1.00	14SURC	GP	RUDSEQ	P	RIG DOWN KOSERCA HYDRAULIC CELLAR PUMPS
6:00	9:00	3.00	14SURC	WLHD	RWH	P	DO A ROUGH CUT ON CASING, LAY DOWN CUT JOINT, CUT AND DRESS CONDUCTOR AND 13 3/8" CASING FOR MULTI BOWL WELL HEAD, SET THE TOP OF THE "B" SECTION 2" INCHES BELOW GROUND LEVEL. SAFETY BREAK: FIRE HAZARDS
9:00	13:00	4.00	14SURC	WLHD	RWH	P	PRE HEAT WELL HEAD PER CAMERON'S PROCEDURES AND INSTALL WELL HEAD, CHECK FOR LEVEL, (GOOD) WELD WELL HEAD TO CASING. TEST WELL HEAD TO 800 PSI FOR 15 MINUTES, TEST (GOOD). SAFETY BREAK: CONFINE SPACE ENTRY
13:00	19:00	6.00	14SURC	BOP	RUBOP	P	INSTALL SPOOL AND DSA, SET BOP'S ON TOP OF DSA, AND TORQUE ALL BREAKS ON BOPS, INSTALL HCR LINE, KILL LINE AND KOOMEY LINES. FUNCTION TEST BOP'S (GOOD)

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/28/2014
Report No: 3

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
19:00	0:00	5.00	14SURC	BOP	TSTBOP	P	TEST BOP AS FOLLOWED: TEST #1 BLIND RAMS, INSIDE KILL VALVE AND PRIMARY CLUSTER OF CHOKE MANIFOLD VALVES 250 LOW, 5000 HIGH, 5 MIN'S OK RUN TEST PLUG ON DRILL PIPE TEST #2 ANNULAR, 250 LOW, 3500 HIGH, 5 MIN'S OK TEST #3 OUTSIDE KILL LINE VALVE, MANUAL CHOKE VALVE 250 LOW, 5000 HIGH, 5 MIN'S OK TEST #4 PIPE RAMS, INSIDE KILL; CHOKE LINE HCR 250 LOW, 5000 HIGH, 5 MIN'S OK TEST #5 PIPE RAMS, INSIDE KILL LINE VALVE, SECONDARY CLUSTER OF CHOKE MANIFOLD VALVES. 250 LOW, 5000 HIGH, 5 MIN'S OK TEST #6 PIPE RAMS, INSIDE KILL LINE VALVE, SUPER CHOKE AND LAST CHOKE MANIFOLD VALVE 250 LOW, 5000 HIGH OK TEST #7 GRAY INSIDE BOP VALVE 250 LOW, 5000 HIGH 5 MIN'S OK TEST #8 TIW FLOOR VALVE 250 LOW 5000 HIGH 5 MIN'S OK TEST #9 BACK TO MUD PUMPS 250 LOW, 4000 HIGH OK TEST ACCUMULATOR (GOOD)

Total Time 24.00

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	0:30	0.50	14SURC	BOP	TSTBOP	P	RIG DOWN TESTERS
0:30	2:00	1.50	14SURC	BOP	RUBOP	P	HOOK UP FILL UP LINE, INSTALL TURN BUCKLES AND CENTER STACK, CLOSE CASING VALVE, AND INSTALL TRIP NIPPLE
2:00	2:30	0.50	14SURC	WLHD	RWH	P	INSTALL WEAR BUSHING
2:30	3:30	1.00	14SURC	TRIP	BHA	P	STRAP AND CALLIPER BHA PICK UP TO THE RIG FLOOR
3:30	5:30	2.00	14SURC	TRIP	BHA	P	MU BHA AS FOLLOWS: 12-1/4" PDC BIT 8" BAKER 7/8 4.0 MUD MOTOR 0.17 REV/GAL (W/ SLICK SLEEVE STAB) XO 12-1/8" IBS (DIRECTIONAL RENTALS) ISYS TOOL (INC/AZI FROM AIM DIRECTIONAL) 1 - 8" NMDC (MWD) 12-1/8" IBS (DIRECTIONAL RENTALS) 6 - 8" DC XO 6 - 6-1/2" DC 27 JTS HWDP
5:30	6:00	0.50	14SURC	RIGMT	REP	P	SERVICE RIG

Total Time 6.00

Safety Incident? N **Days since Last RI:** 50.00
Environ Incident? N **Days since Last LTA:** 50.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/28/2014
Report No: 3

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 8
SAFE ACTS: 7
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 2
LO/TO'S: 0
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: THIRD PARTY EMPLOYEE PSI WASHING IN A HIGH PSI AREA, STOPPED JOB EXPLAINED POLICY
AND JOB CONTINUED INCIDENT FREE
24 HOUR GOAL: DRILLED TO 2500' BY 1800 HRS

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/27/2014
Report No: 2

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	14SUDR	DRILL	ROTVR	P	<p>DRILLED 16" SURFACE HOLE' F/ 475' T/ 1,120', AS FOLLOWS:</p> <p>PROGRESS: 645 FT ROP AVG: 162 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG</p> <p>DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES</p> <p>SAFETY BREAK: FORKLIFT OPS</p>
4:00	5:30	1.50	14SUDR	DRILL	ROTVR	P	<p>DRILLED 16" SURFACE HOLE' F/ 1,120' T/ 1,378', AS FOLLOWS:</p> <p>PROGRESS: 258 FT ROP AVG: 172 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG</p> <p>SWAP TO STEEL PITS AT 1,378'</p> <p>DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES</p>
5:30	6:00	0.50	14SUDR	RIGMT	SRVRIG	P	SERVICE RIG, HOOK UP AIRLINE TO FLOWLINE AND FIX LEAK ON 2" ON #1 MUD PUMP
6:00	9:00	3.00	14SUDR	DRILL	ROTVR	P	<p>DRILL 16" SURFACE HOLE FROM 1,378' TO 1,765', TOTAL=387' (129' AVG. ROP), PUMPING 750 GPM'S, PUMP PRESSURE OFF BOTTOM- 2,200 PSI., ON BOTTOM-2,500 PSI., RPM'S TOTAL- 120, WOB- 20-25K, TORQUE OFF BOTTOM- 2-3K, ON BOTTOM- 14-16K.</p> <p>MUD IN- 8.9 PPG. WITH 38 VIS MUD OUT- 9.2 PPG. WITH 42 VIS</p> <p>P/U- 145K, ROT- 130K, S/O- 125K</p> <p>DROPPING RAPID SWEEP AND SOAP STICKS EVERY CONNECTION. PUMP HIGH VIS SWEEPS AS NEEDED. TD SURFACE @ 09:00 AM ON 10-27-2014</p>
9:00	10:00	1.00	14SUDR	CIRC	CNDHOL	P	<p>PUMP HIGH VIS SWEEP AROUND @ 1,765' WITH 748 GPM'S WITH 2,200 PSI., BUILD 50 BBL. SWEEP WITH 10 SACKS OF SAPP AND 10 BUCKETS OF DD, PUMP 50 SWEEP AROUND.</p> <p>DOUBLE CHECK PIPE COUNT WHILE CIRCULATING. (GOOD)</p>
10:00	14:00	4.00	14SUDR	TRIP	DRILL	P	<p>PULL OUT OF THE HOLE FROM 1,765' TO 68'.</p> <p>HOLE IS TAKING PROPER DISPLACEMENT.</p>
14:00	16:00	2.00	14SUDR	TRIP	DRILL	P	<p>BREAK OUT AND LAY DOWN, 15 3/4" STABILIZERS, ISYS TOOL, BIT AND SHOCK SUB.</p> <p>SAFETY BREAK:PINCH POINT AND WORKING WITH HEAVY EQUIPMENT</p>
16:00	18:00	2.00	14SURC	CSG	RUNCSG	P	PJSM WITH B&L CASING CREW, H&P EMPLOYEE'S, TOOLPUSHER AND DSM AND RIG UP CASING CREW, GET SHOE, FLOAT AND CENTERLIZERS ON RIG FLOOR.
18:00	18:30	0.50	14SURC	SAFE	PJSM	P	SAFETY MEETING WITH ONCOMING CREW

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/27/2014
Report No: 2

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
18:30	22:00	3.50	14SURC	CSG	RUNCSG	P	PICK UP AND RUN 13 3/8" 54.5# J-55 BTC CASING AS FOLLOWS: 1- 13 3/8" SHOE SET @- 1,755' 1- 13 3/8" 54.5# J-55 BTC SET @- 1,753' 1- 13 3/8" FLOAT COLLAR SET @- 1,708' 38- 13 3/8" 54.5# J-55 BTC SET @- 1,702' CHECK FLOATS AFTER MAKE UP, (GOOD) RUN CASING FROM 0' TO 1,355' RUN RIGID BOW SPRING CENTRALIZER, 2 ON THE THE FIRST JOINT AND THEN ON EVERY 4 TH JOINT. CIRCULATE BOTTOMS UP AT 1,355' WITH 7 BPM DUE TO DRAG 25K SLACK OFF AND 35K PICK UP. AFTER CIRCULATING 8 K PU AND SLACK OFF.	
22:00	0:00	2.00	14SURC	CSG	RUNCSG	P	CONTINUE RUNNING 13 3/8" SURFACE CASING FROM 1,355' TO 1,710' WASHED WITH VALONT TOOL FROM 1,692' TO 1,710' AT 9 BPM, 155 PSI	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	1:00	1.00	14SURC	CSG	RUNCSG	P	WASH LAST JOINT OF CASING FROM 1,710' TO 1,765' 9 BPM, 151 PSI	
1:00	2:00	1.00	14SURC	CIRC	CNDHOL	P	CIRCULATE AND CONDITION HOLE THROUGH VALONT TOOL 9 BPM 50 PSI RECIPROCATATE CASING WHILE CIRCULATING P/U 130 S/O 102 S/W 115 HOLD SAFETY MEETING WITH HALLIBURTON WHILE CIRCULATING	
2:00	2:30	0.50	14SURC	CMT	RIGUP	P	RIG DOWN VOLANT TOOL AND RIG UP HALLIBURTON CEMENTING EQUIPMENT	
2:30	4:30	2.00	14SURC	CMT	PRIM	P	PERFORM CEMENT JOB ON 13 3/8" SURFACE AS FOLLOWS: TEST LINES TO 1,500 PSI PUMP 20 BBLS OF 8.3 PPG WATER SPACER PUMP LEAD, 197 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (630 SACKS) OF CLASS C CEMENT, 13.5 PPG, 1.759 YIELD, 9.37 GAL/SK PUMP TAIL, 67 BBLS OF PREMIUM PLUS CLASS (C) CEMENT (280 SACKS) OF CLASS C CEMENT, 14.8 PPG, 1.342 YIELD, 6.43 GAL/SK DROP PLUG AT 03:45 PUMP DISPLACEMENT, 265 BBLS OF 8.3 PPG WATER. PUMP RATE WAS 8 BPM AND 2 BPM LAST 10 BBL'S PUMPED BUMPED PLUG @ 4:28 HRS. WITH 500 PSI OVER, PUMP PRESSURE WAS 750 PSI AND PRESSURED UP TO 1250 PSI WHEN BUMPED. HELD FOR 5 MINUTES (GOOD) BLED BACK 1.5 BBLS. KEPT FULL RETURNS THROUGH JOB GOT CEMENT BACK 180 BBLS INTO DISPLACEMENT, GOT BACK 85 BBLS OF CEMENT (268 SACKS)	
4:30	5:00	0.50	14SURC	CMT	RIGUP	P	RIG DOWN HALLIBURTON CEMENT EQUIPMENT	
5:00	6:00	1.00	14SURC	GP	RUDSEQ	P	RIG DOWN KOSERCA HYDRAULIC CELLAR PUMPS	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	49.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	49.00	
Incident Comments: No incidents reported last 24 hours.				

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/27/2014
Report No: 2

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 8
SAFE ACTS: 3
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 3
LO/TO'S: 1
PERMIT'S TO WORK: 1
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION: 1
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE SAW AIRLINE WITHOUT WHIP CHECK ON IT, STOPPED JOB AND PUT ONE ON, JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL: BOP TESTED BY 1800 HOURS

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/26/2014
Report No: 1

Wellbore / Top MD: 00 @ 0 ft Rig: H&P 629 Ref Datum: Original KB @3,103.10ft DFS: 0.50
Today's MD: 475 ft Progress: 475 ft Ground Elev: 3,079.10 ft
Prev MD: 0 ft Rot Hrs Today: 4.50 hr AFE MD/Days: 17,037.0 / 33.6 days
PBMD: Avg ROP Today: 105.6 ft/hr AFE Number: 1189081#0102

Current Formation: @ Lithology:

Current Ops:

24-Hr Summary: FINISH RIGGING UP AND PERFORM PRE SPUD CHECKLIST, ACCEPTED RIG @ 12:00, P/U AND M/U 16" BHA. DRILL T/ 475'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) DRILL 16" SURFACE TO ~1755', PUMP SWEEP, TOOH, LD STAB'S, RU AND RUN 13 3/8" CSG & CMT

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:		Str Wt Up/Dn:	93.0/ 89.0 kip	Pump Rate:	749.5	Conn:			0
Next Casing:		Str Wt Rot:	91.0 kip	Pump Press:	1310	Trip:			0
Last BOP Press Test:	09/18/2014	Torq Off Btm:	1,200.0 ft-lbf			Backgr:			0
Form Test/EMW:		Torq On Btm:	4,700.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.00
Engineer:	KEVIN THREADGILL	402.0	0.40	176.10	402.00	-1.2	0.0	-1.2	0.13	0.13
Geologist:	TIM LYONS	245.0	0.20	181.00	245.00	-0.4	0.0	-0.4	0.08	0.08
Oxy Personnel:	2									
Contractor Personnel:	15									
Total on Site:	17									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
1	16.000	CAPROCK BITS	616-SR9	39830	S232	9x12	40	1765	0-0-NO-A	0-1-NO-TD

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
1	4.50	4.50	475	475	105.6	105.6	5.0/15.0	50/100	0.994	445	241.9	1.0

MUD DATA - M-I LLC (Schlumberger)						LAST OR CURRENT BHA				
Engineer: Nels Hansen	MBT:	BHA No: 1	Bit No: 1	MD In: 40 ft						
Sample From: Other	pH:	Purpose: DRILL SURFACE HOLE	MD Out: 1765 ft							
Mud Type: Clear Water	Pm / Pom:	Component		OD	ID	Jts	Length			
Time / MD: 19:00 / 0	Pf / Mf: /	PDC BIT	16.000	2.000	1	1.50				
Density @ Temp: 8.30 /	Chlorides: 800	NEAR BIT STABILIZER	8.000	2.875	1	7.45				
Rheology Temp:	Ca+ / K+: /	SHOCK SUB	8.125	3.000	1	11.62				
Viscosity:	CaCl2:	INTEGRAL BLADE STABILIZER	8.000	3.000	1	6.40				
PV / YP: /	Clom:	UBHO SUB	8.000	2.500	1	2.58				
Gels 10s/10m/30m: //	Lime:	MWD TOOL	8.000	2.876	1	28.60				
API WL:	ES:	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.48				
HHP WL:	ECD:	DRILL COLLAR	8.000	2.875	6	183.79				
Cake API / HHP:	n / K: /	CROSSOVER	8.000	3.000	1	3.60				
Solids / Sol Corr: /	Carbonate:	DRILL COLLAR	6.500	3.000	6	183.13				
Oil / Water: /	Bicarbonate:	HWDP	6.500	2.875	30	926.30				
Sand:	Form Loss: 0.0 / 0.0									
Water Added:	Fluid Disch: /									
Oil Added:										
LGS: /										

VG Meter: ?@300 / ?@600
Comments: Check well water supply

Total Length: 1,362.45 ft Wt below Jars:

MUD PRODUCTS		
Product	Units	Qty Used
Blower Rental	each	2.00
Bulk Tank Rental	each	4.00
Pallet	each	5.00
Shrink Wrap	each	22.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/26/2014
Report No: 1

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	01MIRU	LOCMOV	RU	P	SPOOL UP DRAWWORKS, UN DOG TOP DRIVE, FUNCTION TEST TOP DRIVE RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %	
4:00	6:00	2.00	01MIRU	LOCMOV	RU	P	PICKED UP ALL TOOLS OFF RIG FLOOR BROUGHT TOP DRIVE DOWN AND BEGAN CHANGING OUT THE SAVER SUB. FILLED PITS WITH WATER RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %	
6:00	10:00	4.00	01MIRU	LOCMOV	RU	P	FINSH POWERING UP RIG, SWAP POWER FOR TRAILERS FROM PORTABLE GENS TO RIG POWER. INSTALL PVC PIPE ON DUMP LINES, INSTALL CAUSTIC BARREL. OFF LOAD SURFACE CASING. 100% RIGGED UP, JUST MISC. EQUIPMENT AND GROUND RODS.	
10:00	12:00	2.00	01MIRU	LOCMOV	RU	P	FINSH RIGGING UP MISC. EQUIPMENT AROUND LOCATION, WALKED AROUND WITH TOOLPUSHER AND TIGHTY UP AROUND LOCATION.	
12:00	16:00	4.00	14SUDR	SAFE	PJSM	P	PERFORMED PRE SPUD CHECKLIST WITH TOOLPUSHER, DRILLER AND DSM, STRAPPING AND CALIBRATING ALL BHA. RIG H&P 629 ACCEPTED AT 12:00 ON 10/26/2014 RIG MOVE 48 MILES IN 70 HOURS.	
16:00	19:30	3.50	14SUDR	TRIP	BHA	P	PICK UP AND MAKE 16" BHA AS FOLLOWS: 1- 16" CAPROCK BIT-616-SR9 WITH 9-12'S 1-15 3/4" NEAR BIT STAB. 1- 8" SHOCK SUB 1- 15 3/4" STAB 1- ISYS TOOL 1- 15 3/4" STAB 6-8" DRILL COLLARS 1-X/O 6- 6 1/2" DRILL COLLARS 30- HWDP TEST LINES TO 2,000 PSI	
19:30	0:00	4.50	14SUDR	DRILL	ROTVR	P	DRILLED 16" SURFACE HOLE F/ SURFACE T/ 475', AS FOLLOWS: PROGRESS: 475 FT ROP AVG: 105 FT/HR WOB: 5-15 KLBS RPM: 40-100 FLOW RATE: 500-750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1250 PSI / 1310 PSI TORQUE ON / OFF BTM: 5 - 6 KLB.FT / 1-2 KLB.FT P/U WT: 93 KIPS S/O WT: 89 KIPS ROT WT: 91 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG DRILLED WITH 500 GPM AND 50 RPM UNTIL TOP STABILIZER 20' BELOW CONDUCTOR DROPPING RAPID SWEEPS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 500' OR AS HOLE DICTATES SAFETY BREAK: HANDLING BHA	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/26/2014
Report No: 1

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	14SUDR	DRILL	ROTVR	P	DRILLED 16" SURFACE HOLE' F/ 475' T/ 1,120', AS FOLLOWS: PROGRESS: 645 FT ROP AVG: 162 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES SAFETY BREAK: FORKLIFT OPS	
4:00	5:30	1.50	14SUDR	DRILL	ROTVR	P	DRILLED 16" SURFACE HOLE' F/ 1,120' T/ 1,378', AS FOLLOWS: PROGRESS: 258 FT ROP AVG: 172 FT/HR WOB: 5-15 KLBS RPM: 100 FLOW RATE: 750 GPM PUMP PRESSURE ON / OFF / BOTTOM: 1800 PSI / 1960 PSI TORQUE ON / OFF BTM: 8-12 KLB.FT / 1-2 KLB.FT P/U WT: 118 KIPS S/O WT: 112 KIPS ROT WT: 115 KIPS MW IN: 8.5 PPG MW OUT: 8.7 PPG SWAP TO STEEL PITS AT 1,378' DROPPING RAPID SWEEP & SOAP STICKS ON EVERY CONNECTION & DD PUMPING HI-VIS SWEEPS EVERY 250' OR AS HOLE DICTATES	
5:30	6:00	0.50	14SUDR	RIGMT	SRVRIG	P	SERVICE RIG, HOOK UP AIRLINE TO FLOWLINE AND FIX LEAK ON 2" ON #1 MUD PUMP	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	48.00	Weather Comments:
Environ Incident?	N	Days since Last LTA:	48.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks:

Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
 SAFE ACTS: 5
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 14
 SAFETY MEETINGS: 4
 LO/TO'S: 1
 PERMIT'S TO WORK: 1
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION: 1
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: NOTICED 3RD PARTY EMPLOYEE SITTING UNDER V-DOOR, STOPPED JOB EXPLAINED POLICY AND DANGERS HE COMPLIED MOVED OUT OF WAY AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL:TD SURFACE BY 1200 HRS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/25/2014
Report No: 3M

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	6:00	6.00	01MIRU	LOCMOV	RU	P	PLUG IN VFD CABLE TRAY, PLUG IN MCC SERVICE ARM TO PITS, INSTALL GROUND RODS TO BACKYARD, PLUG HOOK UP DWKS, MAKE UP MUD PUMP VIBRATOR HOSES AND VIBRATOR ON TOP OF MCC HOUSE. RIGGED DOWN- 100% RIG MOVED- 95% RIGGED UP- 40 %
6:00	9:00	3.00	01MIRU	LOCMOV	RU	P	RIG UP SOLIDS CONTROLS, INSTALL MUD LINES ON THE PUMPS AND PITS. RAISE SHAKER SKIDS AND PIN SAME PJSM WITH H&P MOVERS AND OXY EMPLOYEE'S OVER SPOTTING AND RIGGING UP RIGGED DOWN- 100% RIG MOVED- 95% RIGGED UP- 40 %
9:00	12:00	3.00	01MIRU	LOCMOV	RU	P	INSTALL CENTER STEEL AND PREP TO RAISE SUBS RAISE SUBS AND DRILLER'S CABIN INSTALL STAIRS TO TRIP TANK SKID AND FLOWLINE RIGGED DOWN- 100 % RIG MOVED- 100% RIGGED UP- 60 % SIMOPS: RETROFIT ON DERRICK CAMERAS BY H&P ELECTRICIANS
12:00	16:00	4.00	01MIRU	LOCMOV	RU	P	RAISE AND PIN MONKEY BOARD, PIN BOOMLINE ARMS, REPLACE CLIMB ASSIST ON DERRICK, AND PREP TO RAISE. RAISE DERRICK AT 1600 RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 70 %
16:00	20:00	4.00	01MIRU	LOCMOV	RU	P	UNPIN AND RETRACT SUB AND DERRICK CYLINDER'S. ROLL UP ALL HYDRAULIC LINES. SCOPE OUT J-ARM ON OFF DRILLER'S SIDE OF RIG FLOOR. RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 75 %
20:00	0:00	4.00	01MIRU	LOCMOV	RU	P	REPLACED DAMAGED HYDRAULIC HOSE THAT SUPPLIES HYDRAULICS TO ODS OF RIG FLOOR. POWER UP HPU SPOOL UP AIR AND BOOM HOIST. RUN AIR TO RIG FLOOR, SCOPE OUT AND HOOK UP ELECTRICAL LINES FROM DRILLERS CABIN SERVICE ARM. RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 80 % SIMOPS: H&P ELECTRICIANS UNLOCKING EQUIPMENT AND RUNNING IT OUT WELDERS MODIFYING SHAKER TROUGH AND INSTALLING A REDUCER ON SAND TRAP FOR DUMPING

Total Time 24.00

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	01MIRU	LOCMOV	RU	P	SPOOL UP DRAWWORKS, UN DOG TOP DRIVE, FUNCTION TEST TOP DRIVE RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %
4:00	6:00	2.00	01MIRU	LOCMOV	RU	P	PICKED UP ALL TOOLS OFF RIG FLOOR BROUGHT TOP DRIVE DOWN AND BEGAN CHANGING OUT THE SAVER SUB. FILLED PITS WITH WATER RIGGED DOWN- 100% RIG MOVED- 100% RIGGED UP- 85 %

Total Time 6.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/25/2014
Report No: 3M

Safety Incident? N **Days since Last RI:** 47.00
Environ Incident? N **Days since Last LTA:** 47.00

Weather Comments:**Incident Comments:**

No incidents reported last 24 hours.

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 11
 SAFE ACTS: 4
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 4
 LO/TO'S: 3
 PERMIT'S TO WORK: 2
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEE WORKING UNDER A SUSPENDED LOAD, STOPPED JOB AND EXPLAINED DANGER AND POLICY, EMPLOYEE AGREED RELOCATED AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL:SPUD BY 1500

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/24/2014
Report No: 2M

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	6:00	6.00	01MIRU	LOCMOV	RD	P	RIG DOWN ELECTRICAL TO FLOOR, GRASSHOPPER, AND J-ARM ON RIG FLOOR. PREP DERRICK TO BE LOWERED, BLEED CYLINDERS. SWAP POWER OVER TO PORTABLE GENERATOR, RIG DOWN GENERATOR PACKAGE. PICK UP AND CLEAN UP MISC. TRASH AROUND LOCATION. RIGGED DOWN- 85% RIG MOVED-50% RIGGED UP- 0%
6:00	10:00	4.00	01MIRU	LOCMOV	MOVE	P	LOAD OUT BACK YARD AND GENERATORS AND MOVE FROM DRRU #2123MH TO ST. ANDREWS 320LH. PREP DERRICK TO BE LOWERED, RIG MOVE DISTANCE 48 MILES. RIGGED DOWN- 90% RIG MOVED- 60% RIGGED UP- 10%
10:00	14:00	4.00	01MIRU	LOCMOV	MOVE	P	LOAD OUT AND MOVE, CREW HOUSE, TOOLPUSHER HOUSE AND CHANGE HOUSE AND MOVE TO ST. ANDREWS 320 LH. PJSM WITH EVERYBODY ON LOCATION ON LOWERING DRRICK, LOWERED DERRICK @ NOON. RIG IS BEING PRESSURE WASHED AS LOADED OUT. RIGGED DOWN- 90% RIG MOVED- 70% RIGGED UP-20%
14:00	18:00	4.00	01MIRU	LOCMOV	MOVE	P	SPOT BACK YARD, GENERATORS, VFD HOUSE, MCC HOUSE AND SHAKERS, RIG UP WHAT HANDRAILS AND LINES WE CAN RIG UP ON ST. ANDREWS #320LH. REMOVED DERRICK OFF OF SUB, LOWER SUB AND PULL CENTER STEEL ON DRRU #2123MH, WASH SUB AND DERRICK WITH PRESSURE WASHING CREW. MOVE SAME TO ST. ANDREWS #320LH AND SPOT MUDBOAT, DWKS, AND SUBS. RIGGED DOWN- 100 % RIG MOVED- 95% RIGGED UP- 30 %
18:00	22:00	4.00	01MIRU	LOCMOV	RU	P	INSTALL NEW RIG SIGNS ON STANDS, SET UP LIGHT TOWERS, PSI WASH SUBS. RIG UP GENS, SCR HOUSE, ELECTRICAL LINES TO PUMPS AND MUD TANKS. RIGGED DOWN- 100 % RIG MOVED- 95% RIGGED UP- 35 %
22:00	0:00	2.00	01MIRU	LOCMOV	RU	P	PSI WASH DERRICK, CONT TO RIG UP ELECTRICAL LINES AND MISC EQUIPMENT RIGGED DOWN- 100 % RIG MOVED- 95% RIGGED UP- 35 %
Total Time		24.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	6:00	6.00	01MIRU	LOCMOV	RU	P	PLUG IN VFD CABLE TRAY, PLUG IN MCC SERVICE ARM TO PITS, INSTALL GROUND RODS TO BACKYARD, PLUG HOOK UP DWKS, MAKE UP MUD PUMP VIBRATOR HOSES AND VIBRATOR ON TOP OF MCC HOUSE. RIGGED DOWN- 100% RIG MOVED- 95% RIGGED UP- 40 %
Total Time		6.00					

Safety Incident? N **Days since Last RI:** 46.00 **Weather Comments:**

Environ Incident? N **Days since Last LTA:** 46.00

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 10/24/2014
Report No: 2M

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
SAFE ACTS: 6
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 5
LO/TO'S: 5
PERMIT'S TO WORK: 2
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

BEST STOP CARD: EMPLOYEES WORKED TOGETHER ON RIG MOVE, EXPLAINED TO THEM THE GOOD WORK WAS APPRECIATED, EMPLOYEES AGREED AND JOB CONTINUED INCIDENT FREE.
24 HOUR GOAL:DERRICK IN THE AIR BY 1200

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 10/23/2014
Report No: 1M

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
14:00	19:00	5.00	01MIRU	LOCMOV	RD	P	RIG DOWN 3RD PARTY OBM EQUIPMENT, RIG DOWN BACKYARD AND MOVE PUMPS, TANKS, PDS, DRILLPIPE, PREMIX TANK, AND GEL BINS TO NEW LOCATION. PSI WASH ALL LOADS LEAVING LOCATION. RIGGED DOWN- 75% RIG MOVED-50% RIGGED UP- 0%	
19:00	0:00	5.00	01MIRU	LOCMOV	RD	P	RIG DOWN GENERATOR'S, PIN TOP DRIVE, & UNSPOOL DRILL LINE, CLEAN ON ALL LOADS LOADED AND SUB. RIGGED DOWN- 80% RIG MOVED-50% RIGGED UP- 0%	
Total Time		10.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	6:00	6.00	01MIRU	LOCMOV	RD	P	RIG DOWN ELECTRICAL TO FLOOR, GRASSHOPPER, AND J-ARM ON RIG FLOOR. PREP DERRICK TO BE LOWERED, BLEED CYLINDERS. SWAP POWER OVER TO PORTABLE GENERATOR, RIG DOWN GENERATOR PACKAGE. PICK UP AND CLEAN UP MISC. TRASH AROUND LOCATION. RIGGED DOWN- 85% RIG MOVED-50% RIGGED UP- 0%	
Total Time		6.00						

Safety Incident? N **Days since Last RI:** 45.00 **Weather Comments:**

Environ Incident? N **Days since Last LTA:** 45.00

Incident Comments:

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" E ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 10
 SAFE ACTS: 6
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 11
 SAFETY MEETINGS: 5
 LO/TO'S: 0
 PERMIT'S TO WORK: 1
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC:

BEST STOP CARD: EMPLOYEE WAS PLACING CLEANING PDS WITHOUT FACE SHIELD STOPPED JOB EXPLAINED DANGERS AND POLICY, HE COMPLIED AND JOB CONT INCIDENT FREE.
 24 HOUR GOAL:RELEASE RIG BY NOON

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/04/2014
 Report No: 10

Wellbore / Top MD:	00 / 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	9.50
Today's MD:	8700 ft	Progress:		Ground Elev:	3,079.10 ft	Daily Cost:	\$391,871
Prev MD:	8700 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,289,295
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 90% SH, 10% LS

Current Ops:
24-Hr Summary: TOOH, LD DC'S, PULL WEAR BUSH, RU CSG CREW, DRY RUN MANDREL, RUN 9 5/8" CASING FROM SHOE TO 6,814'
24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONT RUNNING 9 5/8" CSG TO 8,687', CCM, CEMENT, INST PACK OFF & TEST, PU CURVE BHA

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	/	Pump Rate:	291.5 gpm	Conn:			125
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:		Pump Press:	125	Trip:			110
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			113
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	8,655.0	2.00	304.30	8,651.78	109.2	122.7	109.2	0.14	-0.13
Engineer:	KEVIN THREADGILL	8,504.0	2.20	305.70	8,500.88	106.0	127.3	106.0	1.03	1.01
Geologist:	SUMIYAH AHMED	8,315.0	0.30	276.80	8,311.93	103.8	130.7	103.8	0.37	-0.05
Oxy Personnel:	2	8,126.0	0.40	112.70	8,122.93	104.0	130.6	104.0	0.64	-0.26
Contractor Personnel	18	7,937.0	0.90	340.90	7,933.94	102.9	130.5	102.9	0.46	0.44
Total on Site:	20	7,748.0	0.06	33.10	7,744.95	101.4	130.9	101.4	0.55	-0.55

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
4	12.250	HALLIBURTON	MM65D	12520014	M323	9x12	7355	8700	1-1-NO-A	X-I-NO-TD

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA								
Engineer:	BUCK HOSKIN	MBT:	0.0 lbm/bbl	BHA No:	4	Bit No:	4	MD In:	7355 ft			
Sample From:	In (Suction Pit)	pH:	10.0	Purpose:	DRILL INTERMEDIATE HOLE			MD Out:	8700 ft			
Mud Type:	Spud Mud	Pm / Pom:		Component								
Time / MD:	0:01 / 8.700.0	Pf / Mf:	0.1 / 0.2	PDC BIT	12.250	2.000	1	1.50				
Density @ Temp:	9.10 / 0	Chlorides:	50,000	VERTICAL DRILLING TOOL	8.000	2.000	1	34.94				
Rheology Temp:	120	Ca++ / K+:	0 / 0	CROSSOVER	8.000	2.875	1	3.65				
Viscosity:	48.00	CaCl2:		INTEGRAL BLADE STABILIZER	8.000	2.875	1	7.63				
PV / YP:	4 / 19	Cl- in water phase:		TELEDRIFT	8.000	2.500	1	28.60				
Gels 10s/10m/30m:	9 / 10 / 12	Lime:	0.00	INTEGRAL BLADE STABILIZER	7.750	2.875	1	7.91				
API WL:	17.00	ES:		DRILL COLLAR	8.000	2.875	6	183.79				
HTHP WL:	0.00	ECD:	0.00	CROSSOVER	8.000	3.000	1	3.60				
Cake API / HTHP:	2.0 / 0	n / K:	0.00 / 0.00	DRILL COLLAR	6.500	3.000	1	30.28				
Solids / Sol Corr:	7.00 / 2.30	Carbonate:		DRILLING JAR	6.500	3.000	1	32.30				
Oil / Water:	0.0 / 93.0	Bicarbonate:	0 ppm	DRILL COLLAR	6.500	3.000	5	152.85				
Oil / Water % for OWR:	/	Form Loss / Cum Loss	0.0 / 0.0	DRILL COLLAR	6.500	2.875	27	833.71				
Sand:	0.01	Fluid Disch:	/	HWDP								
Water Added:		Daily Mud Cost:	\$124	Total Length: 1,320.76 ft Wt below Jars: 40.0 kip								
Oil Added:		Cum Mud Cost:	\$32,825	DAILY COSTS (Top 15)								
LGS:	2.30 / 21.20			Cost Description								

VG Meter: 13@3 / 15@6 / 20@100 / 21@200 / 23@300 / 27@600
 Comments: Last 24 hrs: Drilled to 8700' TVD. Circulate hole clean.
 POOH. Running casing @TOR. Next 24 Hours: Roll OBM frac tanks. Collect

MUD PRODUCTS				DAILY COSTS (Top 15)		
Product	Number of Units	Units	Qty Used	Cost Description	Vendor	Amount
Blower Rental	1.00	each	1.00	Material Casing/Liners/Accs	SOONER PIPE LLC	\$286,063
Bulk Tank Rental	1.00	each	2.00	Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650
				Material Fuel Offroad Diesel	THOMAS PETROLEUM LLC	\$22,511
				Taxes IVA (Value Added Tax)	OXY	\$18,661
				Taxes IVA (Value Added Tax)	OXY	\$17,772
				Material Casing/Liners/Accs	WEATHERFORD INTERNATIOI	\$4,827
				Contr Rig Supervisor	AIP INC	\$4,700
				Services Mud Logging	OTHER	\$1,535
				Rental Downhole Equip/Tools	BAKER HUGHES OILFIELD OF	\$1,505
				Freight Shipping - Land Transportat	TEJAS HOTSHOT SERVICE &	\$1,210
				Contr Other - Other Labor	CAMERON	\$957
				Contr Other - Other Labor	M I SWACO	\$825
				Services Rig Costs - Drill Rig	M I SWACO	\$613
				Freight Shipping - Land Transportat	TEJAS HOTSHOT SERVICE &	\$436
				Services Communication & IT	NATIONAL OILWELL VARCO LI	\$400

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/04/2014
 Report No: 10

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:30	2.50	21INDR	TRIP		P	CONTINUE TO TOO H FROM 6,465' TO 1,644' NO DRAG HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.	
2:30	3:00	0.50	21INDR	TRIP	DRILL	P	REMOVE ROTATING HEAD, INSTALL TRIP NIPPLE & FLOW CHECK AT THE SHOE (GOOD)	
3:00	4:00	1.00	21INDR	TRIP	DRILL	P	CONTINUE TO TOO H FROM 1,644' TO 487' HOLE TAKING AVERAGE OF 1 BBL OVER CALCULATED FILL UP EVERY 5 STANDS.	
4:00	4:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON LAYING DOWN 6.5" AND 8" DRILL COLLARS	
4:30	6:00	1.50	21INDR	TRIP	DRILL	P	LAY DOWN 6- 6.5" DC'S, 1 JAR.	
6:00	6:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON LAYING DOWN 8" DRILL COLLARS	
6:30	9:00	2.50	21INDR	TRIP	BHA	P	L/D 6-8" DC'S, DRAIN MUD MOTOR, BRAKE BIT, L/D IBS'S, NMDC (ISYS TOOL).	
9:00	9:30	0.50	21INDR	BOP	RPWB	P	PULL WEAR BUSHING W/ CAMERON TECH.	
9:30	10:00	0.50	21INDR	CSG	RIGUP	P	DRY FIT 9 5/8" MANDREL WITH CAMERON TECH	
10:00	10:30	0.50	21INDR	SAFE	PJSM	P	HOLD SAFETY MEETING W/ OXY DSM, H&P TOOLPUSHER, B&L CASING CREW & H&P RIG CREW. SAFETY BRAKE: PINCH POINTS, DROPPED OBJECTS	
10:30	11:30	1.00	21INDR	CSG	RIGUP	P	RIG UP B&L CASING CREW & CRT TOOL	
11:30	15:30	4.00	21INDR	CSG	RUNCSG	P	MAKE UP SHOE, TWO JTS., FLOAT COLLAR. TEST FLOATS. RUN CASING F/ 88' TO 1,450'. MAKE UP AND RUN 9-5/8" 40# L-80 BTC CASING AS FOLLOWS: WEATHERFORD E303 9-5/8" 40# K-55 BTC FLOAT SHOE SET @ 8,687' 2 JOINTS- 9-5/8" 40# L-80 BTC CASING WEATHERFORD E402 9-5/8" 40# K-55 BTC FLOAT COLLAR SET @ 8,599' 202 JOINTS OF 9-5/8" 40# L-80 BTC CASING TO SURFACE AVERAGE MAKE UP TQ.= 7,500 SEMI-RIGID BOW SPRING CENTRALIZES AS FOLLOWS: 2 PER JOINT ON FIRST TWO JOINTS 1 PER 4 JOINTS TO SURFACE. 4 INSIDE SURFACE CASING 55 TOTAL	
15:30	19:30	4.00	21INDR	CSG	RUNCSG	P	CONTINUE TO RUN CASING F/ 1,450' TO 3,755' PROPER DISPLACEMENT	
19:30	0:00	4.50	21INDR	CSG	RUNCSG	P	CONTINUE TO RUN CASING F/ 3,755' TO 6,814' PROPER DISPLACEMENT	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	3:00	3.00	21INDR	CSG	RUNCSG	P	CONTINUE TO RUN CASING F/ 6,814' TO 8,662' PROPER DISPLACEMENT	
3:00	4:00	1.00	21INDR	CSG	RUNCSG	P	PU 9 5/8" LANDING JOINT WITH MANDREL AND SET AT 8,687' WITH 268K HANGING ON MANDREL	
4:00	6:00	2.00	21INDR	CIRC	CNDHOL	P	CIRCULATE 2 BOTTOMS AT 7.5 BPM, 140 PSI, BEFORE SHUTTING PUMPS OFF PUMP 300 BBL'S OF WATER SPACER. SIMOPS: RIG DOWN B&L CASING CREW AND HOLD CEMENTING SAFETY MEETING WITH HALLIBURTON CEMENTING CREW	
Total Time		6.00						

Safety Incident? N Days since Last RI: 57.00
 Environ Incident? N Days since Last LTA: 57.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

ST ANDREWS UNIT 320LH**Daily Operations 30-Hr Report**

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/04/2014
Report No: 10

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 7

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 10

SAFETY MEETINGS: 4

LO/TO'S: 1

PERMIT'S TO WORK: 0

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE NOT HONORING BUFFER ZONE, STOPPED JOB EXPLAINED DANGERS, HE COMPLIED
JOB CONTINUED INCIDENT FREE

24 HOUR GOAL: PICKING DIRECTIONAL TOOLS UP BY 1200 HRS.

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/05/2014
 Report No: 11

Wellbore / Top MD:	00 / 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	10.50
Today's MD:	8700 ft	Progress:	0 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$180,072
Prev MD:	8700 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,469,367
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 90% SH 10% LS

Current Ops:
24-Hr Summary: RUN 9 5/8" CASING, CIRC, CEMENT, INSTALL PACKOFF AND TEST(GOOD) INSTALL KATCH KAN FOR OBM, PU CURVE BHA
24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) TIH, TEST CASING, CHOKE DRILL, DRILL CMT, FE+10', FIT, SWAP TO OBM, DRILL TO KOP

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	13.375in @ 1,760ft	Str Wt Up/Dn:	/	Pump Rate:	0.0 gpm	Conn:			0
Next Casing:	9.625in @ 8,700ft	Str Wt Rot:		Pump Press:	0	Trip:			138
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			27
Form Test/EMW:	FIT / 13.10 ppg	Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	JEFF ROZELLE	8,655.0	2.00	304.30	8,651.78	109.2	122.7	109.2	0.14	-0.13
Engineer:	KEVIN THREADGILL	8,504.0	2.20	305.70	8,500.88	106.0	127.3	106.0	1.03	1.01
Geologist:	SUMIYAH AHMED	8,315.0	0.30	276.80	8,311.93	103.8	130.7	103.8	0.37	-0.05
Oxy Personnel:	2	8,126.0	0.40	112.70	8,122.93	104.0	130.6	104.0	0.64	-0.26
Contractor Personnel	30	7,937.0	0.90	340.90	7,933.94	102.9	130.5	102.9	0.46	0.44
Total on Site:	32	7,748.0	0.06	33.10	7,744.95	101.4	130.9	101.4	0.55	-0.55

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
5	8.500	HALLIBURTON	MMD55DM	12568106	M323	5x16	8700		--	--
4	12.250	HALLIBURTON	MM65D	12520014	M323	9x12	7355	8700	1-1-NO-A	X-1-NO-TD

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	BUCK HOSKIN	MBT:	0.0 lbm/bbl	BHA No:	5	Bit No:	5	MD In:	8700 ft
Sample From:	In (Suction Pit)	pH:	10.0	Purpose:	DRILL CURVE	MD Out:			
Mud Type:	Spud Mud	Pm / Pom:							
Time / MD:	0:01 / 8,700.0	Pf / Mf:	0.1 / 0.2						
Density @ Temp:	9.10 / 85	Chlorides:	50,000						
Rheology Temp:	120	Ca++ / K+:	0 / 0						
Viscosity:	48.00	CaCl2:							
PV / YP:	4 / 19	Cl- in water phase:							
Gels 10s/10m/30m:	9 / 10 / 12	Lime:	0.00						
API WL:	17.00	ES:							
HTHP WL:	0.00	ECD:	0.00						
Cake API / HTHP:	2.0 / .0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	7.00 / 2.30	Carbonate:							
Oil / Water:	0.0 / 93.0	Bicarbonate:	0 ppm						
Oil / Water % for OWR:	/	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.01	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$5,487						
Oil Added:		Cum Mud Cost:	\$38,312						
LGS:	2.30 / 21.20								

VG Meter: 13@3 / 15@6 / 20@100 / 21@200 / 23@300 / 27@600

Comments: Last 24 hrs: Ran casing and cemented with no issues. P/U Dir tools @TOR. No check necessary. WOC. TIH. Displacement. Next 24

MUD PRODUCTS				DAILY COSTS (Top 15)		
Product	Number of Units	Units	Qty Used	Cost Description	Vendor	Amount
Blower Rental	1.00	each	1.00	Services Cementing	HALLIBURTON ENERGY SERV	\$55,216
Bulk Tank Rental	1.00	each	2.00	Contr Other - Other Labor	B&L EQUIPMENT RENTALS IN	\$27,598
Flowzan	25.00	lb	1.00	Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650
M-I Gel	1.00	ton (short)	17.34	Material Wellhead Equip - WH Equip	CAMERON	\$17,386
Shrink Wrap	1.00	each	79.00	Material Bits/Rmrs/Scrapers	HALLIBURTON ENERGY SERV	\$10,500
Soap Stick	1.00	each	52.00	Material Fluids - Drilling Fluids	WESTERN PETROLEUM LLC	\$10,078
				Taxes IVA (Value Added Tax)	OXY	\$8,575
				Taxes IVA (Value Added Tax)	OXY	\$8,167
				Contr Rig Supervisor	AIP INC	\$4,700
				Services Mud Logging	OTHER	\$1,535
				Rental Downhole Equip/Tools	BAKER HUGHES OILFIELD OF	\$1,505
				Contr Other - Other Labor	CAMERON	\$1,442
				Freight Shipping - Land Transportat	LIGHT TOWER RENTALS	\$1,320
				Contr Other - Other Labor	M I SWACO	\$825
				Services Rig Costs - Drill Rig	M I SWACO	\$613

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/05/2014
Report No: 11

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	3:00	3.00	21INDR	CSG	RUNCSG	P	CONTINUE TO RUN CASING F/ 6,814' TO 8,662' PROPER DISPLACEMENT
3:00	4:00	1.00	21INDR	CSG	RUNCSG	P	PU 9 5/8" LANDING JOINT WITH MANDREL AND SET AT 8,687' WITH 268K HANGING ON MANDREL MAKE UP AND RUN 9-5/8" 40# L-80 BTC CASING AS FOLLOWS: WEATHERFORD E303 9-5/8" 40# K-55 BTC FLOAT SHOE SET @ 8,687' 2 JOINTS- 9-5/8" 40# L-80 BTC CASING WEATHERFORD E402 9-5/8" 40# K-55 BTC FLOAT COLLAR SET @ 8,599' 202 JOINTS OF 9-5/8" 40# L-80 BTC CASING TO SURFACE AVERAGE MAKE UP TQ.= 7,500 SEMI-RIGID BOW SPRING CENTRALIZES AS FOLLOWS: 2 PER JOINT ON FIRST TWO JOINTS 1 PER 4 JOINTS TO SURFACE. 4 INSIDE SURFACE CASING 55 TOTAL
4:00	6:00	2.00	21INDR	CIRC	CNDHOL	P	CIRCULATE 2 BOTTOMS AT 7.5 BPM, 140 PSI, BEFORE SHUTTING PUMPS OFF PUMP 175 BBL'S OF WATER SPACER. SIMOPS: RIG DOWN B&L CASING CREW AND HOLD CEMENTING SAFETY MEETING WITH HALLIBURTON CEMENTING CREW
6:00	6:30	0.50	21INDR	SAFE	PJSM	P	HOLD EJSA SAFETY MEETING W/ OXY DSM, H&P TOOLPUSHER, RIG CREW & HALLIBURTON CEMENTERS. R/U CEMENT HEAD & HALLIBURTON IRON.
6:30	7:00	0.50	21INDR	CIRC	CNDHOL	P	PUMP 175 BBL'S OF FRESH WATER SPACER.
7:00	12:00	5.00	21INDR	CMT	PRIM	P	PERFORM CEMENT JOB ON 9 5/8" INTERMEDIATE AS FOLLOWS: TEST LINES TO 5,000 PSI PUMP 20 BBL'S OF 8.3 PPG WATER SPACER PUMP LEAD, 514 BBL'S OF VARICEM CLASS (C) CEMENT (1150 SACKS) OF CLASS C CEMENT, 11.3 PPG, 2.512 YIELD, 15.05 GAL/SK PUMP TAIL, 156 BBL'S OF VARICEM CLASS (H) CEMENT (510 SACKS) OF CLASS H CEMENT, 13 PPG, 1.712 YIELD, 9.09 GAL/SK DROP PLUG AT 09:40AM PUMP DISPLACEMENT, 652 BBL'S OF 9.3 PPG DRILLING MUD. PUMP RATE WAS 7.5 BPM AND 3 BPM LAST 10 BBL'S PUMPED BUMPED PLUG @ 11:25 HRS, WITH 790 PSI OVER, PUMP PRESSURE WAS 800 PSI AND PRESSURED UP TO 1590 PSI WHEN BUMPED. HELD FOR 5 MINUTES (GOOD) BLED BACK 3.5 BBL'S. KEPT FULL RETURNS THROUGH JOB
12:00	12:30	0.50	21INDR	CMT	RIGUP	P	R/D HALLIBURTON CEMENTERS.
12:30	16:30	4.00	21INDR	WLHD	RWH	P	BACK OUT LANDING JOINT, WASHED OUT STACK AND WELLHEAD, MAKE UP PACK OFF SUB ON CROSSOVER AND RUN INTO WELL HEAD INSTALL PACK OFF. REMOVE JOINT OF DRILLPIPE. PACK OFF & TEST TO 5000 PSI W/ CAMERON TECH (GOOD)
16:30	17:00	0.50	21INDR	BOP	RPWB	P	INSTALL WEAR BUSHING
17:00	17:30	0.50	21INDR	BOP	CHRAMS	P	CHANGE OUT RT. HEAD BOWL GASKET
17:30	18:00	0.50	21INDR	TRIP	BHA	P	PICK UP DIRECTIONAL SUBS TO RIG FLOOR
18:00	18:30	0.50	21INDR	SAFE	PJSM	P	EJSA ON PICKING UP DIRECTIONAL BHA
18:30	21:00	2.50	21INDR	CIRC	CHOVR	P	INSTALL KATCH KAN AROUND BOP FOR OBM LAY OUT AND STRAP 3 JOINTS OF HWDP

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/05/2014
 Report No: 11

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
21:00	0:00	3.00	21INDR	TRIP	BHA	P	PU DIRECTIONAL BHA AS FOLLOWS: DIALED MOTOR DOWN FROM 2.0° TO 1.93°, TESTED MWD AND MOTOR (GOOD) MADE BIT UP AND TIH 8-1/2" PDC BIT (MMD55DM) 6-1/2" WENZEL HB-24 7/8 6.0 1.93° ADJ .26 REV/GAL (SLICK AND FIT FOR OBM) BTB LENGTH 40" UBHO NMDC (MWD/GAMMA) 1- NM FLEX COLLAR 21 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV PLUS AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 9 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP 4-1/2" DP TO SURFACE
Total Time		24.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	21INDR	TRIP	DRILL	P	CONT TO TIH FROM 785' TO 8,434'
4:00	4:30	0.50	21INDR	TRIP	DRILL	P	LOAD GOLD WING W/ DRILLPIPE, STRAP TO REPLACE THE 8" & 6.5" DC'S THAT WAS LAID DOWN TO GET TO BOTTOM.
4:30	5:00	0.50	21INDR	TRIP	PULD	P	REVIEW EJSA ON PICKING UP DP FROM PDS. PICK UP 7 JTS. OF DRILL PIPE & TAG FLOAT COLLAR @ 8,599'.
5:00	5:30	0.50	21INDR	CIRC	CNDFLD	P	FILL PIPE, BREAK CIRCULATION, & LINE UP CHOKE MANIFOLD
5:30	6:00	0.50	21INDR	CSG	PIPE	P	TEST 9 5/8" CASING TO 3,500 PSI & CHART FOR 30 MIN.
Total Time		6.00					

Safety Incident?	N	Days since Last RI:	58.00
Environ Incident?	N	Days since Last LTA	58.00
Incident Comments: No incidents reported last 24 hours.			

Weather Comments:

ST ANDREWS UNIT 320LH**Daily Operations 30-Hr Report**

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/05/2014
Report No: 11

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 7

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 12

SAFETY MEETINGS: 2

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE WORKING UNDER A SUSPENDED LOAD, STOPPED JOB EXPLAINED DANGERS AND JOB CONTINUED INCIDENT FREE.

24 HOUR GOAL: AT KOP BY 1200 HRS

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/06/2014
 Report No: 12

Wellbore / Top MD:	00 / 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	11.50
Today's MD:	8912 ft	Progress:	212 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$79,895
Prev MD:	8700 ft	Rot Hrs Today:	12.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,549,262
PBMD:		Avg ROP Today:	17.7 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 90% SHALE 10% SANDSTONE

Current Ops:
24-Hr Summary: TIH, TEST CASING, CHOKE DRILL, DRILL CMT, FE+10', FIT, SWAP TO OBM, DRILL TO KOP AND BEGIN BUILDING CURVE
24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE BUILDING CURVE

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	225.0 / 212.0 kip	Pump Rate:	400.8 gpm	Conn:	100		114
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	215.0 kip	Pump Press:	2900	Trip:	0		0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	2.0 ft-lbf			Backgr:	113		174
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	6.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	8,849.0	2.20	304.40	8,845.62	113.5	116.3	113.5	0.32	-0.32
Engineer:	KEVIN THREADGILL	8,754.0	2.50	303.50	8,750.70	111.3	119.5	111.3	0.51	0.51
Geologist:	SUMIYAH AHMED	8,655.0	2.00	304.30	8,651.78	109.2	122.7	109.2	0.00	0.00
Oxy Personnel:	2	8,655.0	2.00	304.30	8,651.78	109.2	122.7	109.2	0.14	-0.13
Contractor Personnel	17	8,504.0	2.20	305.70	8,500.88	106.0	127.3	106.0	1.03	1.01
Total on Site:	19	8,315.0	0.30	276.80	8,311.93	103.8	130.7	103.8	0.37	-0.05

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
5	8.500	HALLIBURTON	MMD55DM	12568106	M323	5x16	8700		--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
5	12.00	12.00	202	202	16.8	16.8	15.0/17.0	0/35	0.982	140	131.0	0.6

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	Buck Hoskin	MBT:		BHA No:	5	Bit No:	5	MD In:	8700 ft
Sample From:	In (Suction Pit)	pH:		Purpose:	DRILL CURVE	MD Out:			
Mud Type:	Diesel-Based	Pm / Pom:	1.30						
Time / MD:	0:01 / 8,700.0	Pf / Mf:	/						
Density @ Temp:	9.10 / 85	Chlorides:							
Rheology Temp:	150	Ca++ / K+:	/						
Viscosity:	49.00	CaCl2:	0.00						
PV / YP:	12 / 8	Cl- in water phase:	0.00						
Gels 10s/10m/30m:	6 / 7 / 8	Lime:	1.69						
API WL:	0.00	ES:	519.00						
HTHP WL:	34.00	ECD:	9.30						
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	7.00 / 5.82	Carbonate:	0 ppm						
Oil / Water:	22.0 / 71.0	Bicarbonate:							
Oil / Water % for OWR:	24.00 / 76.00	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.01	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$124						
Oil Added:	0.0 bbl	Cum Mud Cost:	\$38,436						
LGS:	0.80 / 7.61								

VG Meter: 5@3 / 6@6 / 11@100 / 15@200 / 20@300 / 32@600

Comments: Tripped in hole. Displaced 500 bbls gel mud to WBM frac tank 1. Displace 905 bbls of Megadril OBM to Active Circulating System. 555

MUD PRODUCTS				DAILY COSTS (Top 15)		
Product	Number of Units	Units	Qty Used	Cost Description	Vendor	Amount
Blower Rental	1.00	each	1.00	Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650
Bulk Tank Rental	1.00	each	2.00	Material Fluids - Drilling Fluids	THOMAS PETROLEUM LLC	\$13,791
				Material Fuel Offroad Diesel	THOMAS PETROLEUM LLC	\$8,787
				Taxes IVA (Value Added Tax)	OXY	\$8,575
				Taxes IVA (Value Added Tax)	OXY	\$8,167
				Contr Rig Supervisor	AIP INC	\$4,700
				Services Mud Logging	OTHER	\$1,535
				Rental Downhole Equip/Tools	BAKER HUGHES OILFIELD OP	\$1,505
				Utilities Water/Sewers/Trash	STALLION OILFIELD SERVICE	\$1,140
				Contr Other - Other Labor	M I SWACO	\$825
				Services Rig Costs - Drill Rig	M I SWACO	\$613
				Rental Surface Equip	PERMIAN PREMIX PITS LP	\$400
				Services Communication & IT	NATIONAL OILWELL VARCO LI	\$400
				Rental Surface Equip	LIGHT TOWER RENTALS	\$390
				Rental HES Equipment and Tools	BOOTS & COOTS HSE SERVI	\$365

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/06/2014
Report No: 12

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	21INDR	TRIP	DRILL	P	CONT TO TIH FROM 785' TO 8,434'	
4:00	4:30	0.50	21INDR	TRIP	DRILL	P	LOAD GOLD WING W/ DRILLPIPE, STRAP TO REPLACE THE 8" & 6.5" DC'S THAT WAS LAID DOWN TO GET TO BOTTOM.	
4:30	5:00	0.50	21INDR	TRIP	PULD	P	REVIEW EJSA ON PICKING UP DP FROM PDS. PICK UP 7 JTS. OF DRILL PIPE & TAG FLOAT COLLAR @ 8,599'.	
5:00	5:30	0.50	21INDR	CIRC	CNDFLD	P	FILL PIPE, BREAK CIRCULATION, & LINE UP CHOKE MANIFOLD	
5:30	6:00	0.50	21INDR	CSG	PIPE	P	TEST 9 5/8" CASING TO 3,500 PSI & CHART FOR 30 MIN. SAFETY BREAK: WORKING AROUND PRESSURE	
6:00	6:30	0.50	21INDR	CSG	PIPE	P	PERFORM CHOKE DRILL 9.625" CASING, BIT DEPTH 8,591'. 20 SPM W/ 290 PSI. 44 TOTAL STROKES. 7 SEC. LAG TIME W/ CHOKE OPENING 7% EVERY TIME YOU BUMP IT IN EITHER DIRECTION. FCCP= 340 PSI W/ CHOKE 28.5% OPEN.	
6:30	7:00	0.50	21INRC	DRLOUT	DOCMT	P	TAG FLOAT COLLAR @ 8,599', DRILL FLOAT COLLAR, SHOE TRACK & SHOE @ 8,687'. DRILL CEMENT TO 8,700. DRILL NEW FORMATION F/ 8,700' TO 8,710'	
7:00	8:30	1.50	21INRC	CIRC	CNDHOL	P	CIRCULATE BOTTOMS UP.	
8:30	9:00	0.50	21INRC	DRLOUT	DOCMT	P	PERFORM F.I.T. TO EQUIVALENT MUD WEIGHT OF 10 PPG. OMW IN STEEL PITS= 9.3PPG. SURFACE PSI APPLIED 325 PSI.= 10.02PPG	
9:00	14:00	5.00	21INRC	CIRC	CHOVR	P	CLEAN STEEL PITS. PUMP ALL WATER BASE MUD OUT & HOOK UP ALL LINES TO TRANSFER OBM FROM FRAC TANKS TO PITS. R/U SOLID CONTROL EQUIPMENT. SAFETY BREAK: OBM	
14:00	15:30	1.50	21INRC	CIRC	CHOVR	P	TRANSFER OBM FROM FRAC TANKS TO STEEL PITS GOING OVER SHAKERS TO ENSURE CLEAN MUD.	
15:30	16:30	1.00	21INRC	CIRC	CHOVR	P	PULL TRIP NIPPLE & INSTALL ROTATING HEAD BEARING ASSEMBLY DRESSED W/ OBM RUBBER.	
16:30	18:30	2.00	21INRC	CIRC	CHOVR	P	DISPLACE WATER BASE MUD W/ OBM.	
18:30	22:00	3.50	31PRDR	DRILL	MTRVER	P	DRILL 8.5" HOLE FROM 8,710' TO 8,850', TOTAL 140', AVG. ROP 40' HR, W.O.B. 17K, GPM'S-450, SRPM-35, MRPMS-117, TOTAL RPMS=152, PUMP PRESSURE OFF BOTTOM- 2,800 PSI., ON BOTTOM-3,100, DIFF 200, TORQUE OFF BOTTOM 2K, TORQUE ON BOTTOM 5-6K. MUD WEIGHT IN-9.2 PPG.	
22:00	0:00	2.00	31PRDR	DRILL	HRZBLD	P	DIRECTIONAL DRILL 8.5" CURVE FROM 8,850' - 8,912' = 62' AVG ROP 31 SLID 62 FT USING 440 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 104 BRPM, 20 WOB. SURVEY: SD: 8849', INC 2.2, AZM 304.4 DLN: 8, MY: N/A CUMULATIVE HOURS IN INTERMEDIATE CASING: 5.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 8100' 90% SHALE 10% SANDSTONE OIL BASE MW 9.1 VIS 47 CIRCULATING STEEL PITS SAFETY BREAK: MIXING CHEMICALS	
Total Time		24.00						

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/06/2014
 Report No: 12

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	31PRDR	DRILL	HRZBLD	P	DIRECTIONAL DRILL 8.5" CURVE FROM 8,912' - 8,987' = 75' AVG ROP 19 ROTATED 15 FT USING 400 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 35 SRPM + 104 MRPM = 139 BRPM, 16 WOB, 4 TRQ, SLID 60 FT USING 440 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 104 BRPM, 20 WOB. SURVEY: SD: 8975', INC 15.3, AZM 0.90 DLN: 8.8, MY: 9.8 17' HIGH / 2' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 9.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 8970' 75% SHALE 5% SANDSTONE 20% LIMESTONE OIL BASE MW 9.1 VIS 47 CIRCULATING STEEL PITS SAFETY BREAK: MAKING CONNECTION	
4:00	6:00	2.00	31PRDR	DRILL	HRZBLD	P	DIRECTIONAL DRILL 8.5" CURVE FROM 8,987' - 9,057' = 70' AVG ROP 35 SLID 70 FT USING 440 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 104 BRPM, 20 WOB. SURVEY: SD: 8975', INC 15.3, AZM 0.90 DLN: 8.8, MY: 9.8 17' HIGH / 2' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 11.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 8970' 75% SHALE 5% SANDSTONE 20% LIMESTONE OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS SAFETY BREAK: HOUSEKEEPING	
Total Time		6.00						

Safety Incident? N Days since Last RI: 59.00
 Environ Incident? N Days since Last LTA: 59.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

ST ANDREWS UNIT 320LH**Daily Operations 30-Hr Report**

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/06/2014
Report No: 12

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 7

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 10

SAFETY MEETINGS: 6

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: OBSERVE 3RD PARTY TRUCK BACKING UP ON LOCATION WITHOUT SPOTTER, STOPPED THE DRIVER AND EXPLAINED TO HIM OXY POLICY, HE AGREED TO USE A SPOTTER, AND HELPER IN THE TRUCK SPOTTED FOR HIM

24 HOUR GOAL: HAVE CURVE LANDED BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/13/2014
Report No: 19

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	18.50
Today's MD:	14,903 ft	Progress:	1334 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$63,628
Prev MD:	13,569 ft	Rot Hrs Today:	24.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,134,663
PBMD:		Avg ROP Today:	55.6 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 100% SHALE

Current Ops:

24-Hr Summary: CONTINUE DRILLING PRODUCTION LATERAL TO 15,093'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014)CONTINUE DRILLING PRODUCTION LATERAL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	225.0/ 199.0 kip	Pump Rate:	499.6	Conn:	65		121
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	216.0 kip	Pump Press:	4300	Trip:			
Last BOP Press Test:	10/28/2014	Torq Off Btm:	4,000.0 ft-lbf			Backgr:	97		166
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	14,000.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	14,897.0	90.00	345.60	9,545.89	5,668.8	-1,156.4	5,668.8	0.71	-0.63
Engineer:	KEVIN THREADGILL	14,802.0	90.60	345.90	9,546.38	5,576.8	-1,133.0	5,576.8	0.86	-0.85
Geologist:	SUMIYAH AHMED	14,708.0	91.40	346.00	9,548.02	5,485.6	-1,110.2	5,485.6	2.78	2.21
Oxy Personnel:	2	14,613.0	89.30	347.60	9,548.61	5,393.1	-1,088.5	5,393.1	2.07	1.17
Contractor Personnel	17	14,519.0	88.20	349.20	9,546.55	5,301.0	-1,069.6	5,301.0	2.32	-2.32
Total on Site:	19	14,424.0	90.40	349.30	9,545.39	5,207.7	-1,051.9	5,207.7	0.67	-0.21

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
8	7.875	BAKER	DP406X	7150372	S423	6x18	13,148		--	--

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
8	24.00	32.50	1334	1755	55.6	54.0	35.0/43.0	55/90	1.491	96	107.5	0.6

MUD DATA - M-I LLC (Schlumberger)

Engineer: Nels Hansen	MBT:
Sample From: In (Suction Pit)	pH:
Mud Type: Diesel-Based	Pm / Pom: 3.00
Time / MD: 19:00 / 14,680.0	Pf / Mf: /
Density @ Temp: 9.30 / 105	Chlorides:
Rheology Temp: 150	Ca++ / K+: /
Viscosity: 46.00	CaCl2: 26.53
PV / YP: 12 / 6	Cl- in water phase: 30,000.00
Gels 10s/10m/30m: 6 / 11 / 11	Lime: 3.90
API WL: 0.00	ES: 1,190.00
HTHP WL: 15.20	ECD: 9.53
Cake API / HTHP: .0 / 3.0	n / K: 0.00 / 0.00
Solids / Sol Corr: 11.00 / 9.80	Carbonate: 0 ppm
Oil / Water: 76.0 / 13.0	Bicarbonate:
Oil / Water % for OWR: 85.00 / 15.00	Form Loss / Cum Loss 0.0 / 0.0
Sand: 0.10	Fluid Disch: /
Water Added:	Daily Mud Cost: \$4,450
Oil Added:	Cum Mud Cost: \$61,577
LGS: 6.90 / 56.10	

LAST OR CURRENT BHA

BHA No: 8	Bit No: 8	MD In: 13,148 ft		
Purpose: MD Out:				
Component	OD	ID	Jts	Length
PDC BIT	7.875	2.000	1	1.00
LATERAL DRILLING MOTOR	6.500	2.000	1	26.44
UBHO SUB	6.500	2.812	1	2.62
NON-MAG DRILL COLLAR	6.500	2.812	1	30.50
NON-MAG DRILL COLLAR	6.312	2.812	1	31.20
DRILL PIPE	4.500	3.826	66	2,079.04
SAFETY JOINT	6.500	2.845	1	8.90
AGITATOR	6.500	2.875	1	10.75
SHOCK SUB	6.500	2.875	1	12.42
DRILL PIPE	4.500	3.826	186	5,861.83
HWDP	4.500	2.875	30	926.34
Total Length: 8,991.04 ft Wt below Jars:				

VG Meter: 3@3 / 4@6 / 8@100 / 13@200 / 18@300 / 30@600
Comments:

MUD PRODUCTS

Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	28.00
M-I Wate	1.00	ton (short)	4.98
Oil Dry	50.00	lb	1.00
OneMul	55.00	gal	1.00
Shrink Wrap	1.00	each	1.00
Versatrol	50.00	lb	25.00
VG-Plus	50.00	lb	4.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/13/2014
 Report No: 19

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,569' T/ 13,820'= 251' AVG ROP 63'</p> <p>ROTATED 225 FT USING 450 GPM, 3100 PSI OFF BTM, 3550 PSI ON BTM, 60 SRPM + 126 MRPM = 186 BRPM, 30 WOB, 12K TRQ.</p> <p>SLIDE 26 FT USING 450 GPM, 3000 PSI OFF BOTTOM, 3450 PSI ON BOTTOM</p> <p>SURVEY @ 13,762' INC. 89.1° / AZI. 346.10° 6' HIGH / ON THE LINE</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 93 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 13,680' 85% SHALE, 15% LIMESTONE</p> <p>MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS</p>
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,820' T/ 13,960'= 140' AVG ROP 70'</p> <p>ROTATED 139 FT USING 450 GPM, 3100 PSI OFF BTM, 3550 PSI ON BTM, 60 SRPM + 126 MRPM = 186 BRPM, 30 WOB, 12K TRQ.</p> <p>SLIDE 9 FT USING 450 GPM, 3000 PSI OFF BOTTOM, 3450 PSI ON BOTTOM</p> <p>SURVEY @ 13,762' INC. 89.1° / AZI. 346.10° 6' HIGH / ON THE LINE</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 93 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 13,770' 90% SHALE, 10% LIMESTONE</p> <p>MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41</p>
6:00	10:00	4.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,960' T/ 14,214'= 254' AVG ROP 64'.</p> <p>ROTATED 254' FT USING 475 GPM, 3,500 PSI. OFF BTM, 4,000 PSI. ON BTM, 70 SRPM + 124 MRPM = 194 BRPM, 35 WOB, 12K TRQ.</p> <p>SURVEY @ 13,857' INC. 91.2° / AZI. 348°, 11' LOW / 6'- LEFT SURVEY @ 13,952' INC. 91.4° / AZI. 347.9°, 10' LOW / 4'-LEFT SURVEY @ 14,046' INC. 91.2° / AZI. 348.5°, 8' LOW / OTL</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 97 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 13,830,' 95% SHALE, 5% LIMESTONE</p> <p>MUD IN- 9.2 PPG. WITH 49 VIS. MUD OUT- 9.3 PPG WITH 52</p> <p>SAFETY BREAK: WELL CONTROL</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/13/2014
 Report No: 19

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
10:00	14:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 14,214' T/ 14,491'= 277' AVG ROP 70'. ROTATED 277' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 70 SRPM + 130 MRPM = 200 BRPM, 43 WOB, 15K TRQ. SURVEY @ 14,141' INC. 91.1° / AZI. 348.4°, 6' LOW / 4'-RIGHT SURVEY @ 14,235' INC. 90.6° / AZI. 348.7°, 4' LOW / 8'-RIGHT SURVEY @ 14,330' INC. 90.6° / AZI. 348.7°, 3' LOW / 13' RIGHT SURVEY @ 14,424' INC. 90.4° / AZI. 349.3°, 3' LOW / 19' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 101 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,400,' 95% SHALE, 5% LIMESTONE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
14:00	18:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 14,491' T/ 14,654'= 163' AVG ROP 41'. ROTATED 138' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 70 SRPM + 130 MRPM = 200 BRPM, 43 WOB, 15K TRQ. SLIDE FROM 14,585' TO 14,610', WITH 491 GPM'S, 3,800 OFF BOTTOM PRESSURE, 4,200 ON BOTTOM, 30 SURVEY @ 14,519' INC. 88.2° / AZI. 349.2°, 4' LOW / 25'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 101 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,400,' 95% SHALE, 5% LIMESTONE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
18:00	22:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 14,654' T/ 14,820'= 166' AVG ROP 42'. ROTATED 146' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 70 SRPM + 130 MRPM = 200 BRPM, 43 WOB, 15K TRQ. SLIDE 20', WITH 491 GPM'S, 3,800 OFF BOTTOM PRESSURE, 4,200 ON BOTTOM, 30 SURVEY @ 14,802' INC. 90.6° / AZI. 345.9°, 4' LOW / 31'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 105 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,760,' 100% SHALE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/13/2014
Report No: 19

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
22:00	0:00	2.00	31PRDR			P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 14,820' T/ 14,903'= 83' AVG ROP 42'. ROTATED 83' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 70-90 SRPM + 130 MRPM = 200-220 BRPM, 43 WOB, 15K TRQ. SURVEY @ 14,897' INC. 90.0° / AZI. 345.6°, 3' LOW / 31'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 107 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,760,' 100% SHALE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
Total Time		24.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 14,903' T/ 15,038'= 135' AVG ROP 34'. ROTATED 135' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 55 SRPM + 130 MRPM = 185 BRPM, 43 WOB, 14K TRQ. SURVEY @ 14,897' INC. 90.0° / AZI. 345.6°, 3' LOW / 31'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 109 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,940,' 100% SHALE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
4:00	5:00	1.00	31PRDR	CIRC	CNDHOL	P	PERFORM CLEAN UP CYCLE DUE TO STATIC BREAKOVER TORQUE GETTING HIGH CIRCULATE BOTTOMS UP AT 100 RPM'S AND 550 GPM WHILE WORKING PIPE
5:00	6:00	1.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,038' T/ 15,093'= 55' AVG ROP 55'. ROTATED 55' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 55 SRPM + 130 MRPM = 185 BRPM, 43 WOB, 14K TRQ. SURVEY @ 14,897' INC. 90.0° / AZI. 345.6°, 3' LOW / 31'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 110 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,940,' 100% SHALE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
Total Time		6.00					

Safety Incident?	N	Days since Last RI:	66.00
Environ Incident?	N	Days since Last LTA	66.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/13/2014
Report No: 19

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 6

SAFETY MEETINGS: 4

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: EMPLOYEE WAS STANDING IN BUFFER ZONE PF PDS WHILE IN USE. GOT EMPLOYEE OUT OF BUFFER ZONE AND TALKED TO HIM ABOUT HONORING IT. EMPLOYEE AGREED AND JOB CONTINUED SAFELY

24 HOUR GOAL: DRILL TO 17,000' BY 0600

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/07/2014
 Report No: 13

Wellbore / Top MD:	00 / 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	12.50
Today's MD:	9665 ft	Progress:	753 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$72,075
Prev MD:	8912 ft	Rot Hrs Today:	23.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,621,337
PBMD:		Avg ROP Today:	32.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 70% SHALE, 20% SANDSTONE, 5% LIMESTONE

Current Ops:
 24-Hr Summary: CONTINUE BUILDING CURVE FROM 8,912' TO 9,854'
 24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) FINISH BUILDING CURVE AND BEGIN DRILLING PRODUCTION LATERAL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	225.0 / 210.0 kip	Pump Rate:	512.1 gpm	Conn:	67	84	
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	218.0 kip	Pump Press:	3500	Trip:	0	0	
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3.0 ft-lbf			Backgr:	60	45	
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	7.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DL\$	Build
Supervisor 2:	DANNY ARTHERTHOLT	9,605.0	70.20	346.50	9,406.49	532.7	37.5	532.7	0.75	0.64
Engineer:	KEVIN THREADGILL	9,558.0	69.90	346.70	9,390.46	489.7	47.7	489.7	4.27	4.26
Geologist:	SUMIYAH AHMED	9,511.0	67.90	346.90	9,373.54	447.0	57.7	447.0	12.59	12.34
Oxy Personnel:	2	9,464.0	62.10	348.20	9,353.68	405.4	66.9	405.4	13.33	13.33
Contractor Personnel	17	9,416.0	55.70	348.10	9,328.90	365.2	75.3	365.2	7.85	7.66
Total on Site:	19	9,369.0	52.10	349.10	9,301.21	328.0	82.8	328.0	11.47	11.46

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
5	8.500	HALLIBURTON	MMD55DM	12568106	M323	5x16	8700		--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
5	23.50	35.50	753	955	32.0	26.9	18.0/20.0	35/35	0.982	228	167.4	1.2

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA					
Engineer:	Buck Hoskin	MBT:		BHA No:	5	Bit No:	5	MD In:	8700 ft
Sample From:	Out (Shaker Underflow)	pH:		Purpose:	DRILL CURVE	MD Out:			
Mud Type:	Diesel-Based	Pm / Pom:	3.60						
Time / MD:	0:01 / 8.912.0	Pf / Mf:	/						
Density @ Temp:	9.10 / 85	Chlorides:							
Rheology Temp:	150	Ca++ / K+:	/						
Viscosity:	44.00	CaCl2:	0.00						
PV / YP:	10 / 10	Cl- in water phase:	0.00						
Gels 10s/10m/30m:	9 / 10 / 11	Lime:	4.68						
API WL:	0.00	ES:	793.00						
HTHP WL:	18.00	ECD:	9.30						
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	7.00 / 5.77	Carbonate:	0 ppm						
Oil / Water:	71.0 / 22.0	Bicarbonate:							
Oil / Water % for OWR:	24.00 / 76.00	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.01	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$6,913						
Oil Added:	126.0 bbl	Cum Mud Cost:	\$45,349						
LGS:	0.80 / 7.49								

VG Meter: 6@3 / 7@6 / 11@100 / 16@200 / 20@300 / 30@600
 Comments: Drilled ahead to 9461' MD cir closed in pits with 9.1 ppg 44 sec/qt vis. OWR low from displacement. Adding diesel at 14 bbls per hour.

MUD PRODUCTS				DAILY COSTS (Top 15)		
Product	Number of Units	Units	Qty Used	Cost Description	Vendor	Amount
Blower Rental	1.00	each	1.00	Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650
Bulk Tank Rental	1.00	each	2.00	Material Fluids - Drilling Fluids	THOMAS PETROLEUM LLC	\$15,272
Lime	50.00	lb	45.00	Material Fuel Offroad Diesel	THOMAS PETROLEUM LLC	\$7,607
OneMul	55.00	gal	2.00	Contr Rig Supervisor	AIP INC	\$4,700
Versamod	55.00	gal	2.00	Rental Surface Equip	HALLIBURTON ENERGY SERV	\$4,250
Versatrol	50.00	lb	25.00	Taxes IVA (Value Added Tax)	OXY	\$3,432
VG-Plus	50.00	lb	5.00	Taxes IVA (Value Added Tax)	OXY	\$3,269
				Services Mud Logging	OTHER	\$1,535
				Contr Other - Other Labor	M I SWACO	\$825
				Services Rig Costs - Drill Rig	M I SWACO	\$613
				Rental Surface Equip	PERMIAN PREMIX PITS LP	\$400
				Services Communication & IT	NATIONAL OILWELL VARCO LI	\$400
				Rental Surface Equip	LIGHT TOWER RENTALS	\$390
				Rental HES Equipment and Tools	BOOTS & COOTS HSE SERVIC	\$365
				Rental Surface Equip	KATCH KAN USA LLC	\$315

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/07/2014
Report No: 13

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 8,912' - 8,987' = 75' AVG ROP 19</p> <p>ROTATED 15 FT USING 400 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 35 SRPM + 104 MRPM = 139 BRPM, 16 WOB, 4 TRQ,</p> <p>SLID 60 FT USING 440 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 104 BRPM, 20 WOB.</p> <p>SURVEY: SD: 8975', INC 15.3, AZM 0.90 DLN: 8.8, MY: 9.8 17' HIGH / 2' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 9.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 8970' 75% SHALE 5% SANDSTONE 20% LIMESTONE</p> <p>OIL BASE MW 9.1 VIS 47 CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MAKING CONNECTION</p>
4:00	6:00	2.00	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 8,987' - 9,057' = 70' AVG ROP 35</p> <p>SLID 70 FT USING 440 GPM, 2700 PSI OFF BTM, 2900 PSI ON BTM, 104 BRPM, 20 WOB.</p> <p>SURVEY: SD: 8975', INC 15.3, AZM 0.90 DLN: 8.8, MY: 9.8 17' HIGH / 2' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 11.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 8970' 75% SHALE 5% SANDSTONE 20% LIMESTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: HOUSEKEEPING</p>
6:00	6:30	0.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,057' - 9,077' = 20' AVG ROP 40</p> <p>ROTATED 20 FT USING 450 GPM, 2750 PSI OFF BTM, 2950 PSI ON BTM, 45 SRPM + 117 MRPM = 162 BRPM, 18 WOB, 6 TRQ</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 12 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>OIL BASE MW 9.2 VIS 48 CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: MAKING CONNECTION</p>
6:30	10:30	4.00	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,077' - 9,170' = 93' AVG ROP 23</p> <p>SLID 93 FT USING 450 GPM, 2800 PSI OFF BTM, 3000 PSI ON BTM, 117 MRPM, 24 WOB.</p> <p>SURVEY: SD: 9,132', INC 25.3, AZM 349.3 DLN: 9.1, MY: 9.1 18' HIGH / 7' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 16 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,090' 85% SHALE, 15% LIMESTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: HAND PLACEMENT</p>

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/07/2014
Report No: 13

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
10:30	14:00	3.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,170'- 9,286 ' = 116' AVG ROP 33</p> <p>SLID 116 FT USING 450 GPM, 2800 PSI OFF BTM, 3000 PSI ON BTM, 117 MRPM, 24 WOB.</p> <p>SURVEY: SD: 9,227', INC 35.7, AZM 350 DLN: 10.2, MY: 10.2 19' HIGH / 9' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 19.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,210' 70% SHALE, 30% LIMESTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p> <p>SAFETY BREAK: W/ OXY HSE DOUG, DAVID, & OXY DSM ON RIPPLE EFFECT</p>	
14:00	14:30	0.50	31PRDR	RIGMT	SRVRIG	P	SERVICE RIG	
14:30	18:00	3.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,286'- 9,440' = 154' AVG ROP 44</p> <p>SLID 154 FT USING 500 GPM, 2800 PSI OFF BTM, 3000 PSI ON BTM, 130 MRPM, 31 WOB.</p> <p>SURVEY: SD: 9,321', INC 46.6, AZM 348.8 MY: 11.26 22' HIGH / 10' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 23 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,210' 70% SHALE, 30% LIMESTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p>	
18:00	20:30	2.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,440'- 9,524' = 84' AVG ROP 34</p> <p>SLID 84 FT USING 500 GPM, 3200 PSI OFF BTM, 3700 PSI ON BTM, 130 MRPM, 31 WOB.</p> <p>SURVEY: SD: 9,511', INC 67.9, AZM 346.9 MY: 8.00 DLN 8 29' HIGH / 10' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 25.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,487' 60% SHALE, 15% LIMESTONE, 25% SANDSTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p>	
20:30	0:00	3.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL TANGENT 8.5" CURVE FROM 9,524'- 9,665' = 141' AVG ROP 40</p> <p>ROTATE 141 FT USING 500 GPM, 3200 PSI OFF BTM, 3500 PSI ON BTM, 130 MRPM, 35 SRPM, 165 TRPM 18-19 WOB.</p> <p>SURVEY: SD: 9,605', INC 70.2, AZM 346.5 DLS 0.75 MY: 8.00 DLN 8.5 36' HIGH / 8' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 29 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,640' 15% SHALE, 20% LIMESTONE, 65% SANDSTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p>	
Total Time		24.00						

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/07/2014
 Report No: 13

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:30	4.50	31PRDR	DRILL	HRZBLD	P	DIRECTIONAL DRILL TANGENT 8.5" CURVE FROM 9,665'- 9,770' = 105' AVG ROP 24 ROTATE 105 FT USING 500 GPM, 3200 PSI OFF BTM, 3500 PSI ON BTM, 130 MRPM, 35 SRPM, 165 TRPM 18-19 WOB. SURVEY: SD: 9,700', INC 69.9, AZM 346.5 DLS 1.54 MY: 13.5 DLN 8.2 32' HIGH / 6' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 33.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 9,720' 70% SHALE, 5% LIMESTONE, 25% SANDSTONE OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITs
4:30	6:00	1.50	31PRDR	DRILL	HRZBLD	P	DIRECTIONAL DRILL 8.5" CURVE FROM 9,770'- 9,823' = 53' AVG ROP 35 SLIDE 53 FT USING 500 GPM, 3200 PSI OFF BTM, 3700 PSI ON BTM, 130 MRPM, 24 WOB. DIFF. 320 PSI SURVEY: SD: 9,700', INC 69.9, AZM 346.5 DLS 1.54 MY: 13.5 DLN 8.2 32' HIGH / 6' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 35 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 9,720' 70% SHALE, 5% LIMESTONE, 25% SANDSTONE OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITs

Total Time 6.00

Safety Incident?	N	Days since Last RI:	60.00
Environ Incident?	N	Days since Last LTA	60.00

Weather Comments:
 Incident Comments:
 No incidents reported last 24 hours.

ST ANDREWS UNIT 320LH**Daily Operations 30-Hr Report**

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/07/2014
Report No: 13

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 7

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 9

SAFETY MEETINGS: 4

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: 3RD PARTY TRUCK DRIVER CAME ONTO LOCATINO WITHOUT CALLING RIG FLOOR AND CHECKING IN.
EXPLAINED TO HIM OXY POLICY AND HE AGREED TO CALL RIG FLOOR ON NEXT VISIT.

24 HOUR GOAL: COMPLETE CURVE BY 0800

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/08/2014
 Report No: 14

Wellbore / Top MD:	00 / 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	13.50
Today's MD:	10,200 ft	Progress:	535 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$112,285
Prev MD:	9665 ft	Rot Hrs Today:	15.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,733,621
PBMD:		Avg ROP Today:	35.7 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:
 24-Hr Summary: FINISH BUILDING CURVE AND DRILLING TO 10,200', TOOH AND PICK UP PRODUCTION LATERAL BHA
 24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) FINISH TIH TO BOTTOM AND CONTINUE DRILLING PRODUCTION LATERAL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	225.0 / 190.0 kip	Pump Rate:	508.0 gpm	Conn:	0	0	0
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	200.0 kip	Pump Press:	3450	Trip:	0	0	0
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3,000.0 ft-lbf			Backgr:	60	110	
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	9,000.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	10,140.0	90.60	349.60	9,507.23	1,040.0	-77.7	1,040.0	2.10	2.10
Engineer:	KEVIN THREADGILL	10,078.0	89.30	349.50	9,507.18	979.0	-66.4	979.0	2.60	2.53
Geologist:	SUMIYAH AHMED	9,983.0	86.90	348.90	9,504.03	885.8	-48.6	885.8	11.94	9.36
Oxy Personnel:	2	9,936.0	82.50	345.40	9,499.69	840.2	-38.2	840.2	5.32	5.32
Contractor Personnel	17	9,889.0	80.00	345.30	9,492.54	795.2	-26.5	795.2	8.22	8.09
Total on Site:	19	9,842.0	76.20	346.00	9,482.85	750.7	-15.1	750.7	9.01	8.96

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
6	7.875	HALLIBURTON	MMD55DM	12542469		5x18	10,200		--	--
5	8.500	HALLIBURTON	MMD55DM	12568106	M323	5x16	8700	10,200	1-1-BT-H	1-1-BT-BHA

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
5	15.00	50.50	535	1490	35.7	29.5	20.0/35.0	30/60	0.982	227	166.0	1.2

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA																																																																					
Engineer:	Buck Hoskin	MBT:			BHA No:	6	Bit No:	6	MD In:	10,200 ft																																																																
Sample From:	In (Suction Pit)	pH:			Purpose:				MD Out:																																																																	
Mud Type:	Diesel-Based	Pm / Pom:	3.10		<table border="1"> <thead> <tr> <th>Component</th> <th>OD</th> <th>ID</th> <th>Jts</th> <th>Length</th> </tr> </thead> <tbody> <tr><td>PDC BIT</td><td>7.875</td><td>2.000</td><td>1</td><td>1.00</td></tr> <tr><td>CURVE DRILLING MOTOR</td><td>6.500</td><td>2.000</td><td>1</td><td>26.15</td></tr> <tr><td>FLOAT SUB</td><td>6.500</td><td>2.875</td><td>1</td><td>4.11</td></tr> <tr><td>UBHO SUB</td><td>6.500</td><td>2.812</td><td>1</td><td>3.10</td></tr> <tr><td>NON-MAG DRILL COLLAR</td><td>6.500</td><td>2.812</td><td>1</td><td>30.50</td></tr> <tr><td>NON-MAG FLEX DRILL COLLAR</td><td>6.312</td><td>2.812</td><td>1</td><td>31.20</td></tr> <tr><td>DRILL PIPE</td><td>4.500</td><td>3.826</td><td>66</td><td>2,078.81</td></tr> <tr><td>SAFETY JOINT</td><td>6.500</td><td>2.845</td><td>1</td><td>8.90</td></tr> <tr><td>AGITATOR</td><td>6.500</td><td>2.875</td><td>1</td><td>10.75</td></tr> <tr><td>SHOCK SUB</td><td>6.500</td><td>2.875</td><td>1</td><td>12.42</td></tr> <tr><td>DRILL PIPE</td><td>4.500</td><td>3.826</td><td>186</td><td>5,862.06</td></tr> <tr><td>HWDP</td><td>4.500</td><td>2.875</td><td>30</td><td>926.34</td></tr> </tbody> </table>					Component	OD	ID	Jts	Length	PDC BIT	7.875	2.000	1	1.00	CURVE DRILLING MOTOR	6.500	2.000	1	26.15	FLOAT SUB	6.500	2.875	1	4.11	UBHO SUB	6.500	2.812	1	3.10	NON-MAG DRILL COLLAR	6.500	2.812	1	30.50	NON-MAG FLEX DRILL COLLAR	6.312	2.812	1	31.20	DRILL PIPE	4.500	3.826	66	2,078.81	SAFETY JOINT	6.500	2.845	1	8.90	AGITATOR	6.500	2.875	1	10.75	SHOCK SUB	6.500	2.875	1	12.42	DRILL PIPE	4.500	3.826	186	5,862.06	HWDP	4.500	2.875	30	926.34
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Time / MD:	0:01 / 10,200.0	Pf / Mf:	/		Total Length:	8,995.34 ft Wt below Jars:																																																																				
Density @ Temp:	9.20 / 85	Chlorides:			DAILY COSTS (Top 15)																																																																					
Rheology Temp:	150	Ca++ / K+:	/		<table border="1"> <thead> <tr> <th>Cost Description</th> <th>Vendor</th> <th>Amount</th> </tr> </thead> <tbody> <tr><td>Services Rig Costs - Drill Rig</td><td>HELMERICH & PAYNE INTERN</td><td>\$25,650</td></tr> <tr><td>Material Fluids - Drilling Fluids</td><td>THOMAS PETROLEUM LLC</td><td>\$22,649</td></tr> <tr><td>Material Bits/Rmrs/Scrapers</td><td>HALLIBURTON ENERGY SERV</td><td>\$15,500</td></tr> <tr><td>Material Bits/Rmrs/Scrapers</td><td>HALLIBURTON ENERGY SERV</td><td>\$15,500</td></tr> <tr><td>Taxes IVA (Value Added Tax)</td><td>OXY</td><td>\$5,347</td></tr> <tr><td>Taxes IVA (Value Added Tax)</td><td>OXY</td><td>\$5,092</td></tr> <tr><td>Contr Rig Supervisor</td><td>AIP INC</td><td>\$4,700</td></tr> <tr><td>Rental Surface Equip</td><td>HALLIBURTON ENERGY SERV</td><td>\$4,250</td></tr> <tr><td>Contr Other - Other Labor</td><td>KATCH KAN USA LLC</td><td>\$2,153</td></tr> <tr><td>Material Fluids - Drilling Fluids</td><td>CATALYST OILFIELD SERVICE</td><td>\$1,600</td></tr> <tr><td>Utilities Water/Sewers/Trash</td><td>STALLION OILFIELD SERVICE</td><td>\$1,598</td></tr> <tr><td>Services Mud Logging</td><td>OTHER</td><td>\$1,535</td></tr> <tr><td>Contr Other - Other Labor</td><td>M I SWACO</td><td>\$825</td></tr> <tr><td>Services Rig Costs - Drill Rig</td><td>M I SWACO</td><td>\$613</td></tr> <tr><td>Services Communication & IT</td><td>NATIONAL OILWELL VARCO LI</td><td>\$400</td></tr> </tbody> </table>					Cost Description	Vendor	Amount	Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650	Material Fluids - Drilling Fluids	THOMAS PETROLEUM LLC	\$22,649	Material Bits/Rmrs/Scrapers	HALLIBURTON ENERGY SERV	\$15,500	Material Bits/Rmrs/Scrapers	HALLIBURTON ENERGY SERV	\$15,500	Taxes IVA (Value Added Tax)	OXY	\$5,347	Taxes IVA (Value Added Tax)	OXY	\$5,092	Contr Rig Supervisor	AIP INC	\$4,700	Rental Surface Equip	HALLIBURTON ENERGY SERV	\$4,250	Contr Other - Other Labor	KATCH KAN USA LLC	\$2,153	Material Fluids - Drilling Fluids	CATALYST OILFIELD SERVICE	\$1,600	Utilities Water/Sewers/Trash	STALLION OILFIELD SERVICE	\$1,598	Services Mud Logging	OTHER	\$1,535	Contr Other - Other Labor	M I SWACO	\$825	Services Rig Costs - Drill Rig	M I SWACO	\$613	Services Communication & IT	NATIONAL OILWELL VARCO LI	\$400																	
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Viscosity:	41.00	CaCl2:	0.00																																																																							
PV / YP:	10 / 7	Cl- in water phase:	0.00																																																																							
Gels 10s/10m/30m:	7 / 9 / 9	Lime:	4.03																																																																							
API WL:	0.00	ES:	872.00																																																																							
HTHP WL:	15.00	ECD:	9.34																																																																							
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00																																																																							
Solids / Sol Corr:	9.00 / 9.07	Carbonate:	0 ppm																																																																							
Oil / Water:	75.0 / 16.0	Bicarbonate:																																																																								
Oil / Water % for OWR:	18.00 / 82.00	Form Loss / Cum Loss	0.0 / 0.0																																																																							
Sand:	0.01	Fluid Disch:	/																																																																							
Water Added:		Daily Mud Cost:	\$1,181																																																																							
Oil Added:	154.0 bbl	Cum Mud Cost:	\$46,529																																																																							
LGS:	3.70 / 33.57																																																																									

VG Meter: 4@3 / 5@6 / 8@100 / 12@200 / 17@300 / 27@600
 Comments: Added 6500 gallons of diesel to bring OWR up to 82/18
 Additions of Lime to bring up POM to 3.1 Drilled ahead to 10200' MD. Pumped

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	22.00
Oil Dry	50.00	lb	2.00
Versatrol	50.00	lb	6.00
VG-Plus	50.00	lb	5.00

DAILY COSTS (Top 15)		
Cost Description	Vendor	Amount
Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650
Material Fluids - Drilling Fluids	THOMAS PETROLEUM LLC	\$22,649
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Contr Other - Other Labor	M I SWACO	\$825
Services Rig Costs - Drill Rig	M I SWACO	\$613
Services Communication & IT	NATIONAL OILWELL VARCO LI	\$400

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/08/2014
 Report No: 14

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:30	4.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL TANGENT 8.5" CURVE FROM 9,665'- 9,770' = 105' AVG ROP 24</p> <p>ROTATE 105 FT USING 500 GPM, 3200 PSI OFF BTM, 3500 PSI ON BTM, 130 MRPM, 35 SRPM, 165 TRPM 18-19 WOB.</p> <p>SURVEY: SD: 9,700', INC 69.9, AZM 346.5 DLS 1.54 MY: 13.5 DLN 8.2 32' HIGH / 6' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 33.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,720' 70% SHALE, 5% LIMESTONE, 25% SANDSTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p>
4:30	6:00	1.50	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,770'- 9,823' = 53' AVG ROP 35</p> <p>SLIDE 53 FT USING 500 GPM, 3200 PSI OFF BTM, 3700 PSI ON BTM, 130 MRPM, 24 WOB. DIFF. 320 PSI</p> <p>SURVEY: SD: 9,700', INC 69.9, AZM 346.5 DLS 1.54 MY: 13.5 DLN 8.2 32' HIGH / 6' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 35 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,720' 70% SHALE, 5% LIMESTONE, 25% SANDSTONE</p> <p>OIL BASE MW 9.0 VIS 47 CIRCULATING STEEL PITS</p>
6:00	10:00	4.00	31PRDR	DRILL	HRZBLD	P	<p>DIRECTIONAL DRILL 8.5" CURVE FROM 9,823'- 9,996' = 173' AVG ROP 43 CURVE LANDED @ 9,996'</p> <p>ROTATE 15 FT USING 500 GPM, 3300 PSI OFF BTM, 3600 PSI ON BTM, 130 MRPM, 35 SRPM, 165 TRPM 20 WOB.</p> <p>SLIDE 158 FT USING 500 GPM, 3300 PSI OFF BTM, 3600 PSI ON BTM, 130 MRPM, 34 WOB. DIFF. 360 PSI</p> <p>SURVEY: SD: 9,983', INC 86.9, AZM 348.9 2' HIGH / L/R ON THE LINE</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 39 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 9,930' 80% SHALE, 5% LIMESTONE, 15% SANDSTONE</p> <p>OIL BASE MW 9.2 VIS 42 CIRCULATING STEEL PITS</p> <p>SAFETY BRAKE: PROPER LIFTING</p>

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/08/2014
Report No: 14

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
10:00	13:00	3.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 8.5" PRODUCTION HOLE FROM 9,996' TO 10,140' = 144' AVG ROP 48'</p> <p>ROTATED 144 FT USING 500 GPM, 3300 PSI OFF BTM, 3600 PSI ON BTM, 60 SRPM + 130 MRPM = 190 BRPM, 20 WOB, 300 TRQ.</p> <p>SURVEY: SD: 10,078', INC 89.3, AZM 349.5 1' HIGH / L/R ON THE LINE</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 42 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 10,020' 70% SHALE 20% LIMESTONE 10% SANDSTONE</p> <p>OIL BASE MW 8.1 VIS 42 CIRCULATING STEEL PITS</p>
13:00	13:30	0.50	31PRDR	RIGMT	SRVRIG	P	SERVICE RIG
13:30	14:30	1.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 8.5" PRODUCTION HOLE FROM 10,140' TO 10,200' = 60' AVG ROP 60'</p> <p>ROTATED 60 FT USING 500 GPM, 3300 PSI OFF BTM, 3600 PSI ON BTM, 60 SRPM + 130 MRPM = 190 BRPM, 20 WOB, 300 TRQ.</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 43 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 10,020' 70% SHALE 20% LIMESTONE 10% SANDSTONE</p> <p>OIL BASE MW 8.1 VIS 42 CIRCULATING STEEL PITS</p>
14:30	15:30	1.00	31PRDR	CIRC	CNDHOL	P	PUMP SWEEP, PREFORM CLEAN UP, CIRCULATE HOLE CLEAN, BUILD SLUG & PREP TO T.O.H. & PICK UP 7 7/8" BIT & LATERAL ASSEMBLY.
15:30	16:00	0.50	31PRDR	CIRC	CNDHOL	P	<p>FLOW CHECK, WELL STATIC, PUMP SLUG.</p> <p>SAFETY BRAKE: T.O.H.</p>
16:00	20:30	4.50	31PRDR	TRIP	DRILL	P	<p>T.O.H. TO PICK UP LATERAL ASSEMBLY F/ 10,200' TO SURFACE</p> <p>HOLE TAKING PROPER FILL</p>
20:30	21:30	1.00	31PRDR	TRIP	DRILL	P	PERFORM PJSM ON LAYING DOWN DIRECTIONAL TOOLS AND L/D SAME
21:30	23:00	1.50	31PRDR	TRIP	DRILL	P	PICK UP AND SCRIBE 6.5" MOTOR. MAKE UP MOTOR AND MWD TOOLS AND TEST. MAKE UP 7.875 BIT
23:00	23:30	0.50	31PRDR	RIGMT	SRVRIG	P	CLEAN RIG FLOOR PRIOR TO TIH
23:30	0:00	0.50	31PRDR	SAFE	PJSM	P	PERFORM PJSM ON PICKING UP BHA AND TIH WITH RIG MANAGER, RIG CREW AND DSM.
Total Time		24.00					

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/08/2014
Report No: 14

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	3:30	3.50	31PRDR	TRIP	DRILL	P	PU DIRECTIONAL BHA AS FOLLOWS AND TIH IN TO 8,154': 7.875" PDC BIT (MM55DM) 6.5" NOV 7/8 1.5° .26 REV/GAL (SLICK AND FIT FOR OBM) BTB LENGTH 6.32' FLOAT SUB UBHO NMDC (MWD/GAMMA) 1- NM FLEX COLLAR 66 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV PLUS AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 186 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP 4-1/2" DP TO SURFACE
3:30	4:00	0.50	31PRDR	SAFE	PJSM	P	PERFORM PJSM WITH RIG REW, RIG MANAGER AND DSM ON SLIP AND CUTTING DRILL LINE
4:00	5:00	1.00	31PRDR	RIGMT	SRVRIG	P	SLIP AND CUT DRILL LINE
5:00	6:00	1.00	31PRDR	TRIP	DRILL	P	CONTINUE TIH FROM 8,154' TO 10,200'
Total Time		6.00					

Safety Incident?	N	Days since Last RI:	61.00	Weather Comments:
Environ Incident?	N	Days since Last LTA	61.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks:	<p>Driving Directions for St. Andrews Unit 320LH From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.</p> <p>LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'</p> <p>OXY DSM TRAILER: 432-253-7382</p> <p>UNSAFE ACTS: 7 SAFE ACTS: 5 UNSAFE EQUIPMENT: SWA'S:0 NEAR MISSES: 0</p> <p>JSA'S: 12 SAFETY MEETINGS: 6 LO/TO'S: 2 PERMIT'S TO WORK: 2 POWER LINE CHECKLIST: 10/21/2014 PRE SPUD/RIG INSPECTION: HAZARD ID'S: 0 EP2 OBSERVATIONS: 0</p> <p>NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109 NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109</p> <p>BEST STOP CARD: EMPLOYEE WAS PULLING SLIPS BY HIMSELF. STOPPED THE JOB AND SPOKE WITH CREW ABOUT MINIMUM 2 PEOPLE ON SLIPS. CREW AGREED TO USE 2 PEOPLE AND JOB CONTINUED SAFELY 24 HOUR GOAL: DRILL TO 12,500 BY 0600</p>
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ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/09/2014
 Report No: 15

Wellbore / Top MD:	00 / 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	14.50
Today's MD:	11,740 ft	Progress:	1540 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$54,136
Prev MD:	10,200 ft	Rot Hrs Today:	17.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,787,758
PBMD:		Avg ROP Today:	88.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 60% SHALE, 30% SANDSTONE, 10% LIMESTONE

Current Ops:

24-Hr Summary: FINISH TIH TO BOTTOM AND CONTINUE DRILLING PRODUCTION LATERAL TO 12,020'

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014)CONTINUE DRILLING PRODUCTION LATERAL TO 15,000'

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	128.0 / 110.0 kip	Pump Rate:	508.0 gpm	Conn:	209		375
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	117.0 kip	Pump Press:	3950	Trip:	266		266
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3.0 ft-lbf			Backgr:	203		548
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	12.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	11,686.0	88.70	347.40	9,501.70	2,554.3	-386.6	2,554.3	1.23	-0.63
Engineer:	KEVIN THREADGILL	11,591.0	89.30	348.40	9,500.05	2,461.5	-366.7	2,461.5	1.01	0.96
Geologist:	SUMIYAH AHMED	11,497.0	88.40	348.10	9,498.16	2,369.4	-347.6	2,369.4	2.00	-1.89
Oxy Personnel:	2	11,402.0	90.20	347.50	9,497.00	2,276.6	-327.5	2,276.6	1.45	1.17
Contractor Personnel	17	11,308.0	89.10	346.70	9,496.42	2,185.0	-306.5	2,185.0	1.80	-1.68
Total on Site:	19	11,213.0	90.70	347.30	9,496.26	2,092.4	-285.1	2,092.4	0.64	0.00

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
6	7.875	HALLIBURTON	MMD55DM	12542469	M434	5x18	10,200		--	--
5	8.500	HALLIBURTON	MMD55DM	12568106	M323	5x16	8700	10,200	1-1-BT-H	1-1-BT-BHA

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
6	17.50	17.50	1540	1540	88.0	88.0	25.0/30.0	80/100	1.243	140	131.2	0.9

MUD DATA - M-I LLC (Schlumberger)

Engineer: Buck Hoskin	MBT:
Sample From: In (Suction Pit)	pH:
Mud Type: Diesel-Based	Pm / Pom: 4.00
Time / MD: 0:01 / 11,572.0	Pf / Mf: /
Density @ Temp: 9.10 / 85	Chlorides:
Rheology Temp: 150	Ca++ / K+: /
Viscosity: 39.00	CaCl2: 0.00
PV / YP: 9 / 7	Cl- in water phase: 0.00
Gels 10s/10m/30m: 5 / 8 / 8	Lime: 5.20
API WL: 0.00	ES: 1,047.00
HTHP WL: 10.00	ECD: 9.35
Cake API / HTHP: .0 / 3.0	n / K: 0.00 / 0.00
Solids / Sol Corr: 10.00 / 9.04	Carbonate: 0 ppm
Oil / Water: 76.0 / 14.0	Bicarbonate:
Oil / Water % for OWR: 16.00 / 84.00	Form Loss / Cum Loss 0.0 / 0.0
Sand: 0.01	Fluid Disch: /
Water Added:	Daily Mud Cost: \$9,648
Oil Added: 156.0 bbl	Cum Mud Cost: \$56,178
LGS: 5.60 / 50.88	

LAST OR CURRENT BHA

BHA No: 6	Bit No: 6	MD In: 10,200 ft		
Purpose: MD Out:				
Component	OD	ID	Jts	Length
PDC BIT	7.875	2.000	1	1.00
CURVE DRILLING MOTOR	6.500	2.000	1	26.15
FLOAT SUB	6.500	2.875	1	4.11
UBHO SUB	6.500	2.812	1	3.10
NON-MAG DRILL COLLAR	6.500	2.812	1	30.50
NON-MAG DRILL COLLAR	6.312	2.812	1	31.20
DRILL PIPE	4.500	3.826	66	2,078.81
SAFETY JOINT	6.500	2.845	1	8.90
AGITATOR	6.500	2.875	1	10.75
SHOCK SUB	6.500	2.875	1	12.42
DRILL PIPE	4.500	3.826	186	5,862.06
HWDP	4.500	2.875	30	926.34
Total Length: 8,995.34 ft Wt below Jars:				

VG Meter: 4@3 / 4@6 / 9@100 / 12@200 / 16@300 / 25@600
 Comments: Last 24 hrs: POOH to change motor and bit. TIH. Drilled ahead to 11572'MD, 9497'TVD circulating 9.1 ppg 39 sec/qt vis Megadril

DAILY COSTS (Top 15)

Cost Description	Vendor	Amount
Services Rig Costs - Drill Rig	HELMERICH & PAYNE INTERN	\$25,650
Freight Shipping - Land Transportat	TEJAS HOTSHOT SERVICE &	\$5,944
Contr Rig Supervisor	AIP INC	\$4,700
Rental Surface Equip	HALLIBURTON ENERGY SERV	\$4,250
Taxes IVA (Value Added Tax)	OXY	\$2,593
Taxes IVA (Value Added Tax)	OXY	\$2,469
Services Mud Logging	OTHER	\$1,535
Contr Other - Other Labor	ROSSES HOTSHOT & FORKLI	\$950
Contr Other - Other Labor	M I SWACO	\$825
Services Rig Costs - Drill Rig	M I SWACO	\$613
Rental Surface Equip	PERMIAN PREMIX PITS LP	\$400
Services Communication & IT	NATIONAL OILWELL VARCO LI	\$400
Rental Surface Equip	LIGHT TOWER RENTALS	\$390
Rental HES Equipment and Tools	BOOTS & COOTS HSE SERVIC	\$365
Rental Surface Equip	KATCH KAN USA LLC	\$315

MUD PRODUCTS

Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
HRP	55.00	gal	1.00
Lime	50.00	lb	26.00
M-I Wate	100.00	lb	15.00
M-I Wate	1.00	ton (short)	19.00
Versamod	55.00	gal	1.00
VG-Plus	50.00	lb	8.00

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/09/2014
Report No: 15

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	3:30	3.50	31PRDR	TRIP	DRILL	P	<p>PU DIRECTIONAL BHA AS FOLLOWS AND TIH IN TO 8,154':</p> <p>7.875" PDC BIT (MM55DM) 6.5" NOV 7/8 1.5° .26 REV/GAL (SLICK AND FIT FOR OBM) BTB LENGTH 6.32' FLOAT SUB UBHO NMDC (MWD/GAMMA) 1- NM COLLAR 66 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV PLUS AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 186 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP 4-1/2" DP TO SURFACE</p>
3:30	4:00	0.50	31PRDR	SAFE	PJSM	P	PERFORM PJSM WITH RIG REW, RIG MANAGER AND DSM ON SLIP AND CUTTING DRILL LINE
4:00	5:00	1.00	31PRDR	RIGMT	SRVRIG	P	SLIP AND CUT DRILL LINE
5:00	6:00	1.00	31PRDR	TRIP	DRILL	P	CONTINUE TIH FROM 8,154' TO 10,200'
6:00	9:30	3.50	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 10,200' T/ 10,440' = 240' AVG ROP 68'</p> <p>ROTATED 183 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ.</p> <p>SLIDE 57 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM</p> <p>SURVEY @ 10,362' INC. 91.7° / AZI. 349.5 8' HIGH / 8' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 46.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 10,410' 90% SHALE 10% LIMESTONE</p> <p>OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS</p> <p>SAFETY BRAKE: RUNNING PDS</p>
9:30	14:00	4.50	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 10,440' T/ 11,075' = 635' AVG ROP 141'</p> <p>ROTATED 635 FT USING 500 GPM, 3525 PSI OFF BTM, 4050 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 10K TRQ.</p> <p>SURVEY @ 11,024' INC. 90.3° / AZI. 347.5 14' HIGH / 20' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 51 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 10,650' 80% SHALE 20% SANDSTONE</p> <p>OIL BASE MW 9.3 VIS 41 CIRCULATING STEEL PITS</p> <p>SAFETY BRAKE: 3RD PARTY HANDS</p>
14:00	14:30	0.50	31PRDR	RIGMT	SRVRIG	P	SERVICE RIG.

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/09/2014
 Report No: 15

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
14:30	18:00	3.50	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,075' T/ 11,453' = 378' AVG ROP 108'</p> <p>ROTATED 360 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ.</p> <p>SLIDE 18 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM</p> <p>SURVEY @ 11,308' INC. 89.1° / AZI. 346.7 20' HIGH / 20' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 54.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 11,310' 40% SHALE 55% LIMESTONE 5% SANDSTONE</p> <p>OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS</p>	
18:00	22:00	4.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,453' T/ 11,677' = 224' AVG ROP 56'</p> <p>ROTATED 183 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ.</p> <p>SLIDE 41 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM</p> <p>SURVEY @ 11,591' INC. 89.3° / AZI. 348.4 24' HIGH / 27' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 59.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 11,670' 65% SHALE, 10% LIMESTONE, 25% SANDSTONE</p> <p>OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS</p>	
22:00	0:00	2.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,677' T/ 11,740' = 63' AVG ROP 32'</p> <p>ROTATED 51 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ.</p> <p>SLIDE 12 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM</p> <p>SURVEY @ 11,686' INC. 88.7° / AZI. 347.4 24.5' HIGH / 29' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 61.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 11,670' 65% SHALE, 10% LIMESTONE, 25% SANDSTONE</p> <p>OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS</p>	
Total Time		24.00						

ST ANDREWS UNIT 320LH
Daily Operations 30-Hr Report

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

Date: 11/09/2014
 Report No: 15

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,740' T/ 11,930' = 190' AVG ROP 47.5' ROTATED 170 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ. SLIDE 20 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM SURVEY @ 11,875' INC. 84.5° / AZI. 346.2 16' HIGH / 29' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 65.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 11,880' 60% SHALE, 10% LIMESTONE, 30% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS	
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,930' T/ 12,020' = 90' AVG ROP 45' ROTATED 70 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ. SLIDE 20 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM SURVEY @ 11,875' INC. 84.5° / AZI. 346.2 16' HIGH / 29' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 67.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 11,880' 60% SHALE, 10% LIMESTONE, 30% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS	
Total Time		6.00						

Safety Incident? N Days since Last RI: 62.00
 Environ Incident? N Days since Last LTA: 62.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

ST ANDREWS UNIT 320LH

Daily Operations 30-Hr Report

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

Date: 11/09/2014
Report No: 15

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 7

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 8

SAFETY MEETINGS: 5

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: 3RD PARTY WAS WALKING ON CASING WHILE ROLLING IT ON THE PIPE RACKS. STOPPED EMPLOYEE AND TALKED WITH HIM ABOUT ROLLING CASING FROM SIDE. HE AGREED TO STAY OFF PIPE AND JOB CONTINUED SAFELY

24 HOUR GOAL: DRILL TO 15,000 BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/10/2014
Report No: 16

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	15.50
Today's MD:	12,050 ft	Progress:	310 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$72,513
Prev MD:	11,740 ft	Rot Hrs Today:	7.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,860,271
PBMD:		Avg ROP Today:	44.3 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 85% SHALE, 5% LIMESTONE, 10% SANDSTONE

Current Ops:

24-Hr Summary: TOOH FOR BIT AND MOTOR CHANGE, TIH AND CONTINUE DRILLING PRODUCTION LATERAL

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) CONTINUE DRILLING PRODUCTION LATERAL 15,000'

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	228.0/ 203.0 kip	Pump Rate:	516.3	Conn:	240	254	
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	218.0 kip	Pump Press:	3950	Trip:	217	217	
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3.0 ft-lbf			Backgr:	130	291	
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	9.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	12,063.0	88.70	345.70	9,522.42	2,919.5	-477.4	2,919.5	1.65	1.17
Engineer:	KEVIN THREADGILL	11,969.0	87.60	344.60	9,519.38	2,828.7	-453.3	2,828.7	3.71	3.30
Geologist:	SUMIYAH AHMED	11,875.0	84.50	346.20	9,512.91	2,738.0	-429.7	2,738.0	2.31	-2.22
Oxy Personnel:	2	11,686.0	88.70	347.40	9,501.70	2,554.3	-386.6	2,554.3	1.23	-0.63
Contractor Personnel	17	11,591.0	89.30	348.40	9,500.05	2,461.5	-366.7	2,461.5	1.01	0.96
Total on Site:	19	11,497.0	88.40	348.10	9,498.16	2,369.4	-347.6	2,369.4	2.00	-1.89

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
7	7.875	HALLIBURTON	MM54D	12451961	M343	7x15	12,020		--	--
6	7.875	HALLIBURTON	MMD55DM	12542469	M434	5x18	10,200	12,020	1-4-BT-S	X-I-CT-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
7	7.00	7.00	310	310	44.3	44.3	15.0/25.0	80/80	1.208	153	137.1	0.9
6	6.00	23.50	280	1820	46.7	77.4	30.0/40.0	80/100	1.243	145	133.3	0.9

MUD DATA - M-I LLC (Schlumberger)

Engineer: Buck Hoskin	MBT:
Sample From: In (Suction Pit)	pH:
Mud Type: Diesel-Based	Pm / Pom: 2.30
Time / MD: 0:01 / 12,020.0	Pf / Mf: /
Density @ Temp: 9.10 / 85	Chlorides:
Rheology Temp: 150	Ca++ / K+: /
Viscosity: 40.00	CaCl2: 0.00
PV / YP: 11 / 5	Cl- in water phase: 0.00
Gels 10s/10m/30m: 6 / 8 / 8	Lime: 2.99
API WL: 0.00	ES: 1,102.00
HTHP WL: 10.00	ECD: 9.34
Cake API / HTHP: .0 / 3.0	n / K: 0.00 / 0.00
Solids / Sol Corr: 10.00 / 9.12	Carbonate: 0 ppm
Oil / Water: 77.0 / 13.0	Bicarbonate:
Oil / Water % for OWR: 14.00 / 86.00	Form Loss / Cum Loss 0.0 / 0.0
Sand: 0.01	Fluid Disch: /
Water Added:	Daily Mud Cost: \$403
Oil Added: 0.0 bbl	Cum Mud Cost: \$56,581
LGS: 5.50 / 49.95	

LAST OR CURRENT BHA

BHA No: 7	Bit No: 7	MD In: 12,020 ft		
Purpose: DRILL PRODUCTION LATERAL		MD Out:		
Component	OD	ID	Jts	Length
PDC BIT	7.875	2.000	1	1.00
CURVE DRILLING MOTOR	6.500	2.000	1	26.15
UBHO SUB	6.500	2.875	1	4.11
UBHO SUB	6.500	2.812	1	3.10
NON-MAG DRILL COLLAR	6.500	2.812	1	30.50
NON-MAG DRILL COLLAR	6.312	2.812	1	31.20
DRILL PIPE	4.500	3.826	66	2,078.81
SAFETY JOINT	6.500	2.845	1	8.90
AGITATOR	6.500	2.875	1	10.75
SHOCK SUB	6.500	2.875	1	12.42
DRILL PIPE	4.500	3.826	186	5,862.06
HWDP	4.500	2.875	30	926.34
Total Length: 8,995.34 ft Wt below Jars:				

VG Meter: 4@3 / 4@6 / 8@100 / 12@200 / 16@300 / 27@600
Comments: Last 24 hrs: Drilled ahead to 12019'MD, 9497' TVD circulating 9.1 ppg, 40 sec/qt viscosity Megadril OBM. POOH @ 6:00am to

MUD PRODUCTS

Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Cottonseed Hulls	50.00	lb	15.00
Lime	50.00	lb	10.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/10/2014
Report No: 16

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,740' T/ 11,930' = 190' AVG ROP 47.5'</p> <p>ROTATED 170 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ.</p> <p>SLIDE 20 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM</p> <p>SURVEY @ 11,875' INC. 84.5° / AZI. 346.2 16' HIGH / 29' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 65.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 11,880' 60% SHALE, 10% LIMESTONE, 30% SANDSTONE</p> <p>OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS</p>
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	<p>DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 11,930' T/ 12,020' = 90' AVG ROP 45'</p> <p>ROTATED 70 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 100 SRPM + 130 MRPM = 230 BRPM, 32 WOB, 12K TRQ.</p> <p>SLIDE 20 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM</p> <p>SURVEY @ 11,875' INC. 84.5° / AZI. 346.2 16' HIGH / 29' RIGHT</p> <p>CUMULATIVE HOURS IN INTERMEDIATE CASING: 67.5 HRS CUMULATIVE MUD LOSSES: 0 BBL</p> <p>LITHOLOGY: 11,880' 60% SHALE, 10% LIMESTONE, 30% SANDSTONE</p> <p>OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS</p>
6:00	8:00	2.00	31PRDR	CIRC	CNDHOL	P	<p>PERFORM DRILL OFF TEST, PLAY WITH DRILLING PARAMETERS. COULD NOT GET OVER 200 PSI OF DIFFERENTIAL PRESSURE AND OVER 26 FPH. CIRCULATE BOTTOMS UP & BUILD SLUG.</p> <p>SAFETY BREAK: PINCH POINTS</p>
8:00	8:30	0.50	31PRDR	CIRC	CNDHOL	PT	<p>FLOW CHECK, WELL STATIC, PUMP SLUG.</p>
8:30	11:30	3.00	31PRDR	TRIP	DRILL	PT	<p>T.I.H. TO CHANGE OUT BIT & MUD MOTOR F/ 12,020' TO 5,232'. HOLE TAKEN PROPER FILL AND NO EXCESS DRAG</p>
11:30	12:00	0.50	31PRDR	TRIP	BHA	PT	<p>L/D SHOCK TOOL, AGITATOR & SAFETY JT.</p>
12:00	15:00	3.00	31PRDR	TRIP	DRILL	PT	<p>CONT. T.O.H. F/ 5,232' TO 97'. HOLE TAKEN PROPER FILL AND NO EXCESS DRAG</p> <p>SAFETY BRAKE: OVERHEAD LIFTING</p>
15:00	17:00	2.00	31PRDR	TRIP	BHA	PT	<p>LAY OUT MWD TOOL TO TIGHTEN PULSAR, ATTEMPT TO DRAIN MOTOR BUT IT WAS ALREADY DRAINED, INDICATING BLOW BY ON THE STATOR RUBBER. EXPLAINS NO DIFFERENTIAL.PSI. BRAKE BIT & LAY DOWN MOTOR. PICK UP NEW MOTOR(6 1/2" BAKER ADJUSTABLE 1.5° 5/6 LOBE 6.0 STAGE .33 REV/GAL.) SCRIBE, INSTALL MWD, SURFACE TEST, MAKE UP BIT.(HALLIBURTON MM54D)</p>
17:00	23:00	6.00	31PRDR	TRIP	DRILL	PT	<p>T.I.H. F/ 97' TO 12,020'</p> <p>HOLE GIVING PROPER DISPLACEMENT FILL PIPE AND BREAK CIRCULATION EVERY 30 STANDS</p> <p>SAFTEY BRAKE: CHECK TIW VALVE & DART VALVE</p>

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/10/2014
Report No: 16

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
23:00	0:00	1.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,020' T/ 12,050' = 30' AVG ROP 30' ROTATED 22 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 25 WOB, 12K TRQ. SLIDE 8 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM SURVEY @ 11,875' INC. 84.5° / AZI. 346.2 16' HIGH / 29' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 68.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 11,880' 60% SHALE, 10% LIMESTONE, 30% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,050' T/ 12,400' = 350' AVG ROP 87.5' ROTATED 348 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 25 WOB, 12K TRQ. SLIDE 2 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM SURVEY @ 12,347' INC. 89.9° / AZI. 345 2' HIGH / 2' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING:72.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,270' 85% SHALE, 5% LIMESTONE, 10% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS	
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,400' T/ 12,589' = 189' AVG ROP 94.5' ROTATED 189 FT USING 450 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 80 SRPM + 148 MRPM = 228 BRPM, 25 WOB, 12K TRQ. DRILLING WITH 1 PUMP DUE TO BLOWN SWAB SURVEY @ 12,347' INC. 89.9° / AZI. 345 2' HIGH / 2' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING:72.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,270' 85% SHALE, 5% LIMESTONE, 10% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	63.00	Weather Comments:
Environ Incident?	N	Days since Last LTA	63.00	
Incident Comments: No incidents reported last 24 hours.				

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/10/2014
Report No: 16

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 7

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 8

SAFETY MEETINGS: 3

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: 3RD PARTY CASING CREW WAS PRESSURE WASHING WITH FACE SHIELD LIFTED UP, STOPPED THE JOB AND EXPLAINED TO HIM THAT THE FACE SHIELD NEEDED TO BE DOWN, IN THE PROPER POSITION WHILE WASHING. HE PUT IT DOWN AND JOB CONTINUED SAFELY.

24 HOUR GOAL: DRILL TO 15,000 BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/11/2014
Report No: 17

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	16.50
Today's MD:	13,148 ft	Progress:	1098 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$63,697
Prev MD:	12,050 ft	Rot Hrs Today:	16.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,923,969
PBMD:		Avg ROP Today:	68.6 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 90% SHALE, 10% LIMESTONE

Current Ops:

24-Hr Summary: CONTINUE DRILLING PRODUCTION LATERAL 13,148' TOOH DUE TO MWD FAILURE, CHANGE BIT AND MOTOR AND BEGIN TIH

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014)CONTINUE TIH TO 13,148 AND CONTINUE DRILLING PRODUCTION LATERAL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	225.0/ 190.0 kip	Pump Rate:	516.3	Conn:	190	190	
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	205.0 kip	Pump Press:	4000	Trip:		1289	
Last BOP Press Test:	10/28/2014	Torq Off Btm:	3,500.0 ft-lbf			Backgr:	250	300	
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	9,000.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	MANUEL CASTANUELA	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	13,011.0	86.40	343.00	9,528.53	3,835.6	-720.6	3,835.6	3.98	-3.71
Engineer:	KEVIN THREADGILL	12,914.0	90.00	344.40	9,525.48	3,742.5	-693.4	3,742.5	0.68	0.53
Geologist:	SUMIYAH AHMED	12,820.0	89.50	344.80	9,525.07	3,651.9	-668.4	3,651.9	1.04	0.74
Oxy Personnel:	2	12,725.0	88.80	344.10	9,523.67	3,560.4	-643.0	3,560.4	2.78	-1.91
Contractor Personnel	17	12,631.0	90.60	346.00	9,523.17	3,469.6	-618.7	3,469.6	0.42	-0.42
Total on Site:	19	12,536.0	91.00	346.00	9,524.50	3,377.4	-595.7	3,377.4	0.53	0.43

BIT RECORD

Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
7	7.875	HALLIBURTON	MM54D	12451961	M343	7x15	12,020	13,148	8-8-RO-S	N-16-RO-PR
6	7.875	HALLIBURTON	MMD55DM	12542469	M434	5x18	10,200	12,020	1-4-BT-S	X-I-CT-PR

BIT OPERATING PARAMETERS TODAY

Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
7	16.00	23.00	1098	1408	68.6	61.2	25.0/40.0	60/80	1.208	155	137.1	1.0

MUD DATA - M-I LLC (Schlumberger)

Engineer: Nels Hansen	MBT:
Sample From: In (Suction Pit)	pH:
Mud Type: Diesel-Based	Pm / Pom: 5.00
Time / MD: 17:00 / 13,148.0	Pf / Mf: /
Density @ Temp: 9.10 / 102	Chlorides:
Rheology Temp: 150	Ca++ / K+: /
Viscosity: 42.00	CaCl2: 23.10
PV / YP: 11 / 6	Cl- in water phase: 25,000.00
Gels 10s/10m/30m: 4 / 9 / 10	Lime: 6.50
API WL: 0.00	ES: 1,290.00
HTHP WL: 10.40	ECD: 0.00
Cake API / HTHP: .0 / 3.0	n / K: 0.00 / 0.00
Solids / Sol Corr: 11.00 / 10.03	Carbonate: 0 ppm
Oil / Water: 84.00 / 13.0	Bicarbonate:
Oil / Water % for OWR: 84.00 / 16.00	Form Loss / Cum Loss 0.0 / 0.0
Sand: 0.10	Fluid Disch: /
Water Added:	Daily Mud Cost: \$311
Oil Added: 0.0 bbl	Cum Mud Cost: \$56,891
LGS: 9.00 / 81.00	

LAST OR CURRENT BHA

BHA No: 7	Bit No: 7	MD In: 12,020 ft		
Purpose: DRILL PRODUCTION LATERAL	MD Out: 13,148 ft			
Component	OD	ID	Jts	Length
PDC BIT	7.875	2.000	1	1.00
CURVE DRILLING MOTOR	6.500	2.000	1	26.15
FLOAT SUB	6.500	2.875	1	4.11
UBHO SUB	6.500	2.812	1	3.10
NON-MAG DRILL COLLAR	6.500	2.812	1	30.50
NON-MAG DRILL COLLAR	6.312	2.812	1	31.20
DRILL PIPE	4.500	3.826	66	2,078.81
SAFETY JOINT	6.500	2.845	1	8.90
AGITATOR	6.500	2.875	1	10.75
SHOCK SUB	6.500	2.875	1	12.42
DRILL PIPE	4.500	3.826	186	5,862.06
HWDP	4.500	2.875	30	926.34

VG Meter: 3@3 / 4@6 / 8@100 / 12@200 / 17@300 / 28@600

Total Length: 8,995.34 ft Wt below Jars:

Comments:

MUD PRODUCTS

Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	25.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/11/2014
 Report No: 17

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,050' T/ 12,400' = 350' AVG ROP 87.5' ROTATED 348 FT USING 500 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 25 WOB, 12K TRQ. SLIDE 2 FT USING 500 GPM, 3500 PSI OFF BOTTOM, 3650 PSI ON BOTTOM SURVEY @ 12,347' INC. 89.9° / AZI. 345 2' HIGH / 2' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING:72.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,270' 85% SHALE, 5% LIMESTONE, 10% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,400' T/ 12,589' = 189' AVG ROP 94.5' ROTATED 189 FT USING 450 GPM, 3500 PSI OFF BTM, 3950 PSI ON BTM, 80 SRPM + 148 MRPM = 228 BRPM, 25 WOB, 12K TRQ. DRILLING WITH 1 PUMP DUE TO BLOWN SWAB SURVEY @ 12,347' INC. 89.9° / AZI. 345 2' HIGH / 2' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING:72.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,270' 85% SHALE, 5% LIMESTONE, 10% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS
6:00	10:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,589' T/ 12,724'= 135' AVG ROP 33' ROTATED 103 FT USING 450 GPM, 3440 PSI OFF BTM, 3720 PSI ON BTM, 80 SRPM + 148 MRPM = 228 BRPM, 30 WOB, 8K TRQ. SLIDE 32 FT USING 500 GPM, 3440 PSI OFF BOTTOM, 3640 PSI ON BOTTOM DRILLING WITH 1 PUMP DUE TO BLOWN SWAB & CAP RING FLANGE LEAKING SURVEY @ 12,631' INC. 90.6° / AZI. 346 9' HIGH / 5' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 76.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,715' 100% SHALE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS SAFETY BRAKE: COLD WEATHER

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/11/2014
 Report No: 17

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
10:00	14:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 12,724' T/ 13,060'= 336' AVG ROP 84'. ATTEMPTED TO PUMP 550GPM BUT OFF BOTTOM PSI WAS AREADY @ 4600 PSI ROTATED 313 FT USING 500 GPM, 3620 PSI OFF BTM, 4000 PSI ON BTM, 80 SRPM + 148 MRPM = 228 BRPM, 30 WOB, 8K TRQ. SLIDE 23 FT USING 500 GPM, 3620 PSI OFF BOTTOM, 3940 PSI ON BOTTOM SURVEY @ 13,011' INC. 86.4° / AZI. 343 10' HIGH / 1' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 80.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,960' 80% SHALE, 20% LIMESTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS SAFETY BRAKE: FACESHIELDS	
14:00	16:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,060' T/ 13,148'= 88' AVG ROP 44' ROTATED 88 FT USING 520 GPM, 3820 PSI OFF BTM, 4350 PSI ON BTM, 80 SRPM + 171 MRPM = 251 BRPM, 30 WOB, 8K TRQ. SURVEY @ 13,011' INC. 86.4° / AZI. 343 10' HIGH / 1' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 82.5 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 12,270' 85% SHALE, 5% LIMESTONE, 10% SANDSTONE OIL BASE MW 9.1 VIS 42 CIRCULATING STEEL PITS SAFETY BRAKE: FACESHIELDS	
16:00	16:30	0.50	31PRDR	DRILL	HRZLAT	PT	TROUBLE SHOOT MWD TOOL & CHANGE OUT SURFACE EQUIPMENT. NO PULSES	
16:30	17:30	1.00	31PRDR	CIRC	CNDHOL	PT	CIRCULATE BOTTOMS UP BEFORE TRIPPING OUT THE HOLE DUE TO MWD FAILURE. BUILD SLUG	
17:30	18:00	0.50	31PRDR	TRIP	DRILL	PT	FLOW CHECK, WELL STATIC, PUMP SLUG.	
18:00	0:00	6.00	31PRDR	TRIP	DRILL	PT	PERFORM PJSM AND TOOH FROM 12,968' TO SURFACE. HOLE TAKING PROPER FILL	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/11/2014
Report No: 17

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:30	1.50	31PRDR	TRIP	DRILL	PT	PERFORM PJSM ON LAYING DOWN DIRECTIONAL TOOLS. BEGIN LAYING DOWN DIRECTIONAL TOOLS AND DISCOVERED THAT THE MWD BATTERY HAD EXPLODED INSIDE THE MONEL COLLAR.
1:30	3:00	1.50	31PRDR	TRIP	DRILL	PT	MWD HANDS PUT ON HAZ-MAT APRONS AND APPROPRIATE PPE AND BAGGED UP THE MWD LITHIUM BATTERY. THEY REMOVED THE MONEL COLLAR THE THE BATTERY HAD LEAKED INTO AND PLACED BOTH ON THE SIDE OF THE LOCATION TO BE HAULED OFF TO THEIR SHOP. ONCE ALL THE CONTAMINATED TOOLS HAD BEEN PROPERLY CLEARED OFF THE FLOOR, HAD THE RIG CREWS THOROUGHLY CLEAN THE RIG AND TOOLS PRIOR TO GOING BACK TO WORK.
3:00	3:30	0.50	31PRDR	TRIP	BHA	PT	STRAP AND CALIPER NEW MONEL THAT WAS DELIVERED TO REPLACE CONTAMINATED ONE. PICK UP NEW BIT AND MOTOR AND PERFORM PJSM ON HANDLING BHA
3:30	6:00	2.50	31PRDR	TRIP	DRILL	PT	ORIENTATE MOTOR, MAKE UP BAKER BIT AND PICK UP FIRST MONEL AND TEST MOTOR. PU DIRECTIONAL BHA AS FOLLOWS AND TIH IN TO 8,154': 7.875" PDC BIT (DP406X) 6.5" NOV 7/8 1.5° .28 REV/GAL (SLICK AND FIT FOR OBM) FLOAT SUB UBHO NMDC (MWD/GAMMA) 1- NM COLLAR 66 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV PLUS AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 186 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP 4-1/2" DP TO SURFACE

Total Time 6.00

Safety Incident?	N	Days since Last RI:	64.00
Environ Incident?	N	Days since Last LTA	64.00
Incident Comments: No incidents reported last 24 hours.			

Weather Comments:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/11/2014
Report No: 17

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 7

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 11

SAFETY MEETINGS: 6

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: WHILE PULLING MWD OUT OF COLLAR, NOTICED THAT MWD HAD CRACKED DUE TO A LITHIUM BATTERY EXPLOSION. STOPPED THE JOB AND REMOVED HANDS FROM FLOOR, UNTIL MWD TECHS COULD PROPERLY DISPOSE OF LITHIUM CELLS

24 HOUR GOAL: FINISH TIH AND BE DRILLING BY 11:00 A.M.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
 Report No: 18

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	17.50
Today's MD:	13,569 ft	Progress:	421 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$64,266
Prev MD:	13,148 ft	Rot Hrs Today:	8.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$1,988,235
PBMD:		Avg ROP Today:	49.5 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 90% SHALE, 10% LIMESTONE

Current Ops:
 24-Hr Summary: TIH TO 13,148 AND CONTINUE DRILLING PRODUCTION LATERAL FROM 13'148' TO 13,960'
 24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014)CONTINUE DRILLING PRODUCTION LATERAL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	230.0/ 204.0 kip	Pump Rate:	449.7	Conn:	35		86
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	220.0 kip	Pump Press:	3550	Trip:	97		97
Last BOP Press Test:	10/28/2014	Torq Off Btm:	4.0 ft-lbf			Backgr:	40		30
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	12.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	13,479.0	88.50	345.50	9,550.44	4,285.7	-846.8	4,285.7	1.36	0.85
Engineer:	KEVIN THREADGILL	13,385.0	87.70	344.50	9,547.32	4,194.9	-822.5	4,194.9	0.45	-0.32
Geologist:	SUMIYAH AHMED	13,290.0	88.00	344.80	9,543.76	4,103.4	-797.4	4,103.4	1.58	1.17
Oxy Personnel:	2	13,196.0	86.90	343.80	9,539.57	4,013.0	-772.0	4,013.0	0.67	0.42
Contractor Personnel	17	13,101.0	86.50	344.30	9,534.10	3,921.8	-745.9	3,921.8	1.45	0.11
Total on Site:	19	13,011.0	86.40	343.00	9,528.53	3,835.6	-720.6	3,835.6	3.98	-3.71

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
8	7.875	BAKER	DP406X	7150372	S423	6x18	13,148		--	--
7	7.875	HALLIBURTON	MM54D	12451961	M343	7x15	12,020	13,148	8-8-RO-S	N-16-RO-PR

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
8	8.50	8.50	421	421	49.5	49.5	25.0/30.0	60/60	1.491	77	96.8	0.4

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA				
Engineer:	Nels Hansen	MBT:		BHA No:	8	Bit No:	8	MD In:	13,148 ft
Sample From:	In (Suction Pit)	pH:		Purpose:	MD Out:				
Mud Type:	Diesel-Based	Pm / Pom:	5.00	Component		OD	ID	Jts	Length
Time / MD:	18:00 / 13,322.0	Pf / Mf:	/	PDC BIT	7.875	2.000	1	1.00	
Density @ Temp:	9.20 / 90	Chlorides:		LATERAL DRILLING MOTOR	6.500	2.000	1	26.44	
Rheology Temp:	150	Ca++ / K+:	/	UBHO SUB	6.500	2.812	1	2.62	
Viscosity:	50.00	CaCl2:	24.53	NON-MAG DRILL COLLAR	6.500	2.812	1	30.50	
PV / YP:	10 / 7	Cl- in water phase:	27,000.00	NON-MAG DRILL COLLAR	6.312	2.812	1	31.20	
Gels 10s/10m/30m:	4 / 9 / 10	Lime:	6.50	DRILL PIPE	4.500	3.826	66	2,079.04	
API WL:	0.00	ES:	1,170.00	SAFETY JOINT	6.500	2.845	1	8.90	
HTHP WL:	14.40	ECD:	9.35	AGITATOR	6.500	2.875	1	10.75	
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00	SHOCK SUB	6.500	2.875	1	12.42	
Solids / Sol Corr:	10.00 / 8.94	Carbonate:	0 ppm	DRILL PIPE	4.500	3.826	186	5,861.83	
Oil / Water:	77.0 / 13.0	Bicarbonate:		HWDP	4.500	2.875	30	926.34	
Oil / Water % for OWR:	86.00 / 14.00	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.10	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$236						
Oil Added:	0.0 bbl	Cum Mud Cost:	\$57,127						
LGS:	6.50 / 59.50								
VG Meter:	3@3 / 3@6 / 8@100 / 12@200 / 17@300 / 27@600			Total Length:	8,991.04 ft		Wt below Jars:		

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Oil Dry	50.00	lb	9.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
 Report No: 18

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:30	1.50	31PRDR	TRIP	DRILL	PT	PERFORM PJSM ON LAYING DOWN DIRECTIONAL TOOLS. BEGIN LAYING DOWN DIRECTIONAL TOOLS AND DISCOVERED THAT THE MWD BATTERY HAD EXPLODED INSIDE THE MONEL COLLAR.
1:30	3:00	1.50	31PRDR	TRIP	DRILL	PT	MWD HANDS PUT ON HAZ-MAT APRONS AND APPROPRIATE PPE AND BAGGED UP THE MWD LITHIUM BATTERY. THEY REMOVED THE MONEL COLLAR THE THE BATTERY HAD LEAKED INTO AND PLACED BOTH ON THE SIDE OF THE LOCATION TO BE HAULED OFF TO THEIR SHOP. ONCE ALL THE CONTAMINATED TOOLS HAD BEEN PROPERLY CLEARED OFF THE FLOOR, HAD THE RIG CREWS THOROUGHLY CLEAN THE RIG AND TOOLS PRIOR TO GOING BACK TO WORK.
3:00	3:30	0.50	31PRDR	TRIP	BHA	PT	STRAP AND CALIPER NEW MONEL THAT WAS DELIVERED TO REPLACE CONTAMINATED ONE. PICK UP NEW BIT AND MOTOR AND PERFORM PJSM ON HANDLING BHA
3:30	6:00	2.50	31PRDR	TRIP	DRILL	PT	ORIENTATE MOTOR, MAKE UP BAKER BIT AND PICK UP FIRST MONEL AND TEST MOTOR. PU DIRECTIONAL BHA AS FOLLOWS AND TIH IN TO 8,154': 7.875" PDC BIT (DP406X) 6.5" NOV 7/8 1.5° .28 REV/GAL (SLICK AND FIT FOR OBM) FLOAT SUB UBHO NMDC (MWD/GAMMA) 1- NM COLLAR 66 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV PLUS AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 186 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP 4-1/2" DP TO SURFACE
6:00	10:00	4.00	31PRDR	TRIP	DRILL	PT	TRIP IN THE HOLE FROM 146' TO 4,439'. FILL PIPE AND TEST MWD EVERY 30 STDS. HOLE GIVING PROPER DISPLACEMNET. SAFETY BREAK: PINCH POINTS
10:00	13:00	3.00	31PRDR	TRIP	DRILL	PT	TRIP IN THE HOLE FROM 4,439' TO 9,035'. FILL PIPE AND TEST MWD EVERY 30 STDS. HOLE GIVING PROPER DISPLACEMNET.
13:00	13:30	0.50	31PRDR	TRIP	DRILL	PT	REMOVE TRIP NIPPLE AND INSTALL ROTATING HEAD @ 9,035'. FILL DRILL PIPE AND TEST MWD.
13:30	15:30	2.00	31PRDR	TRIP	DRILL	PT	TRIP IN THE HOLE FROM 9,035' TO 13,148'. FILL PIPE AND TEST MWD EVERY 30 STDS. HOLE GIVING PROPER DISPLACEMNET.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
 Report No: 18

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
15:30	18:00	2.50	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,148' T/ 13,258'= 110' AVG ROP 44' ROTATED 88 FT USING 520 GPM, 3820 PSI OFF BTM, 4350 PSI ON BTM, 80 SRPM + 171 MRPM = 251 BRPM, 30 WOB, 8K TRQ. SURVEY @ 13,101' INC. 86.5° / AZI. 344.30° 6' HIGH / ON THE LINE CUMULATIVE HOURS IN INTERMEDIATE CASING: 85 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 13,160' 90% SHALE, 10% LIMESTONE MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS. SAFETY BRAKE: FACESHIELDS	
18:00	22:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,258' T/ 13,500'= 242' AVG ROP 60.5' ROTATED 222 FT USING 450 GPM, 3100 PSI OFF BTM, 3550 PSI ON BTM, 60 SRPM + 126 MRPM = 186 BRPM, 30 WOB, 12K TRQ. SLIDE 20 FT USING 450 GPM, 3000 PSI OFF BOTTOM, 3450 PSI ON BOTTOM SURVEY @ 13,479' INC. 88.5° / AZI. 344.50° 6' HIGH / ON THE LINE CUMULATIVE HOURS IN INTERMEDIATE CASING: 89 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 13,500' 85% SHALE, 15% LIMESTONE MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS.	
22:00	0:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,500' T/ 13,569'= 69' AVG ROP 34.5' ROTATED 49 FT USING 450 GPM, 3100 PSI OFF BTM, 3550 PSI ON BTM, 60 SRPM + 126 MRPM = 186 BRPM, 30 WOB, 12K TRQ. SLIDE 20 FT USING 450 GPM, 3000 PSI OFF BOTTOM, 3450 PSI ON BOTTOM SURVEY @ 13,479' INC. 88.5° / AZI. 344.50° 6' HIGH / ON THE LINE CUMULATIVE HOURS IN INTERMEDIATE CASING: 89 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 13,500' 85% SHALE, 15% LIMESTONE MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS.	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
Report No: 18

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,569' T/ 13,820'= 251' AVG ROP 63' ROTATED 225 FT USING 450 GPM, 3100 PSI OFF BTM, 3550 PSI ON BTM, 60 SRPM + 126 MRPM = 186 BRPM, 30 WOB, 12K TRQ. SLIDE 26 FT USING 450 GPM, 3000 PSI OFF BOTTOM, 3450 PSI ON BOTTOM SURVEY @ 13,762' INC. 89.1° / AZI. 346.10° 6' HIGH / ON THE LINE CUMULATIVE HOURS IN INTERMEDIATE CASING: 93 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 13,680' 85% SHALE, 15% LIMESTONE MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS
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Total Time 6.00

Safety Incident?	N	Days since Last RI:	65.00
Environ Incident?	N	Days since Last LTA	65.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/12/2014
Report No: 18

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 11

SAFETY MEETINGS: 6

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: WHILE MAKING UP A STAND IN THE MOUSE HOLE, EMPLOYEE LET GO OF PIPE WHILE HANGING FROM THE AIR-HOIST, ALLOWING IT TO SWING ACROSS THE FLOOR. STOPPED THE JOB AND EXPLAINED TO HIM ABOUT KEEPING POSITIVE CONTROL OVER DRILL PIPE WHILE IT WAS HANGING FROM HOIST. JOB CONTINUED SAFELY.

24 HOUR GOAL: DRILL TO 15,800' BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
 Report No: 18

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
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DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
 Report No: 18

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
15:30	18:00	2.50	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,148' T/ 13,258'= 110' AVG ROP 44' ROTATED 88 FT USING 520 GPM, 3820 PSI OFF BTM, 4350 PSI ON BTM, 80 SRPM + 171 MRPM = 251 BRPM, 30 WOB, 8K TRQ. SURVEY @ 13,101' INC. 86.5° / AZI. 344.30° 6' HIGH / ON THE LINE CUMULATIVE HOURS IN INTERMEDIATE CASING: 85 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 13,160' 90% SHALE, 10% LIMESTONE MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS. SAFETY BRAKE: FACESHIELDS	
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Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/12/2014
 Report No: 18

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 13,569' T/ 13,820'= 251' AVG ROP 63' ROTATED 225 FT USING 450 GPM, 3100 PSI OFF BTM, 3550 PSI ON BTM, 60 SRPM + 126 MRPM = 186 BRPM, 30 WOB, 12K TRQ. SLIDE 26 FT USING 450 GPM, 3000 PSI OFF BOTTOM, 3450 PSI ON BOTTOM SURVEY @ 13,762' INC. 89.1° / AZI. 346.10° 6' HIGH / ON THE LINE CUMULATIVE HOURS IN INTERMEDIATE CASING: 93 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 13,680' 85% SHALE, 15% LIMESTONE MUD IN- 9.1 PPG. WITH 40 VIS. MUD OUT- 9.1 PPG WITH 41 VIS
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Total Time 6.00

Safety Incident?	N	Days since Last RI:	65.00
Environ Incident?	N	Days since Last LTA	65.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/12/2014
Report No: 18

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

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OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 11

SAFETY MEETINGS: 6

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

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HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

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24 HOUR GOAL: DRILL TO 15,800' BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/14/2014
Report No: 20

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	19.50
Today's MD:	15,316 ft	Progress:	413 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$64,908
Prev MD:	14,903 ft	Rot Hrs Today:	11.50 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,199,571
PBMD:		Avg ROP Today:	35.9 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:
24-Hr Summary: DRILL 7 7/8" LATERAL FROM 15,093' TO 15,316', CBU, TOOH FOR MWD FAILURE. PICK UP NEW BHA AND BEGIN TIH
24-Hr Forecast: (RR 11/20/2014 ROL 11/21/2014)FINISH TIH AND CONTINUE DRILLING PRODUCTION LATERAL

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	235.0/ 195.0 kip	Pump Rate:	491.3	Conn:		
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	220.0 kip	Pump Press:	4300	Trip:	150	
Last BOP Press Test:	10/28/2014	Torq Off Btm:	5,000.0 ft-lbf			Backgr:		
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	15,000.0 ft-lbf					

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	AJ DAVEY	15,180.0	91.30	345.10	9,539.54	5,942.3	-1,228.8	5,942.3	0.21	-0.21
Supervisor 2:	DANNY ARTHERTHOLT	15,086.0	91.50	345.10	9,541.84	5,851.5	-1,204.6	5,851.5	0.21	-0.21
Engineer:	KEVIN THREADGILL	14,991.0	91.70	345.10	9,544.49	5,759.8	-1,180.2	5,759.8	1.89	1.81
Geologist:	SUMIYAH AHMED	14,897.0	90.00	345.60	9,545.89	5,668.8	-1,156.4	5,668.8	0.71	-0.63
Oxy Personnel:	2	14,802.0	90.60	345.90	9,546.38	5,576.8	-1,133.0	5,576.8	0.86	-0.85
Contractor Personnel	17	14,708.0	91.40	346.00	9,548.02	5,485.6	-1,110.2	5,485.6	2.78	2.21
Total on Site:	19									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
8	7.875	BAKER	DP406X	7150372	S423	6x18	13,148	15,316	1-1-WT-A	1-1-WT-DSF

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
8	11.50	44.00	413	2168	35.9	49.3	30.0/43.0	60/90	1.491	93	105.7	0.5

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA				
Engineer:	Nels Hansen	MBT:		BHA No:	8	Bit No:	8	MD In:	13,148 ft
Sample From:	In (Suction Pit)	pH:		Purpose:		MD Out:	15,316 ft		
Mud Type:	Diesel-Based	Pm / Pom:	3.00						
Time / MD:	19:30 / 15,316.0	Pf / Mf:	/						
Density @ Temp:	9.30 / 94	Chlorides:							
Rheology Temp:	150	Ca++ / K+:	/						
Viscosity:	47.00	CaCl2:	25.68						
PV / YP:	13 / 7	Cl- in water phase:	29,000.00						
Gels 10s/10m/30m:	5 / 11 / 11	Lime:	3.90						
API WL:	0.00	ES:	1,158.00						
HTHP WL:	15.60	ECD:	9.43						
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	11.00 / 9.85	Carbonate:	0 ppm						
Oil / Water:	76.0 / 13.0	Bicarbonate:							
Oil / Water % for OWR:	85.00 / 15.00	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.10	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$2,453						
Oil Added:	0.0 bbl	Cum Mud Cost:	\$64,030						
LGS:	6.90 / 56.10								

VG Meter: 3@3 / 4@6 / 9@100 / 15@200 / 20@300 / 33@600 Total Length: 8,991.04 ft Wt below Jars:

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	15.00
M-I Wate	1.00	ton (short)	3.00
OneMul	55.00	gal	1.00
Sodium Chloride/NaCl	50.00	lb	50.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/14/2014
 Report No: 20

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 14,903' T/ 15,038'= 135' AVG ROP 34'. ROTATED 135' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 55 SRPM + 130 MRPM = 185 BRPM, 43 WOB, 14K TRQ. SURVEY @ 14,897' INC. 90.0° / AZI. 345.6°, 3' LOW / 31'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 109 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,940,' 100% SHALE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
4:00	5:00	1.00	31PRDR	CIRC	CNDHOL	P	PERFORM CLEAN UP CYCLE DUE TO STATIC BREAKOVER TORQUE GETTING HIGH CIRCULATE BOTTOMS UP AT 100 RPM'S AND 550 GPM WHILE WORKING PIPE
5:00	6:00	1.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,038' T/ 15,093'= 55' AVG ROP 55'. ROTATED 55' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 55 SRPM + 130 MRPM = 185 BRPM, 43 WOB, 14K TRQ. SURVEY @ 14,991' INC. 91.7° / AZI. 345.1°, 2' LOW / 31'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 110 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 14,940,' 100% SHALE MUD IN- 9.2 PPG. WITH 47 VIS. MUD OUT- 9.3 PPG WITH 50
6:00	10:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,093' T/ 15,228'= 135' AVG ROP 35'. ROTATED 135' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,300 PSI. ON BTM, 75 SRPM + 130 MRPM = 195 BRPM, 43 WOB, 14K TRQ. SURVEY @ 15,086 ' INC. 91.5° / AZI. 345.1°, OTL / 30'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 114 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 15,150', 100% SHALE MUD IN- 9.3 PPG. WITH 49 VIS. MUD OUT- 9.3 PPG WITH 51

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/14/2014
Report No: 20

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
10:00	12:30	2.50	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,228' T/ 15,316'= 88' AVG ROP 40'. ROTATED 88' FT USING 450 GPM, 3,300 PSI. OFF BTM, 3,800 PSI. ON BTM, 75 SRPM + 130 MRPM = 195 BRPM, 43 WOB, 14K TRQ. SURVEY @ 15,180' INC. 91.3° / AZI. 345.1°, 2' HIGH / 29'-RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 118 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 15,240', 100% SHALE MUD IN- 9.3 PPG. WITH 49 VIS. MUD OUT- 9.3 PPG WITH 51 VIS.	
12:30	13:00	0.50	31PRDR	DRILL	HRZLAT	PT	TROUBLESHOOT MWD, TRIED SEVERAL TIMES AND COULD NOT GET ANY SIGNAL, WHILE TROUBLESHOOTING MWD PIECES OF RUBBER CAME OVER SHAKERS.	
13:00	14:30	1.50	31PRDR	CIRC	CNDHOL	PT	CIRCULATE BOTTOMS UP @ 15,316', WITH 491 GPM'S, WITH 3,650 PUMP PRESSURE AND 90 RPM'S ON TOP DRIVE WHILE WORKING PIPE. BUILD SLUG WHILE CIRCULATING, AND GET FLOOR READY TO TRIP PIPE.	
14:30	15:00	0.50	31PRDR	TRIP	DRILL	PT	CHEK FOR FLOW (NO FLOW), PUMP SLUG.	
15:00	18:00	3.00	31PRDR	TRIP	DRILL	PT	PULL OUT OF HOLE FROM 15,316' TO 7,892', DUE TO MWD FAILURE HOLE IS TAKING PROPER DISPLACEMENT. SAFETY BREAK: PINCH POINTS	
18:00	21:30	3.50	31PRDR	TRIP	DRILL	PT	PULL OUT OF THE HOLE FROM 7,892' TO SURFACE. HOLE IS TAKING PROPER FILL	
21:30	22:00	0.50	31PRDR	RIGMT	SRVRIG	PT	CLEAN RIG FLOOR OF OILBASE MUD	
22:00	23:30	1.50	31PRDR	TRIP	DRILL	PT	BREAK BIT AND LAY OUT MOTOR AND ONE MONEL. BATTERY HAD VENTED INSIDE OF MONEL, MWD PERSONELL WRAPPED UP AND MOVED BATTERY AND MONEL COLLAR TO THE EDGE OF LOCATION TO BE HAULED OFF MOTOR BEARINGS APPEARED TO BE IN GOOD SHAPE.	
23:30	0:00	0.50	31PRDR	TRIP	DRILL	PT	PICK UP AND SCRIBE NEW MOTOR AND MONEL. INSTALL MWD TOOL. MAKE UP NEW BIT AND TEST MWD TOOL	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	1:00	1.00	31PRDR	TRIP	DRILL	PT	CONTINUE TO PICK UP AND SCRIBE NEW MOTOR AND MONEL. INSTALL MWD TOOL. MAKE UP NEW BIT AND TEST MWD TOOL ALL TESTED GOOD	
1:00	6:00	5.00	31PRDR	TRIP	DRILL	PT	PICK UP DIRECTIONAL BHA AS FOLLOWS AND BEGIN TO TRIP IN HOLE TO 10,515'. 7.875" PDC BIT (DP406X) 6.5" NOV 7/8 1.5° .33 REV/GAL (SLICK AND FIT FOR OBM) UBHO NMDC (MWD/GAMMA) NMDC 66 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV STANDARD FLOW AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 186 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP	
Total Time		6.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/14/2014
 Report No: 20

Safety Incident? N Days since Last RI: 67.00

Environ Incident? N Days since Last LTA: 67.00

Incident Comments:

No incidents reported last 24 hours.

Weather Comments:**Other Remarks:**

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 10

SAFETY MEETINGS: 7

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: EMPLOYEE LEFT FORKLIFT RUNNING AFTER GETTING OFF OF IT. STOPPED THE EMPLOYEE AND SPOKE WITH HIM ABOUT POLICY ON FORKLIFT OPERATIONS. HE AGREED TO FOLLOW POLICY AND JOB CONTINUED SAFELY

24 HOUR GOAL: DRILL TO 17,500' BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/15/2014
Report No: 21

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	20.50
Today's MD:	16,264 ft	Progress:	948 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$72,056
Prev MD:	15,316 ft	Rot Hrs Today:	16.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,271,627
PBMD:		Avg ROP Today:	59.2 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 60% SHALE, 40% LIMESTONE

Current Ops:
24-Hr Summary: FINISH TIH AND CONTINUE DRILLING PRODUCTION LATERAL
24-Hr Forecast: (RR 11/20/2014 ROL 11/21/2014)DRILL PRODUCTION LATERAL TO TD, PERFORM CLEAN UP CYCLE, TOOH AND M/U LOGGING TOOLS

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	228.0/ 200.0 kip	Pump Rate:	499.6	Conn:	120	145	
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	218.0 kip	Pump Press:	3750	Trip:	0	0	
Last BOP Press Test:	10/28/2014	Torq Off Btm:	6,000.0 ft-lbf			Backgr:	95	178	
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	13,000.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	16,218.0	90.20	343.80	9,543.44	6,935.7	-1,528.6	6,935.7	2.03	1.38
Engineer:	KEVIN THREADGILL	16,124.0	88.90	342.40	9,542.70	6,845.8	-1,501.3	6,845.8	0.97	-0.63
Geologist:	SUMIYAH AHMED	16,029.0	89.50	343.10	9,541.37	6,755.1	-1,473.1	6,755.1	1.62	1.38
Oxy Personnel:	2	15,935.0	88.20	342.30	9,539.49	6,665.3	-1,445.2	6,665.3	1.33	-0.42
Contractor Personnel	17	15,840.0	88.60	341.10	9,536.84	6,575.2	-1,415.4	6,575.2	1.01	-0.32
Total on Site:	19	15,746.0	88.90	342.00	9,534.78	6,486.0	-1,385.6	6,486.0	1.14	-0.63

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
9	7.825	BAKER	DP406X	7150235	S424	6x18	15,316		--	--
8	7.875	BAKER	DP406X	7150372	S423	6x18	13,148	15,316	1-1-WT-A	1-1-WT-DSF

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
9	16.00	16.00	948	948	59.2	59.2	25.0/35.0	60/85	1.491	96	107.5	0.6

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA																																																																
Engineer:	Nels Hansen	MBT:		BHA No:	9	Bit No:	9	MD In:	15,316 ft																																																												
Sample From:		pH:		Purpose:	MD Out:																																																																
Mud Type:	Diesel-Based	Pm / Pom:	2.50	<table border="1"> <thead> <tr> <th>Component</th> <th>OD</th> <th>ID</th> <th>Jts</th> <th>Length</th> </tr> </thead> <tbody> <tr><td>PDC BIT</td><td>7.875</td><td>2.000</td><td>1</td><td>1.00</td></tr> <tr><td>LATERAL DRILLING MOTOR</td><td>6.500</td><td>2.000</td><td>1</td><td>32.09</td></tr> <tr><td>UBHO SUB</td><td>6.500</td><td>2.812</td><td>1</td><td>2.62</td></tr> <tr><td>NON-MAG DRILL COLLAR</td><td>6.500</td><td>2.812</td><td>1</td><td>30.50</td></tr> <tr><td>NON-MAG DRILL COLLAR</td><td>6.312</td><td>2.812</td><td>1</td><td>28.40</td></tr> <tr><td>DRILL PIPE</td><td>4.500</td><td>3.826</td><td>66</td><td>2,078.81</td></tr> <tr><td>SAFETY JOINT</td><td>6.500</td><td>2.845</td><td>1</td><td>8.80</td></tr> <tr><td>AGITATOR</td><td>6.500</td><td>2.875</td><td>1</td><td>10.73</td></tr> <tr><td>SHOCK SUB</td><td>6.500</td><td>2.875</td><td>1</td><td>13.10</td></tr> <tr><td>DRILL PIPE</td><td>4.500</td><td>3.826</td><td>186</td><td>5,862.06</td></tr> <tr><td>HWDP</td><td>4.500</td><td>2.875</td><td>30</td><td>926.34</td></tr> </tbody> </table>						Component	OD	ID	Jts	Length	PDC BIT	7.875	2.000	1	1.00	LATERAL DRILLING MOTOR	6.500	2.000	1	32.09	UBHO SUB	6.500	2.812	1	2.62	NON-MAG DRILL COLLAR	6.500	2.812	1	30.50	NON-MAG DRILL COLLAR	6.312	2.812	1	28.40	DRILL PIPE	4.500	3.826	66	2,078.81	SAFETY JOINT	6.500	2.845	1	8.80	AGITATOR	6.500	2.875	1	10.73	SHOCK SUB	6.500	2.875	1	13.10	DRILL PIPE	4.500	3.826	186	5,862.06	HWDP	4.500	2.875	30	926.34
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Time / MD:	8:00 / 15,316.0	Pf / Pm:	/	Total Length:	8,994.45 ft	Wt below Jars:																																																															
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LGS:	6.50 / 58.50																																																																				

VG Meter: 3@3 / 4@6 / 9@100 / 14@200 / 19@300 / 33@600
Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	20.00
OneMul	55.00	gal	2.00
Versatrol	50.00	lb	10.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/15/2014
Report No: 21

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:00	1.00	31PRDR	TRIP	DRILL	PT	CONTINUE TO PICK UP AND SCRIBE NEW MOTOR AND MONEL. INSTALL MWD TOOL. MAKE UP NEW BIT AND TEST MWD TOOL ALL TESTED GOOD
1:00	6:00	5.00	31PRDR	TRIP	DRILL	PT	PICK UP DIRECTIONAL BHA AS FOLLOWS AND BEGIN TO TRIP IN HOLE TO 10,515'. 7.875" PDC BIT (DP406X) 6.5" NOV 7/8 1.5° .33 REV/GAL (SLICK AND FIT FOR OBM) UBHO NMDC (MWD/GAMMA) NMDC 66 JTS 4-1/2" DP XRV SAFETY LATCH TTS XRV STANDARD FLOW AGITATOR (AIM DIRECTIONAL) COUGAR SHOCK SUB (AIM DIRECTIONAL) PDC SETTING ON SHOCK SUB 186 JTS 4-1/2" DP 30 JTS 4-1/2" HWDP
6:00	8:00	2.00	31PRDR	TRIP	DRILL	PT	TRIP IN THE HOLE FROM 10,515' TO 15,233', WASH DOWN LAST STAND FROM 15,233' TO 15,316'. FILL DRILL PIPE AND TEST MWD EVERY 30 STANDS. HOLE GIVING PROPER DISPLACEMENT.
8:00	12:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,316' T/ 15,551'= 235' AVG ROP 59'. ROTATED 235' FT USING 472 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 75 SRPM + 155 MRPM = 230 BRPM, 25 WOB, 12K TRQ. SURVEY @ 15,273' INC. 90.2° / AZI. 344°, 4' / HIGH / 28'-RIGHT SURVEY @ 15,368' INC. 91.1° / AZI. 344.5°, 5' / HIGH / 25' RIGHT SURVEY @ 15,462' INC. 92° / AZI. 344.5°, 7' / HIGH / 23' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 122 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 15,330', 95% SHALE, 5% LIMESTONE MUD IN- 9.4 PPG. WITH 49 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.
12:00	16:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,551' T/ 15,897'= 346' AVG ROP 87'. SLIDE 20' FROM 15,530' TO 15,550', WITH 490 GPM'S, OFF BOTTOM PRESSURE 3,800, ON BOTTOM 4,000, WOB- 45K, 225 PSI DIFF. ROTATED 326' FT USING 472 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 75 SRPM + 155 MRPM = 230 BRPM, 30 WOB, 12K TRQ. SURVEY @ 15,557' INC. 90° / AZI. 344°, 9' / HIGH / 21'-RIGHT SURVEY @ 15,651' INC. 89.5° / AZI. 342.9°, 8' / HIGH / 13' RIGHT SURVEY @ 15,746' INC. 88.9° / AZI. 342°, 7' / HIGH / 12' RIGHT CUMULATIVE HOURS IN INTERMEDIATE CASING: 126 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 15,510', 100% SHALE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/15/2014
 Report No: 21

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
16:00	20:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 15,897' T/ 16,083' = 186' AVG ROP 47'. SLID 40' FROM 15,905' TO 15,925', AND FROM 16,000' TO 16,020' WITH 490 GPM'S, OFF BOTTOM PRESSURE 3,800, ON BOTTOM 4,000, WOB- 45K, 225 PSI DIFF. ROTATED 146' FT USING 472 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 75 SRPM + 155 MRPM = 230 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,029' INC. 89.5° / AZI. 343.1°, 1' HIGH / 5'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 130 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,080', 95% SHALE, 5% LIMESTONE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.	
20:00	0:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,083' T/ 16,264' = 181' AVG ROP 45'. SLID 20' FROM 16,190' TO 16,210' WITH 490 GPM'S, OFF BOTTOM PRESSURE 3,800, ON BOTTOM 4,000, WOB- 45K, 225 PSI DIFF. ROTATED 171' FT USING 472 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 80 SRPM + 155 MRPM = 235 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,218' INC. 90.2° / AZI. 343.8°, 1' LOW / 14'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 134 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,080', 95% SHALE, 5% LIMESTONE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/15/2014
Report No: 21

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,264' T/ 16,461' = 197' AVG ROP 49'. ROTATED 197' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,313' INC. 92.4° / AZI. 345.2°, 7' HIGH / 17'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 138 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,380', 65% SHALE, 35% LIMESTONE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.	
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,461' T/ 16,556' = 95' AVG ROP 47'. SLID 20' FROM 16,461' TO 16,481' WITH 490 GPM'S, OFF BOTTOM PRESSURE 3,800, ON BOTTOM 4,000, WOB- 45K, 225 PSI DIFF. ROTATED 75' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,407' INC. 93.0° / AZI. 345.0°, 5' HIGH / 18'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 140 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,410', 60% SHALE, 40% LIMESTONE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	68.00
Environ Incident?	N	Days since Last LTA	68.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/15/2014
Report No: 21

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 9

SAFETY MEETINGS: 4

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: EMPLOYEE WAS RUNNING THE AIRHOIST, WHEN ANOTHER EMPLOYEE NOTICED THAT THE LINE WAS CAUGHT UP IN THE DERRICK. EMPLOYEE STOPPED THE JOB AND THE PULLED THE LINE FREE BEFORE CONTINUING THE JOB.

24 HOUR GOAL: TD, COMPLETE CLEAN UP CYCLE, TOOH AND BE TIH WITH LOGGING TOOLS BY 0600

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/16/2014
Report No: 22

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	21.50
Today's MD:	16,891 ft	Progress:	627 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$109,766
Prev MD:	16,264 ft	Rot Hrs Today:	14.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,380,973
PBMD:		Avg ROP Today:	44.8 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology: 95% SHALE, 5% LIMESTONE

Current Ops:
24-Hr Summary: DRILL 7 7/8" LATERAL FROM 16,264' TO 16,891', CBU 4/X, PULL OUT OF HOLE, REMOVE WEAR BUSHING, AND BEGIN TEST BOPS
24-Hr Forecast: (RR 11/22/2014 ROL 11/23/2014)FINISH TESTING BOP'S, MAKE UP AND RUN IN HOLE WITH THRU BIT AND BEGIN LOGGING

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avq	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	240.0/ 190.0 kip	Pump Rate:	524.6	Conn:			
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:	210.0 kip	Pump Press:	4300	Trip:			
Last BOP Press Test:	10/28/2014	Torq Off Btm:	5,000.0 ft-lbf			Backgr:			
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:	15,000.0 ft-lbf						

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Engineer:	KEVIN THREADGILL	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Geologist:	SUMIYAH AHMED	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Oxy Personnel:	2	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Contractor Personnel	17	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Total on Site:	19	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
9	7.825	BAKER	DP406X	7150235	S424	6x18	15,316	16,891	--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI
9	14.00	30.00	627	1575	44.8	52.5	25.0/40.0	60/90	1.491	106	112.9	0.7

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA				
Engineer:	Nels Hansen	MBT:		BHA No:	9	Bit No:	9	MD In:	15,316 ft
Sample From:	In (Suction Pit)	pH:		Purpose:		MD Out:	16,891 ft		
Mud Type:	Diesel-Based	Pm / Pom:	3.00						
Time / MD:	17:00 / 16,891.0	Pf / Mf:	/						
Density @ Temp:	9.30 / 112	Chlorides:							
Rheology Temp:	150	Ca++ / K+:	/						
Viscosity:	47.00	CaCl2:	27.18						
PV / YP:	11 / 7	Cl- in water phase:	31,000.00						
Gels 10s/10m/30m:	6 / 11 / 12	Lime:	3.90						
API WL:	0.00	ES:	1,192.00						
HTHP WL:	15.20	ECD:	9.59						
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	11.00 / 9.75	Carbonate:	0 ppm						
Oil / Water:	76.0 / 13.0	Bicarbonate:							
Oil / Water % for OWR:	85.00 / 15.00	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.10	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$3,962						
Oil Added:	0.0 bbl	Cum Mud Cost:	\$70,914						
LGS:	6.90 / 62.10								

VG Meter: 3@3 / 4@6 / 9@100 / 14@200 / 18@300 / 29@600

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Lime	50.00	lb	20.00
M-I Wate	1.00	ton (short)	3.00
Mica Medium	50.00	lb	10.00
OneMul	55.00	gal	1.00
Versatrol	50.00	lb	24.00
VG-Plus	50.00	lb	4.00

Total Length: 8,994.45 ft Wt below Jars:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/16/2014
 Report No: 22

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,264' T/ 16,461' = 197' AVG ROP 49'. ROTATED 197' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,313' INC. 92.4° / AZI. 345.2°, 7' HIGH / 17'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 138 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,380', 65% SHALE, 35% LIMESTONE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.
4:00	6:00	2.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,461' T/ 16,556' = 95' AVG ROP 47'. SLID 20' FROM 16,461' TO 16,481' WITH 490 GPM'S, OFF BOTTOM PRESSURE 3,800, ON BOTTOM 4,000, WOB- 45K, 225 PSI DIFF. ROTATED 75' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,407' INC. 93.0° / AZI. 345.0°, 5' HIGH / 18'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 140 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,410', 60% SHALE, 40% LIMESTONE MUD IN- 9.3 PPG. WITH 45 VIS. MUD OUT- 9.4 PPG WITH 51 VIS.
6:00	10:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,556' T/ 16,680' = 124' AVG ROP 31'. SLID 25' FROM 16,555' TO 16,580' WITH 473 GPM'S, OFF BOTTOM PRESSURE 3,600, ON BOTTOM 4,000, WOB- 50K, 225 PSI DIFF. ROTATED 124' FT USING 500 GPM, 3,800 PSI. OFF BTM, 4,500 PSI. ON BTM, 80 SRPM + 165 MRPM = 245 BRPM, 30 WOB, 12K TRQ. SURVEY @ 16,502' INC. 92.9° / AZI. 344.4°, 10' HIGH / 20'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 144 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,650', 95% SHALE, 5% LIMESTONE MUD IN- 9.3 PPG. WITH 47 VIS. MUD OUT- 9.4 PPG WITH 48 VIS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/16/2014
Report No: 22

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
10:00	14:00	4.00	31PRDR	DRILL	HRZLAT	P	DIRECTIONAL DRILL 7 7/8" PRODUCTION HOLE F/ 16,680' T/ 16,891' = 211' AVG ROP 53'. ROTATED 211' FT USING 478 GPM, 3,800 PSI. OFF BTM, 4,400 PSI. ON BTM, 70 SRPM + 157 MRPM = 227 BRPM, 40 WOB, 15K TRQ. SURVEY @ 16,691' INC. 90.4° / AZI. 345.7°, 13' HIGH / 22'-LEFT SURVEY @ 16,785' INC. 91° / AZI. 345.7°, 15' /HIGH / 23'-LEFT SURVEY @ 16,837' INC. 91.3° / AZI. 346.1°, 16' HIGH / 22'-LEFT CUMULATIVE HOURS IN INTERMEDIATE CASING: 148 HRS CUMULATIVE MUD LOSSES: 0 BBL LITHOLOGY: 16,650', 95% SHALE, 5% LIMESTONE MUD IN- 9.3 PPG. WITH 47 VIS. MUD OUT- 9.4 PPG WITH 48 VIS. TD LATERAL SECTION @ 14:00 HRS ON 11/16/2014, @ 16,891'.	
14:00	19:00	5.00	31PRDR	CIRC	CNDHOL	P	CIRCULATE 4 BOTTOMS UP @ 16,891', WITH 529 GPM'S WITH 4,400 PSI AND 100 RPM'S ON TOP DRIVE WORKING STAND UP AND DOWN. MAKE SURE SHAKERS ARE CLEAN. DOUBLE CHECKED PIPE COUNT. (GOOD) MUD IN- 9.3 PPG. WITH 47 VIS. MUD OUT- 9.4 PPG WITH 49 VIS. SIMOPS: PERFORM PRE JOB SAFETY MEETING ON TRIPPING OUT OF THE HOLE	
19:00	0:00	5.00	31PRDR	TRIP	DRILL	P	PERFORM FLOW CHECK (NO FLOW) AND PUMP SLUG BEGIN TRIPPING OUT OF THE HOLE FROM 16,891' TO 7,342' HOLE TAKING PROPER FILL	
Total Time		24.00						

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	4:00	4.00	31PRDR	TRIP	DRILL	P	CONTINUE PULLING OUT OF THE HOLE FROM 7,342' TO SURFACE HOLE TAKING PROPER FILL	
4:00	5:00	1.00	31PRDR	TRIP	DRILL	P	DRAIN MOTOR AND BREAK BIT. LAY OUT ALL DIRECTIONAL TOOLS AND MWD	
5:00	5:30	0.50	31PRDR	RIGMT	SRVRIG	P	CLEAN RIG FLOOR	
5:30	6:00	0.50	31PRDR	BOP	RPWB	P	PULL WEAR BUSHING	
Total Time		6.00						

Safety Incident? N **Days since Last RI:** 69.00
Environ Incident? N **Days since Last LTA:** 69.00
Incident Comments:
 No incidents reported last 24 hours.

Weather Comments:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/16/2014
Report No: 22

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 9

SAFETY MEETINGS: 7

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: EMPLOYEE WAS GOING TO USE THE AIRHOIST WITHOUT PUTTING A NUT ON THE SHACKLE, ONLY USING A SAFETY KEEPER. ANOTHER EMPLOYEE NOTICED AND STOPPED THE JOB, HE EXPLAINED TO HIM THE DANGERS OF NOT PUTTING A NUT ON THE SHACKLE. EMPLOYEE AGREED TO USE THE TOOL PROPERLY AND JOB CONTINUED SAFELY
24 HOUR GOAL: TIH WITH THRU BIT AND BEGIN LOGGING BY 20:00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/17/2014
Report No: 23

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	22.50
Today's MD:	16,891 ft	Progress:	0 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$156,354
Prev MD:	16,891 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,537,327
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:
24-Hr Summary: FINISH TESTING BOP'S, MAKE UP AND RUN IN HOLE WITH THRU BIT AND CIRCULATE HOLE CLEAN, BEGIN LOGGING
24-Hr Forecast: (RR 11/22/2014 ROL 11/23/2014) FINISH LOGGING WITH THRU BIT AND TOOH. RIG UP FOR SECOND LOGGING RUN

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	/	Pump Rate:	0.0	Conn:			
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:		Pump Press:	0	Trip:			
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Engineer:	KEVIN THREADGILL	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Geologist:	SUMIYAH AHMED	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Oxy Personnel:	2	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Contractor Personnel	12	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Total on Site:	14	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
9	7.825	BAKER	DP406X	7150235	S424	6x18	15,316	16,891	1-1-WT-A	1-1-WT-TD

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA				
Engineer:	Nels Hansen	MBT:		BHA No:	9	Bit No:	9	MD In:	15,316 ft
Sample From:	In (Suction Pit)	pH:		Purpose:				MD Out:	16,891 ft
Mud Type:	Diesel-Based	Pm / Pom:	2.80						
Time / MD:	18:00 / 16,891.0	Pf / Mf:	/						
Density @ Temp:	9.50 / 50	Chlorides:							
Rheology Temp:	150	Ca++ / K+:	/						
Viscosity:	55.00	CaCl2:	28.43						
PV / YP:	11 / 6	Cl- in water phase:	33,000.00						
Gels 10s/10m/30m:	6 / 11 / 12	Lime:	3.64						
API WL:	0.00	ES:	1,285.00						
HTHP WL:	15.20	ECD:	0.00						
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00						
Solids / Sol Corr:	11.00 / 9.66	Carbonate:	0 ppm						
Oil / Water:	76.0 / 13.0	Bicarbonate:							
Oil / Water % for OWR:	85.00 / 15.00	Form Loss / Cum Loss	0.0 / 0.0						
Sand:	0.10	Fluid Disch:	/						
Water Added:		Daily Mud Cost:	\$124						
Oil Added:	0.0 bbl	Cum Mud Cost:	\$71,038						
LGS:	7.00 / 63.00								
VG Meter:	3@3 / 4@6 / 9@100 / 13@200 / 17@300 / 28@600								

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/17/2014
 Report No: 23

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRDR	TRIP	DRILL	SC	CONTINUE PULLING OUT OF THE HOLE FROM 7,342' TO SURFACE HOLE TAKING PROPER FILL
4:00	5:00	1.00	31PRDR	TRIP	DRILL	SC	DRAIN MOTOR AND BREAK BIT. LAY OUT ALL DIRECTIONAL TOOLS AND MWD
5:00	5:30	0.50	31PRDR	RIGMT	SRVRIG	SC	CLEAN RIG FLOOR
5:30	6:00	0.50	31PRDR	BOP	RPWB	SC	PULL WEAR BUSHING
6:00	9:00	3.00	31PRDR	BOP	TSTBOP	SC	PJSM WITH TESTERS, RIGGED UP AND MADE UP TEST SUB AND TEST PLUG, WENT TO FILL UP BOPS WITH WATER, WATER HOSE FROZEN, GOT NEW HOSE, ATTEMPTED TO PUMP WITH TEST UNIT AND IT WAS FROZE UP, THAWED OUT LINES WENT BACK TO PUMPING AND BLEW SEALS OUT OF PACK OFF'S IN PUMP. WINCH AND WRENCH MADE PHONE CALLS AND HAVE ANOTHER TRUCK ON THE WAY.
9:00	12:00	3.00	31PRDR	WAIT	WOEQ	SC	WAITING ON NEW PUMP TRUCK, WHILE WAITING WORKING ON OLD PUMP. WHILE WAITING CLEAN RIG FLOOR AND GET ALL BITS OFF FLOOR AND GET THRU-BIT BHA ON FLOOR AND STRAP AND CAL.
12:00	17:30	5.50	31PRDR	BOP	TSTBOP	SC	HOLD PJSM WITH WINCH AND WRENCH, H&P EMPLOYEE'S AND DSM, ON TESTING BOP'S, TEST BOP'S AS FOLLOWS: TOP RAMS, LOWER RAMS AND BLIND RAMS, AND ALL WING VAVLES , TEST 250 LOW F/ 5 MINUTES, TEST TO 5,000 PSI HIGH FOR 5 MINUTES. TEST ALL VAVLES ON CHOKE MANIFOLD 250 LOW F/ 5 MINUTES, 5,000 HIGH FOR 5 MINUTES. TEST ANNULAR TO 250 LOW FOR 5 MINUTES, 3,500 HIGH FOR 5 MINUTES. TEST FLOOR VAVLES TO 250 LOW FOR 5 MINUTES, 5,000 HIGH FOR 5 MINUTES. SAFETY BREAK: WORKING AROUND HIGH PRESSURE LINES AND SLIPS, TRIP AND FALLS.
17:30	18:00	0.50	31PRDR	BOP	TSTBOP	SC	SET DOWN BOP TEST PLUG AND DRILL PIPE. SET WEAR BUSHING AND X-OVERS DOWN AND CLEAN OIL BASE MUD FROM FLOOR
18:00	19:00	1.00	31PRDR	RIGMT	SRVRIG	SC	DRAIN WATER FROM CHOKE AND LINES AND PUMP OILBASE THROUGH THEM
19:00	19:30	0.50	31PRDR	SAFE	PJSM	SC	PERFORM PJSM ON RIGGING UP AND RUNNING THRU BIT TOOLS AND BHA
19:30	0:00	4.50	31PRDR	LOG	DPLOG	SC	MAKE UP AND RUN THRU BIT BHA AS FOLLOWS FROM SURFACE TO 12,000' THRU BIT BIT SUB FLOAT SUB CROSSOVER 267 JOINTS 4.5" DRILL PIPE 30 JOINTS HWDP

Total Time 24.00

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	5:00	5.00	31PRDR	LOG	DPLOG	SC	CONTINUE TRIPPING IN THE HOLE WITH THRU BIT TOOLS FROM 12,000 TO 16,891 WASH AND REAM THROUGH TIGHT HOLE FROM 14,600' TO 15,400 AND AGAIN FROM 16,555' TO 16,630' PICK UP 6 JOINTS OF DRILL PIPE TO TAG BOTTOM'
5:00	6:00	1.00	31PRDR	CIRC	CNDHOL	SC	CIRCULATE BOTTOMS UP AT 550 GPM AND 80 RPM WORKING THE PIPE

Total Time 6.00

Safety Incident? N Days since Last RI: 70.00
 Environ Incident? N Days since Last LTA 70.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/17/2014
Report No: 23

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 12

SAFETY MEETINGS: 8

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: EMPLOYEE WALKED PASSED THE BARRIER WHILE TESTING INTO THE DANGER AREA. PULLED EMPLOYEE OUT OF THE DANGER AREA AND EXPLAINED TO HIM THE DANGERS AND REASONS FOR THE BARRIERS. HE AGREED TO STAY OUT OF THE AREA AND JOB CONTINUED SAFELY

24 HOUR GOAL: COMPLETE LOGGING BY 18:00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/18/2014
Report No: 24

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	23.50
Today's MD:	16,891 ft	Progress:	0 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$50,870
Prev MD:	16,891 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,588,197
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:
24-Hr Summary: R/U WIRELINE AND RUN/PUMP TOOL TO BOTTOM, TOOH WHILE LOGGING TO SHOE. RET. TOOL AND BEGIN TIH TO CLEAN HOLE
24-Hr Forecast: (RR 11/22/2014 ROL 11/23/2014) FINISH TIH ON CLEANING RUN, TOOH AND RIG UP SCHLUMBERGER LOGGING UNIT. TIH TO LOG

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	/	Pump Rate:	0.0	Conn:			
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:		Pump Press:	0	Trip:			
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
Supervisor 1:	AJ DAVEY	MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 2:	DANNY ARTHERTHOLT	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Engineer:	KEVIN THREADGILL	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Geologist:	SUMIYAH AHMED	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Oxy Personnel:	2	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Contractor Personnel	12	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Total on Site:	14	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
9	7.825	BAKER	DP406X	7150235	S424	6x18	15,316	16,891	1-1-WT-A	1-1-WT-TD

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)					LAST OR CURRENT BHA					
Engineer:	Nels Hansen	MBT:			BHA No:	9	Bit No:	9	MD In:	15,316 ft
Sample From:	In (Suction Pit)	pH:			Purpose:				MD Out:	16,891 ft
Mud Type:	Diesel-Based	Pm / Pom:	3.00							
Time / MD:	21:58 / 16,891.0	Pf / Mf:	/							
Density @ Temp:	9.40 / 85	Chlorides:								
Rheology Temp:	150	Ca++ / K+:	/							
Viscosity:	47.00	CaCl2:	30.23							
PV / YP:	11 / 6	Cl- in water phase:	36,000.00							
Gels 10s/10m/30m:	5 / 10 / 10	Lime:	3.90							
API WL:	0.00	ES:	1,298.00							
HTHP WL:	15.60	ECD:	9.60							
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00							
Solids / Sol Corr:	11.00 / 9.50	Carbonate:	0 ppm							
Oil / Water:	76.0 / 13.0	Bicarbonate:								
Oil / Water % for OWR:	85.00 / 15.00	Form Loss / Cum Loss	0.0 / 0.0							
Sand:	0.10	Fluid Disch:	/							
Water Added:		Daily Mud Cost:	\$522							
Oil Added:	0.0 bbl	Cum Mud Cost:	\$71,560							
LGS:	6.20 / 55.80									

VG Meter: 3@3 / 3@6 / 8@100 / 12@200 / 17@300 / 28@600
 Total Length: 8,994.45 ft Wt below Jars:

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Megadril System	1.00	bbl	199.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/18/2014
 Report No: 24

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	5:00	5.00	31PRDR	LOG	DPLOG	SC	CONTINUE TRIPPING IN THE HOLE WITH THRU BIT TOOLS FROM 12,000 TO 16,891 WASH AND REAM THROUGH TIGHT HOLE FROM 14,600' TO 15,400 AND AGAIN FROM 16,555' TO 16,630' PICK UP 6 JOINTS OF DRILL PIPE TO TAG BOTTOM'
5:00	6:00	1.00	31PRDR	CIRC	CNDHOL	SC	CIRCULATE BOTTOMS UP AT 550 GPM AND 80 RPM WORKING THE PIPE. MUD IN- 9.3 PPG.WITH 47 VIS. MUD OUT- 9.3 PPG., WITH 48 VIS.
6:00	7:00	1.00	31PRDR	CIRC	CNDHOL	SC	FINSH CIRCULATING BOTTOMS UP, HAVE PRE JOB SAFETY MEETING WITH THRU BIT WHILE CIRCULATING.
7:00	12:00	5.00	31PRDR	LOG	DPLOG	SC	RIG UP THRU BIT SHEEVE'S, AND SPOT TRUCK, PICK UP AND MAKE UP THRU BIT QUAD COMBO LOGGING TOOLS AND RUN INTO DRILL PIPE TO 8,000', RIG UP PUMP IN SUB WITH PACK OFF, PUMP DOWN QUAD COMBO LOGGING TOOLS TO BIT WITH 430 GPM'S, AND 2,700 PSI, PUMP PRESSURE RAISED TO 3,055 PSI WHEN TOOL SET.
12:00	15:00	3.00	31PRDR	LOG	DPLOG	SC	THRU BIT CHECKED QUAD COMBO LOGS WITH COMPUTERS BEFORE DISENGAGING, DISENGAGED WIRELINE AND PULLED OUT OF HOLE AND RIGGED DOWN SHEEVE'S. SAFETY BREAK: TRIPPING SLOW
15:00	15:30	0.50	31PRDR	CIRC	CNDHOL	SC	CHECK FOR FLOW (NO FLOW), PUMPED SLUG.
15:30	18:00	2.50	31PRDR	LOG	DPLOG	SC	PULLING OUT OF HOLE LOGGING WITH QUAD COMBO FROM 16,891' TO 14,220', AT 30' A MINUTE. HOLE IS TAKING PROPER DISPLACEMENT.
18:00	0:00	6.00	31PRDR	LOG	DPLOG	SC	CONTINUE LOGGING, PULLING OUT OF THE HOLE AT 30' A MINUTE WITH THRU BIT FROM 14,220' TO 8500 HOLE IS TAKING PROPER FILL
Total Time		24.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	3:00	3.00	31PRDR	LOG	DPLOG	SC	COVER JSA ON RIGGING UP WIRELINE EQUIPMENT AND RIG UP SAME. RUN IN HOLE WITH WIRELINE AND RETRIEVE LOGGING TOOLS.
3:00	4:00	1.00	31PRDR	LOG	RIGUP	SC	RIG DOWN WIRELINE EQUIPMENT AND CLEAN RIG FLOOR
4:00	5:00	1.00	31PRDR	TRIP	COND	SC	TRIP IN HOLE FROM 8,500' TO 11,344 TO CLEAN OUT ANY TIGHT SPOTS BEFORE MAKING SECOND LOGGING RUN.
5:00	6:00	1.00	31PRDR	CIRC	CNDFLD	SC	FILLED THE PIPE AND SHUT OFF PUMPS AND WELL CONTINUED TO FLOW. KICKED PUMPS BACK ON AND PUMP BOTTOMS UP, WATCHING GAIN AND LOSS AND PIT VOLUME.
Total Time		6.00					

Safety Incident? N Days since Last RI: 71.00
 Environ Incident? N Days since Last LTA 71.00
 Incident Comments:
 No incidents reported last 24 hours.

Weather Comments:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/18/2014
Report No: 24

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 8

SAFETY MEETINGS: 7

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: EMPLOYEE WAS OPERATING THE MAN-LIFT WITHOUT BEING TIED OFF. STOPPED THE JOB AND EXPLAINED TO THE EMPLOYEE THAT HE NEEDED TO BE TIED OFF WHILE INSIDE THE MAN-LIFT. HE TIED OFF AND JOB CONTINUED SAFELY.

24 HOUR GOAL: BEGIN RUNNING SECOND LOG BY 8:00 P.M.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/19/2014
 Report No: 25

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	24.50
Today's MD:	16,891 ft	Progress:	0 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$224,326
Prev MD:	16,891 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$2,842,996
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:
24-Hr Summary: FINISH TIH ON CLEANING RUN, TOOH AND RIG UP SCHLUMBERGER LOGGING UNIT. TIH TO LOG
24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) TIH WITH SECOND SCHLUMBERGER LOGGING TOOLS AND BEGIN LOGGING.

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	/	Pump Rate:	499.6	Conn:			
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:		Pump Press:	856	Trip:			
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	AJ DAVEY	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Supervisor 2:	DANNY ARTHERTHOLT	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Engineer:	KEVIN THREADGILL	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Geologist:	SUMIYAH AHMED	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Oxy Personnel:	2	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Contractor Personnel	12	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64
Total on Site:	14									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
									--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)			
Engineer:	Nels Hansen	MBT:	
Sample From:	In (Suction Pit)	pH:	
Mud Type:	Diesel-Based	Pm / Pom:	3.00
Time / MD:	7:00 / 16,891.0	Pf / Mf:	/
Density @ Temp:	9.40 / 50	Chlorides:	
Rheology Temp:	150	Ca++ / K+:	/
Viscosity:	47.00	CaCl2:	30.23
PV / YP:	11 / 6	Cl- in water phase:	0.00
Gels 10s/10m/30m:	5 / 10 / 10	Lime:	3.90
API WL:		ES:	1,298.00
HTHP WL:	15.60	ECD:	0.00
Cake API / HTHP:	/ 3.0	n / K:	0.00 / 0.00
Solids / Sol Corr:	11.00 / 9.51	Carbonate:	0 ppm
Oil / Water:	76.0 / 13.0	Bicarbonate:	
Oil / Water % for OWR:	85.00 / 15.00	Form Loss / Cum Loss	/ 0.0
Sand:	0.10	Fluid Disch:	/
Water Added:		Daily Mud Cost:	\$124
Oil Added:	0.0 bbl	Cum Mud Cost:	\$71,684
LGS:	6.20 / 55.80		

LAST OR CURRENT BHA				
Component	OD	ID	Jts	Length

VG Meter: 3@3 / 3@6 / 8@100 / 12@200 / 17@300 / 28@600
 Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/19/2014
Report No: 25

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	3:00	3.00	31PREV	LOG	DPLOG	SC	COVER JSA ON RIGGING UP WIRELINE EQUIPMENT AND RIG UP SAME. RUN IN HOLE WITH WIRELINE AND RETRIEVE LOGGING TOOLS.
3:00	4:00	1.00	31PREV	LOG	RIGUP	SC	RIG DOWN WIRELINE EQUIPMENT AND CLEAN RIG FLOOR
4:00	5:00	1.00	31PREV	TRIP	COND	SC	TRIP IN HOLE FROM 8,500' TO 11,344 TO CLEAN OUT ANY TIGHT SPOTS BEFORE MAKING SECOND LOGGING RUN.
5:00	6:00	1.00	31PREV	CIRC	CNDFLD	SC	FILLED DRILL PIPE, HAD AIR AND SLUG IN DRILL PIPE, CIRCULATED AIR AND SLUG OUT OF HOLE @ 550 GPM'S WITH 3,000 PSI. MUD IN- 9.4 PPG WITH 52 VIS. MUD OUT- 9.5 PPG WITH 56 VIS.
6:00	8:00	2.00	31PREV	TRIP	COND	SC	TRIP IN THE HOLE FROM 11,344' TO 14,514', TAGGED UP WITH 40 K, PICK UP AND REAMED THRU WITH 100 RPM'S, AND 500 GPM'S WITH 2,700 PSI., WENT UP AND DOWN THRU TIGHT SPOT WITH PUMPS ON AND ROTARY ON, THEN SHUT OFF PUMPS AND ROTARY AND TRIPPED IN AND OUT OF TIGHT SPOT, MAX SLACK OFF 15K.
8:00	11:00	3.00	31PREV	TRIP	COND	SC	TRIP IN THE HOLE FROM 14,514' TO 16,891', WASH AND REAMING ANY TIGHT SPOTS. TIGHT @ 14,710', 14,788', 15,080', 15,180' AND 15,420. REAMED WITH 100 RPM'S AND 500 GPM'S WITH 2,800 PSI.
11:00	12:30	1.50	31PREV	CIRC	CNDHOL	SC	CIRCULATE BOTTOMS UP WITH 500 GPM'S WITH 2,900 PSI WITH 100 RPM'S, WORKING PIPE UP AND DOWN. MUD IN- 9.4 PPG. WITH 49 VIS. MUD OUT- 9.5 PPG. WITH 52 VIS.
12:30	13:00	0.50	31PREV	CIRC	CNDHOL	SC	CHECK FOR FLOW (NO FLOW), PUMP SLUG.
13:00	18:00	5.00	31PREV	TRIP	DRILL	SC	PULL OUT HOLE FROM 16,891' TO 8,440'. HOLE IS TAKING PROPER DISPLACEMENT.
18:00	20:30	2.50	31PREV	TRIP	DRILL	SC	PULL OUT HOLE FROM 8,440' TO 4,000'. HOLE IS TAKING PROPER DISPLACEMENT.
20:30	23:00	2.50	31PREV	RIGMT	SRVRIG	SC	HELD PJSM WITH H&P EMPLOYEE'S, TOOLPUSHER AND DSM, SLIP AND CUT 12 WRAPS DRILLINE (102'), UNDOCK TOP DRIVE, CHECK C.O.M., AND SET PARAMETERS.
23:00	23:30	0.50	31PREV	TRIP	DRILL	SC	TRIP OUT OF HOLE FROM 4,000' TO 3,283'. HOLE TAKING PROPER FILL
23:30	0:00	0.50	31PREV	TRIP	DRILL	SC	REMOVE ROTATING HEAD AND INSTALL TRIP NIPPLE.
Total Time		24.00					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:30	1.50	31PREV	TRIP	DRILL	SC	TRIP OUT OF THE HOLE FROM 3,270' TO SURFACE. HOLE TAKING PROPER FILL.
1:30	2:00	0.50	31PREV	TRIP	BHA	SC	BREAK OUT THRU BITS, BIT AND CROSSOVER AND LAY DOWN.
2:00	2:30	0.50	31PREV	RIGMT	SRVRIG	SC	CLEAN RIG FLOOR
2:30	4:00	1.50	31PREV	LOG	RIGUP	SC	PJSM WITH SCHLUMBERGER, H&P EMPLOYEE'S, TOOL PUSHER AND DSM ON RIGGING UP SCHLUMBERGER. PICKED UP AND MADE UP SCHLUMBERGER'S HANG OFF TOOL AND SUBS. PICKED UP LOGGING TOOLS AND HUNG OFF IN HANG OFF TOOL. SAFETY BREAK: WORKING WITH THIRD PARTY
4:00	6:00	2.00	31PREV	LOG	DPLOG	SC	TRIP IN THE HOLE FROM SURFACE TO 2,400' @ 80' A MINUTE. HOLE IS GIVING BACK PROPER DISPLACEMENT.
Total Time		6.00					

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/19/2014
 Report No: 25

Safety Incident? N Days since Last RI: 72.00
 Environ Incident? N Days since Last LTA 72.00

Weather Comments:

Incident Comments:

No incidents reported last 24 hours.

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 13

SAFETY MEETINGS: 7

LO/TO'S: 2

PERMIT'S TO WORK: 2

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: THIRD PARTY EMPLOYEE'S FROM OUT OF STATE ATTEMPTED TO COME ON LOCATION WITH FULL BEARDS, EMPLOYEE STOP THIRD EMPLOYEE'S AND INFORMED THEM OF ARE POLICIES. THIRD PARTY EMPLOYEE'S AGREED AND SHAVED. JOB COUINTUED WITH OUT INCIDENT.

24 HOUR GOAL:

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/20/2014
 Report No: 26

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	1:30	1.50	31PREV	TRIP	DRILL	SC	TRIP OUT OF THE HOLE FROM 3,270' TO SURFACE. HOLE IS TAKING A BBL TO 1 1/2" MORE THE FIGURED DISPLACEMENT PER 5 STANDS.	
1:30	2:00	0.50	31PREV	TRIP	BHA	SC	BREAK OUT THRU BITS, BIT AND CROSSOVER AND LAY DOWN.	
2:00	2:30	0.50	31PREV	RIGMT	SRVRIG	SC	CLEAN RIG FLOOR	
2:30	4:00	1.50	31PREV	LOG	RIGUP	SC	PJSM WITH SCHLUMBERGER, H&P EMPLOYEE'S, TOOL PUSHER AND DSM ON RIGGING UP SCHLUMBERGER. PICKED UP AND MADE UP SCHLUMBERGER'S HANG OFF TOOL AND SUBS. PICKED UP LOGGING TOOLS AND HUNG OFF IN HANG OFF TOOL. SAFETY BREAK: WORKING WITH THIRD PARTY	
4:00	6:00	2.00	31PREV	LOG	DPLOG	SC	TRIP IN THE HOLE FROM SURFACE TO 2,400' @ 80' A MINUTE. HOLE IS NOT GIVING BACK ANY RETURNS.	
6:00	10:00	4.00	31PREV	LOG	DPLOG	SC	TRIP IN THE HOLE FROM 2,400' TO 8,536' HOLE IS NOT GIVING BACK ANY RETURNS.	
10:00	13:30	3.50	31PREV	LOG	DPLOG	SC	RIG UP SCHLUMBERGER'S SIDE ENTRY SUB AND SHEEVE'S, MAKE UP INTO STRING AND RUN WIRELINE INTO DRILL PIPE, PUMP DOWN WIRE LINE AT 250 GPM'S, WITH 260 PSI. SET TOOL SET WIRELINE LOCK. PULL TEST WIRELINE. (GOOD) NO RETURNS WHILE PUMPING. TOTAL LOSSES- 250 BBLs.	
13:30	18:00	4.50	31PREV	LOG	DPLOG	SC	TRIP IN HOLE WITH OBMI LOGS FROM 8,536' TO 12831', @ 40' A MINUTE. HOLE IS NOT GIVING ANY DISPLACEMENT.	
18:00	20:30	2.50	31PREV	LOG	DPLOG	SC	TRIP IN HOLE WITH OBMI LOGS FROM 12,831 TO 14,455', @ 40' A MINUTE. FILLING DP EVERY 10 STANDS AND BREAKING CIRCULATION NOT EXCEEDING 5 BPM WHILE PUMPING. GOOD CIRCULATION	
20:30	21:00	0.50	31PREV	LOG	DPLOG	SC	TRIP IN HOLE WITH OBMI LOGS FROM 14,455' TO 15,108', @ 30' A MINUTE. DID NOT SEE ANY DRAG AT 14,500'. HOLE IS NOT GIVING BACK ANY DISPLACEMENT.	
21:00	23:00	2.00	31PREV	LOG	DPLOG	SC	TRIP IN HOLE WITH OBMI LOGS FROM 15,108' TO 16,853', @ 40' A MINUTE. NO DRAG. HOLE IS NOT GIVING BACK ANY DISPLACEMENT. TOTAL LOSSES-350 BBLs	
23:00	0:00	1.00	31PREV	LOG	DPLOG	SC	TEST LOGGING TOOLS AND FUNCTION, ALL TEST ARE GOOD, PUMP SLUG AND PULL OUT OF THE HOLE FROM 16,853' TO 16545' WITH OBMI LOGS. HAD PARTICAL RETURNS WHILE PUMPING ON DRILL STRING. TOTAL LOSSES-400 BBLs	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/20/2014
Report No: 26

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:00	2.00	31PREV	LOG	DPLOG	SC	TRIP OUT OF HOLE WITH OBMI LOGS FROM 16,545' TO 14,565' @ 40' PER MINUTE' HOLE TAKING 1 BBL OVER CALCULATED FILL EVERY 5 STANDS UNTIL 14,565' AT 14,565' WHEN WE ATTEMPTED TO FILL HOLE IT TOOK 12 BBL'S, 9.5 BBL'S OVER CALC. FILL AND DID NOT GET RETURNS. TOTAL LOSSES- 450 BBLS SAFETY BREAK : WELL CONTROL	
2:00	6:00	4.00	31PREV	LOG	DPLOG	SC	TRIP OUT OF HOLE WITH OBMI LOGS FROM 14,565' TO 11,000' @ 40' PER MINUTE. PUMPING 2 TIMES CALCULATED FILL EVERY 5 STANDS. TOTAL LOSSES-500 BBLS PRE TOUR SAFETY MEETING: WORKING WITH THIRD PARTY AND WELL CONTROL.	
Total Time		6.00						

Safety Incident?	N	Days since Last RI:	73.00	Weather Comments:
Environ Incident?	N	Days since Last LTA	73.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks:

Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 9
 SAFE ACTS: 6
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 4
 LO/TO'S: 2
 PERMIT'S TO WORK: 2
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109
 NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

BEST STOP CARD: NOTICED LIGHT PLANT THAT WAS NOT PROPERLY GROUNDED, STOPPED AND INSTALLED GROUND WIRE, JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL: OUT OF HOLE BY 0000

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/21/2014
Report No: 27

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	26.50
Today's MD:	16,891 ft	Progress:	0 ft	Ground Elev:	3,079.10 ft	Daily Cost:	\$224,820
Prev MD:	16,891 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$3,113,861
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:

24-Hr Summary: FINSH POOH WITH OBMI LOGS TO 8,555', RD SCL, POOH LAYING DOWN PIPE, LAY DOWN LOGGING TOOLS

24-Hr Forecast: (RR 11/23/2014 ROL 11/24/2014) RIG UP AND RUN 5.5" PRODUCTION CASING

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	/	Pump Rate:	0.0	Conn:		0
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:		Pump Press:	0	Trip:		0
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:		0
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:						

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	AJ DAVEY	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Supervisor 2:	JEFF ROZELLE	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Engineer:	KEVIN THREADGILL	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Geologist:	SUMIYAH AHMED	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Oxy Personnel:	2	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Contractor Personnel	16	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64
Total on Site:	18									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
									--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA				
Engineer:	Nels Hansen	MBT:						
Sample From:	In (Suction Pit)	pH:						
Mud Type:	Diesel-Based	Pm / Pom:	2.80					
Time / MD:	18:00 / 16,891.0	Pf / Mf:	/					
Density @ Temp:	9.30 / 50	Chlorides:						
Rheology Temp:	150	Ca++ / K+:	/					
Viscosity:	60.00	CaCl2:	22.15					
PV / YP:	11 / 12	Cl- in water phase:	40,000.00					
Gels 10s/10m/30m:	6 / 10 / 12	Lime:	3.64					
API WL:	0.00	ES:	650.00					
HTHP WL:	20.00	ECD:	0.00					
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00					
Solids / Sol Corr:	8.00 / 6.47	Carbonate:	0 ppm					
Oil / Water:	70.0 / 22.0	Bicarbonate:						
Oil / Water % for OWR:	70.00 / 24.00	Form Loss / Cum Loss	150.0 / 55					
Sand:	0.10	Fluid Disch:	/					
Water Added:		Daily Mud Cost:	\$1,638					
Oil Added:	0.0 bbl	Cum Mud Cost:	\$73,446					
LGS:	4.70 / 42.30							
VG Meter:	5@3 / 6@6 / 12@100 / 17@200 / 23@300 / 34@600							

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Megadril System	1.00	bbl	757.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/21/2014
 Report No: 27

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
0:00	2:00	2.00	31PREV	LOG	DPLOG	SC	TRIP OUT OF HOLE WITH OBMI LOGS FROM 16,545' TO 14,565' @ 40' PER MINUTE' HOLE TAKING 1 BBL OVER CALCULATED FILL EVERY 5 STANDS UNTIL 14,565' AT 14,565' WHEN WE ATTEMPTED TO FILL HOLE IT TOOK 12 BBL'S, 9.5 BBL'S OVER CALC. FILL AND DID NOT GET RETURNS. TOTAL LOSSES- 450 BBLs SAFETY BREAK : WELL CONTROL	
2:00	6:00	4.00	31PREV	LOG	DPLOG	SC	TRIP OUT OF HOLE WITH OBMI LOGS FROM 14,565' TO 11,000' @ 40' PER MINUTE. PUMPING 2 TIMES CALCULATED FILL EVERY 5 STANDS. TOTAL LOSSES-500 BBLs PRE TOUR SAFETY MEETING: WORKING WITH THIRD PARTY AND WELL CONTROL.	
6:00	10:00	4.00	31PREV	LOG	DPLOG	SC	TRIP OUT OF HOLE WITH OBMI LOGS FROM 11,000' TO 8,556' @ 40' PER MINUTE. PUMPING 2 TIMES CALCULATED FILL EVERY 5 STANDS. TOTAL LOSSES-550 BBLs SAFETY BREAK: WORKING WITH THIRD PARTY.	
10:00	13:30	3.50	31PREV	LOG	DPLOG	SC	PULL SCHLUMBERGER WIRE OUT OF HOLE AND BREAK SIDE ENTRY OUT AND LAY DOWN. RIG DOWN SCHLUMBERGER AND CRANE. PREP RIG FLOOR TO LAY DOWN DRILL PIPE.	
13:30	18:00	4.50	31PREV	TRIP	PULD	SC	PULLING OUT OF HOLE LAYING DOWN DRILL PIPE FROM 8,556' TO 5,234' PUMPING 2 TIMES CALCULATED FILL EVERY 5 STANDS. PICK UP OFF OF SLIPS EASY AND SET SLIPS EASY DUE TO SCHLUMBERGER'S TOOL IS STILL HANGING OUT HANG OFF TOOL.	
18:00	23:00	5.00	31PREV	TRIP	PULD	SC	PULLING OUT OF HOLE LAYING DOWN DRILL PIPE FROM 5,234' TO LOGGING TOOLS PUMPING 2 TIMES CALCULATED FILL EVERY 5 STANDS. PICK UP OFF OF SLIPS EASY AND SET SLIPS EASY DUE TO SCHLUMBERGER'S TOOL IS STILL HANGING OUT HANG OFF TOOL.	
23:00	0:00	1.00	31PREV	LOG	RIGUP	SC	HOLD PJSM WITH SCHLUMBERGER LOGGING CREW AND RIG LOGGING TOOLS DOWN.	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/21/2014
Report No: 27

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	0:30	0.50	31PREV	TRIP	PULD	SC	CLEAN AND CLEAR RIG FLOOR FROM TRIP AND SLIP HAZARDS. SEND DOWN UN NECESSARY HANDLING TOOLS AND SUBS.
0:30	1:00	0.50	31PRRC	SAFE	PJSM	SC	HOLD RIG UP MEETING WITH B&L CASING CREW
1:00	3:00	2.00	31PRRC	CSG	RIGUP	SC	RIG UP B&L CRT TOOL, TORQUE TURN, CASING RUNNING EQUIPMENT AND HOLD CASING RUNNING MEETING WITH B&L, OXY, H&P, PATRIOT THREAD REP, & TOE INITIATOR REP.
3:00	6:00	3.00	31PRRC	CSG	RUNCSG	SC	MAKE UP AND RUN 5-1/2" 20# L-80 LTC CASING AS FOLLOWS: WEATHERFORD 5-1/2" LTC TYPE E303 FLOAT SHOE SET @16,891' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,889' WEATHERFORD 5-1/2" LTC TYPE 402 SS3 FLOAT SET @ 16,806' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,805' TEAM OIL TOOLS LATCH COLLAR SET @ 16,762' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,761' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,683' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,679' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,640' 189- JOINTS 5-1/2" 20# L-80 LTC CASING SET @ 16,636' 1- MARKER JOINT 5 1/2" 20# L-80 LTC SET @ 8,823' 211- 5 1/2" 20# L-80 LTC SET @ 8,807' RUN 5 1/2" 20# L-80 LTC CASING FROM 0' TO 1,800'. CHECK FLOATS (GOOD) RUN 5 1/2" X 7 3/8" TOPCO STRAIGHT BLADE SOLID BODY CENTRALIZERS 1-PER JOINT TO 8,850. RUN 8 1/2" BOW SPRING CENTRALIZERS 1 EVRY 4 JOINTS TO 6,500' AND 1 50' BELOW SURFACE.

Total Time 6.00

Safety Incident?	N	Days since Last RI:	74.00
Environ Incident?	N	Days since Last LTA	74.00

Weather Comments:

Incident Comments:
 No incidents reported last 24 hours.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/21/2014
Report No: 27

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 10
SAFE ACTS: 5
UNSAFE EQUIPMENT:
SWA'S:0
NEAR MISSES: 0

JSA'S: 12
SAFETY MEETINGS: 4
LO/TO'S: 2
PERMIT'S TO WORK: 2
POWER LINE CHECKLIST: 10/21/2014
PRE SPUD/RIG INSPECTION:
HAZARD ID'S: 0
EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109
NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109
NOTIFIED TRRC: SARAH ON 11-21-2014 @ 14:53 JOB# 18109

BEST STOP CARD: NOTICED SLIP HAZARDS ON FLOOR, STOPPED JOB INSTRUCTED EMPLOYEES TO CLEAN HAZARDS, JOB CONTINUED INCIDENT FREE
24 HOUR GOAL: RUN CASING TO 9000' BY 1800 HRS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/22/2014
Report No: 28

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	27.50
Today's MD:	16,891 ft	Progress:		Ground Elev:	3,079.10 ft	Daily Cost:	\$70,979
Prev MD:	16,891 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$3,184,840
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:

24-Hr Summary: RIG UP CASING CREW AND RUN 5 1/2" 20# L-80 LTC CASING FROM 0' TO 12,407'

24-Hr Forecast: (RR 11/24/2014 ROL 11/25/2014) CONT RUNNING CASING TO BOTTOM, CIRCULATE, CEMENT, SET SLIPS, LDDP

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS		Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	/	Pump Rate:	241.5	Conn:			0
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:		Pump Press:	235	Trip:			0
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:			0
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:							

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	AJ DAVEY	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Supervisor 2:	JEFF ROZELLE	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Engineer:	KEVIN THREADGILL	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Geologist:	SUMIYAH AHMED	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Oxy Personnel:	3	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Contractor Personnel	21	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64
Total on Site:	24									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
									--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)				LAST OR CURRENT BHA				
Engineer:	Nels Hansen	MBT:						
Sample From:	In (Suction Pit)	pH:						
Mud Type:	Diesel-Based	Pm / Pom:	2.70					
Time / MD:	17:00 / 16,891.0	Pf / Mf:	/					
Density @ Temp:	9.30 / 50	Chlorides:						
Rheology Temp:	150	Ca++ / K+:	/					
Viscosity:	65.00	CaCl2:	22.38					
PV / YP:	11 / 13	Cl- in water phase:	35,000.00					
Gels 10s/10m/30m:	8 / 11 / 12	Lime:	3.51					
API WL:	0.00	ES:	603.00					
HTHP WL:	19.60	ECD:	0.00					
Cake API / HTHP:	.0 / 3.0	n / K:	0.00 / 0.00					
Solids / Sol Corr:	9.00 / 7.66	Carbonate:	0 ppm					
Oil / Water:	72.0 / 19.0	Bicarbonate:						
Oil / Water % for OWR:	79.00 / 21.00	Form Loss / Cum Loss	0.0 / 550.0					
Sand:	0.10	Fluid Disch:	/					
Water Added:		Daily Mud Cost:	\$649					
Oil Added:	0.0 bbl	Cum Mud Cost:	\$74,094					
LGS:	3.50 / 31.50							
VG Meter:	7@3 / 8@6 / 14@100 / 19@200 / 24@300 / 35@600							

Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00
Megadril System	1.00	bbl	200.00
Oil Dry	50.00	lb	10.00

Component	OD	ID	Jts	Length

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/22/2014
 Report No: 28

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	0:30	0.50	31PREV	TRIP	PULD	P	CLEAN AND CLEAR RIG FLOOR FROM TRIP AND SLIP HAZARDS. SEND DOWN UN NECESSARY HANDLING TOOLS AND SUBS.
0:30	1:00	0.50	31PRRC	SAFE	PJSM	P	HOLD RIG UP MEETING WITH B&L CASING CREW
1:00	3:00	2.00	31PRRC	CSG	RIGUP	P	RIG UP B&L CRT TOOL, TORQUE TURN, CASING RUNNING EQUIPMENT AND HOLD CASING RUNNING MEETING WITH B&L, OXY, H&P, PATRIOT THREAD REP, & TOE INITIATOR REP.
3:00	6:00	3.00	31PRRC	CSG	RUNCSG	P	MAKE UP AND RUN 5-1/2" 20# L-80 LTC CASING AS FOLLOWS: WEATHERFORD 5-1/2" LTC TYPE E303 FLOAT SHOE SET @16,891' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,889' WEATHERFORD 5-1/2" LTC TYPE 402 SS3 FLOAT SET @ 16,806' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,805' TEAM OIL TOOLS LATCH COLLAR SET @ 16,762' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,761' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,683' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,679' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,640' 189- JOINTS 5-1/2" 20# L-80 LTC CASING SET @ 16,636' 1- MARKER JOINT 5 1/2" 20# L-80 LTC SET @ 8,823' 211- 5 1/2" 20# L-80 LTC SET @ 8,807' RUN 5 1/2" 20# L-80 LTC CASING FROM 0' TO 1,800'. CHECK FLOATS (GOOD) RUN 5 1/2" X 7 3/8" TOPCO STRAIGHT BLADE SOLID BODY CENTRALIZERS 1-PER JOINT TO 8,850. RUN 8 1/2" BOW SPRING CENTRALIZERS 1 EVRY 4 JOINTS TO 6,500' AND 1 50' BELOW SURFACE.
6:00	11:00	5.00	31PRRC	CSG	RUNCSG	P	MAKE UP AND RUN 5-1/2" 20# L-80 LTC CASING AS FOLLOWS: WEATHERFORD 5-1/2" LTC TYPE E303 FLOAT SHOE SET @16,891' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,889' WEATHERFORD 5-1/2" LTC TYPE 402 SS3 FLOAT SET @ 16,806' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,805' TEAM OIL TOOLS LATCH COLLAR SET @ 16,762' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,761' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,683' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,679' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,640' 189- JOINTS 5-1/2" 20# L-80 LTC CASING SET @ 16,636' 1- MARKER JOINT 5 1/2" 20# L-80 LTC SET @ 8,823' 211- 5 1/2" 20# L-80 LTC SET @ 8,807' RUN 5 1/2" 20# L-80 LTC CASING FROM 1,800' TO 5,000'. RUN 5 1/2" X 7 3/8" TOPCO STRAIGHT BLADE SOLID BODY CENTRALIZERS 1-PER JOINT TO 8,850. RUN 8 1/2" BOW SPRING CENTRALIZERS 1 EVRY 4 JOINTS TO 6,500' AND 1 50' BELOW SURFACE.
11:00	12:00	1.00	31PRRC	CIRC	CNDHOL	P	FILL UP CASING AND CIRCULATED BOTTOMS UP @ 165 GPM'S WITH 150 PSI., WITH FULL RETURNS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/22/2014
 Report No: 28

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details	
12:00	17:00	5.00	31PRRC	CSG	RUNCSG	P	MAKE UP AND RUN 5-1/2" 20# L-80 LTC CASING AS FOLLOWS: WEATHERFORD 5-1/2" LTC TYPE E303 FLOAT SHOE SET @16,891' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,889' WEATHERFORD 5-1/2" LTC TYPE 402 SS3 FLOAT SET @ 16,806' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,805' TEAM OIL TOOLS LATCH COLLAR SET @ 16,762' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,761' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,683' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,679' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,640' 189- JOINTS 5-1/2" 20# L-80 LTC CASING SET @ 16,636' 1- MARKER JOINT 5 1/2" 20# L-80 LTC SET @ 8,823' 211- 5 1/2" 20# L-80 LTC SET @ 8,807' RUN 5 1/2" 20# L-80 LTC CASING FROM 5,000' TO 8,636'. RUN 5 1/2" X 7 3/8" TOPCO STRAIGHT BLADE SOLID BODY CENTRALIZERS 1-PER JOINT TO 8,850. RUN 8 1/2" BOW SPRING CENTRALIZERS 1 EVRY 4 JOINTS TO 6,500' AND 1 50' BELOW SURFACE. HOLE IS GIVING BACK PROPER DISPLACEMENT.	
17:00	18:30	1.50	31PRRC	CIRC	CNDHOL	P	CIRCULATE BOTTOMS UP @ 8,636', WITH 207 GPM'S AND 260 PSI ON PUMP PRESSURE WITH FULL RETURNS. MUD IN-9.2 PPG WITH 55 VIS MUD OUT-9.3 PPG WITH 58 VIS	
18:30	0:00	5.50	31PRRC			P	MAKE UP AND RUN 5-1/2" 20# L-80 LTC CASING AS FOLLOWS: WEATHERFORD 5-1/2" LTC TYPE E303 FLOAT SHOE SET @16,891' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,889' WEATHERFORD 5-1/2" LTC TYPE 402 SS3 FLOAT SET @ 16,806' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,805' TEAM OIL TOOLS LATCH COLLAR SET @ 16,762' 2 JOINTS- 5-1/2" 20# L-80 LTC CASING SET @ 16,761' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,683' 1 JOINT- 5-1/2" 20# L-80 LTC CASING SET @ 16,679' 1 PEAK COMPLETIONS TOE INITIATOR SET @ 16,640' 189- JOINTS 5-1/2" 20# L-80 LTC CASING SET @ 16,636' 1- MARKER JOINT 5 1/2" 20# L-80 LTC SET @ 8,823' 211- 5 1/2" 20# L-80 LTC SET @ 8,807' RUN 5 1/2" 20# L-80 LTC CASING FROM 8,636' TO 12,407'. RUN 5 1/2" X 7 3/8" TOPCO STRAIGHT BLADE SOLID BODY CENTRALIZERS 1-PER JOINT TO 8,850. RUN 8 1/2" BOW SPRING CENTRALIZERS 1 EVRY 4 JOINTS TO 6,500' AND 1 50' BELOW SURFACE. HOLE IS GIVING BACK PROPER DISPLACEMENT.	
Total Time		24.00						

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/22/2014
Report No: 28

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRRC	CSG	RUNCSG	P	CONTINUE RUNNING 5½" 20# L-80 LTC CASING FROM 12,407' TO 15,130'. TRIP IN HOLE AS PER SURGE MODEL HOLE GIVING BACK AVG OF 3 BBL'S UNDER PROPER DISPLACEMENT
4:00	6:00	2.00	31PRRC	CSG	RUNCSG	P	CONTINUE RUNNING 5½" 20# L-80 LTC CASING FROM 15,130' TO 16,850'. WASH DOWN LAST JOINT. TRIP IN HOLE AS PER SURGE MODEL HOLE GIVING BACK AVG OF 3 BBL'S UNDER PROPER DISPLACEMENT PRE TOUR SAFETY MEETING: WORKING WITH THIRD PARTY

Total Time 6.00

Safety Incident? N	Days since Last RI: 75.00	Weather Comments:
Environ Incident? N	Days since Last LTA: 75.00	
Incident Comments: No incidents reported last 24 hours.		

Other Remarks:

Driving Directions for St. Andrews Unit 320LH
 From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 10
 SAFE ACTS: 5
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 4
 LO/TO'S: 2
 PERMIT'S TO WORK: 2
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109
 NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109
 NOTIFIED TRRC: SARAH ON 11-21-2014 @ 14:53 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE GRAB TONGS IN A D AREA, STOPPED JOB EXPLAINED DANGERS HE COMPLIED AND JOB COMNTINUED INCIDENT FREE.
 24 HOUR GOAL: CEMENTED BY 1200 HRS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/23/2014
Report No: 29

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	4:00	4.00	31PRRC	CSG	RUNCSG	P	CONTINUE RUNNING 5½" 20# L-80 LTC CASING FROM 12,407' TO 15,130'. TRIP IN HOLE AS PER SURGE MODEL HOLE GIVING BACK AVG OF 3 BBL'S UNDER PROPER DISPLACEMENT
4:00	6:00	2.00	31PRRC	CSG	RUNCSG	P	CONTINUE RUNNING 5½" 20# L-80 LTC CASING FROM 15,130' TO 16,850'. WASH DOWN LAST JOINT. TRIP IN HOLE AS PER SURGE MODEL HOLE GIVING BACK AVG OF 3 BBL'S UNDER PROPER DISPLACEMENT PRE TOUR SAFETY MEETING: WORKING WITH THIRD PARTY
6:00	7:00	1.00	31PRRC	CSG	RUNCSG	P	PICK UP LAST JOINT AND WASH FROM 16,850' TO 16,891' WITH 338 GPM'S AND 950 PSI.
7:00	9:30	2.50	31PRRC	CIRC	CNDHOL	P	CIRCULATE BOTTOM UP @ 16,891' WITH 338 GPM'S WITH 950 PSI. RIG DOWN CASING CREW WHILE CIRCULATING AND RIG UP HALLIBURTON'S LINES AND GET EQUIPMENT ON FLOOR.
9:30	10:00	0.50	31PRRC	CMT	RIGUP	P	PJSM WITH HALLIBURTON, H&P EMPLOYEE'S, TOOLPUSHER AND DSM AND RIG UP HALLIBURTON.
10:00	14:30	4.50	31PRRC	CMT	PRIM	P	CEMENT 5½" 20# L-80 LTC CASING AS FOLLOWS: TEST LINES TO 7,000 PSI. PUMP 20 BBL TUNED SPACER, 9.5 PPG., 26.258 YIELD, MIX FLUID GAL. 174.01, .25 GAL/BBL OF D-AIR 3000L, .80 GAL/BBL SEM-7, 5 GAL PAIL, .40 GAL/BBL MUSOL (R) A, .50 GAL/BBL DUAL SPACER PUMP 318 BBL'S OF TERGO VIS. (170 STKS), 9.0 PPG., YIELD-10.505, TOTAL MIX FLUID GAL.-74.75, .50 % SA-1015, .75 % D-AIR 5000, PUMP 58 BBL'S OF LEAD CEMENT, (110 SACKS), TUNED LIGHT 11, 10.85 PPG., YIELD-2.743, TOTAL MIX RATIO-15.07, .50% HR-601 PUMP 313 BBL'S OF TAIL CEMENT, (670 SACKS), 15.0 PPG, YIELD- 2.743, MIX RATIO-15.07, .70 % HALAD(R)-344, .25 LBM D-AIR 5000, 10 LBM SILICALITE 50/50 POZMIX, .90 % HR-601 PUMP 313 BBL'S OF DISPLACEMENT 9.6 PPG BRINE. BUMP PLUG 5 BBL'S EARLY, WAS PUMPING 832 PSI, PRESSURED UP 1,575 PSI HELD FOR 5 MINUTES, FLOATS HELD, BLEED BACK 1.5 BBL'S. FULL RETURNS THE HOLE CEMENT JOB.
14:30	15:00	0.50	31PRRC	CMT	RIGUP	P	RIG DOWN HALLIBURTON CEMENTERS AND PREP FOR NIPPLE DOWN.
15:00	19:00	4.00	31PRRC	BOP	RDBOP	P	REMOVE KATCH KAN POLUTION PAN, PULL MOUSEHOLE AND LAY DOWN, REMOVE TURN BUCKLES REMOVE DRESSER SLEEVE FROM FLOWLINE AND RUN BOP HANDLER IN TO PICK UP BOP'S AND PICK UP SAME CLEANING PITS WHILE NIPPLING DOWN.
19:00	21:00	2.00	31PRRC	WLHD	RWH	P	LIFT STACK, SET SLIPS WITH CAMERON TECHNICIAN WITH FULL STRING WEIGHT OF 120,000 LBS. MAKE ROUGH CUT AND LAY OUT CUT CASING B-SECTION OF WELLHEAD OPEN DURING OPS.
21:00	22:00	1.00	31PRRC	BOP	RDBOP	P	SET STACK BACK DOWN ON WELL HEAD AND FLUSH THROUGH BOPE TO CLEAN FREE OF OIL BASE MUD
22:00	23:00	1.00	31PRRC	BOP	RDBOP	P	BREAK DSA AND SPOOL REMOVE SAME, REMOVE BOP AND SET ON TRANSPORT SKID.
23:00	0:00	1.00	31PRRC	WLHD	RWH	P	MAKE FINAL CUT AND DRESS CASING AND INSTALL WELLHEAD.

Total Time 24.00

11/24/2014 7:23:42AM

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
 Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/23/2014
 Report No: 29

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:30	1.50	31PRRC	WLHD	RWH	P	TORQUE WELLHEAD WITH PRECISION TORQUE CREW. TEST WELLHEAD TO 5000 PSI (GOOD) INSTALL CAP AND TIGHTEN SAME
1:30	2:00	0.50	31PRRC	SRFEQ	RIGUP	P	INSTALL MOUSEHOLE
2:00	2:30	0.50	31PRRC	CSG	RIGUP	P	RIG DOWN CASING BALE EXTENSIONS AND CASING ELEVATORS. RIG UP DRILLPIPE ELEVATORS
2:00	6:00	4.00	31PRRC	TRIP	PULD	P	LAY DOWN 1,000' OF DRILL PIPE OUT OF DERRICK FROM MOUSEHOLE. 7,300' OF DP LEFT IN DERRICK
Total Time		6.50					

Safety Incident? N Days since Last RI: 76.00

Environ Incident? N Days since Last LTA: 76.00

Incident Comments:

No incidents reported last 24 hours.

Weather Comments:

Other Remarks:

Driving Directions for St. Andrews Unit 320LH

From the Intersection of Highway 385 and Highway 176 in Andrews, Texas, drive 2.1 miles East on Highway 176 to intersection of Highway 176 and Highway 115. Turn left (Northeast) on Highway 115. From intersection of Highway 115 and Highway 176, drive 6.1 miles Northeast on Highway 115. Turn left (North) onto lease road. Drive 0.2 miles and turn left (West) on lease road. Drive less than 0.1 miles and arrive at University St. Andrews Unit #320LH.

LAT: 32° 22' 50.24" N LONG: 102° 25' 51.68" ELEVATION 3,103.1' LIFE FLIGHT COORDINATES: X: 478,268.39' Y: 295,460.92'

OXY DSM TRAILER: 432-253-7382

UNSAFE ACTS: 10

SAFE ACTS: 5

UNSAFE EQUIPMENT:

SWA'S:0

NEAR MISSES: 0

JSA'S: 12

SAFETY MEETINGS: 4

LO/TO'S: 2

PERMIT'S TO WORK: 3

POWER LINE CHECKLIST: 10/21/2014

PRE SPUD/RIG INSPECTION:

HAZARD ID'S: 0

EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109

NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109

NOTIFIED TRRC: SARAH ON 11-21-2014 @ 14:53 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE PSI WASHING BOOTS, STOPPED JOB EXPLAINED POLICY, HE COMPLIED AND JOB CONTINUED INCIDENT FREE.

24 HOUR GOAL: PIPE LAYED DOWN BY 1200 HRS.

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
USA

Date: 11/24/2014
Report No: 30

Wellbore / Top MD:	00 @ 0 ft	Rig:	H&P 629	Ref Datum:	Original KB @3,103.10ft	DFS:	29.50
Today's MD:	16,891 ft	Progress:		Ground Elev:	3,079.10 ft	Daily Cost:	\$342,070
Prev MD:	16,891 ft	Rot Hrs Today:	0.00 hr	AFE MD/Days:	17,037.0 / 33.6 days	Cum Cost:	\$3,745,803
PBMD:		Avg ROP Today:	0.0 ft/hr	AFE Number:	1189081#0102	AFE Cost:	\$4,401,747

Current Formation SPRABERRY@8,535.0 Lithology:

Current Ops:
24-Hr Summary: FINSH INSTALLING WELLHEAD AND TEST, L/D DRILL PIPE, RELEASE RIG @ 18:00 ON 11-24-2014, RIG DOWN.
24-Hr Forecast: (RR 11/24/2014 ROL 11/25/2014)RIG DOWN RIG AND PREP RIG TO MOVE TO SCR#2353MH.

CASING/WELL CONTROL		HOOKLOAD & TORQUE		HYDRAULICS		MUD GAS	Avg	Max
Last Casing:	9.625in @ 8,687ft	Str Wt Up/Dn:	/	Pump Rate:	0.0	Conn:		
Next Casing:	5.500in @ 16,900ft	Str Wt Rot:		Pump Press:	0	Trip:		
Last BOP Press Test:	10/28/2014	Torq Off Btm:				Backgr:		
Form Test/EMW:	FIT / 10.02 ppg	Torq On Btm:						

PERSONNEL		SURVEY DATA (LAST 6)								
		MD	Incl	Azi	TVD	N-S	E-W	VS	DLS	Build
Supervisor 1:	AJ DAVEY	16,837.0	91.30	346.10	9,526.24	7,533.6	-1,687.4	7,533.6	0.96	0.58
Supervisor 2:	JEFF ROZELLE	16,785.0	91.00	345.70	9,527.28	7,483.2	-1,674.7	7,483.2	0.63	0.63
Engineer:	KEVIN THREADGILL	16,690.0	90.40	345.70	9,528.44	7,391.2	-1,651.3	7,391.2	0.44	-0.11
Geologist:	SUMIYAH AHMED	16,596.0	90.50	345.30	9,529.18	7,300.2	-1,627.7	7,300.2	2.73	-2.55
Oxy Personnel:	3	16,502.0	92.90	344.40	9,531.97	7,209.5	-1,603.2	7,209.5	0.64	-0.11
Contractor Personnel	18	16,407.0	93.00	345.00	9,536.86	7,118.0	-1,578.1	7,118.0	0.67	0.64
Total on Site:	21									

BIT RECORD										
Bit No	Size	Manufacturer	Model	Serial No	IADC Code	Nozzles	MD In	MD Out	I-O-D-L	B-G-O-R
									--	--

BIT OPERATING PARAMETERS TODAY												
Bit No	Rot Hrs	Cum Rot Hrs	Prog	Cum Prog	ROP	Cum ROP	WOB min/max	RPM min/max	TFA	P Drop Bit	Noz Vel	HHPSI

MUD DATA - M-I LLC (Schlumberger)	
Engineer: Nels Hansen	MBT:
Sample From: Tank	pH:
Mud Type: Diesel-Based	Pm / Pom: 2.80
Time / MD: 16:00 / 16,891.0	Pf / Mf: /
Density @ Temp: 9.50 / 0	Chlorides:
Rheology Temp:	Ca++ / K+: /
Viscosity: 60.00	CaCl2: 21.01
PV / YP: 10 / 10	Cl- in water phase: 34,000.00
Gels 10s/10m/30m: 7 / 11 / 11	Lime: 3.64
API WL: 0.00	ES: 658.00
HTHP WL: 18.40	ECD: 0.00
Cake API / HTHP: .0 / 3.0	n / K: 0.00 / 0.00
Solids / Sol Corr: 9.00 / 7.71	Carbonate: 0 ppm
Oil / Water: 71.0 / 20.0	Bicarbonate:
Oil / Water % for OWR: 78.00 / 22.00	Form Loss / Cum Loss 0.0 / 550.0
Sand: 0.10	Fluid Disch: /
Water Added:	Daily Mud Cost: \$124
Oil Added: 0.0 bbl	Cum Mud Cost: \$74,342
LGS: 2.40 / 21.60	

LAST OR CURRENT BHA				
Component	OD	ID	Jts	Length

VG Meter: 6@3 / 6@6 / 12@100 / 16@200 / 20@300 / 30@600
 Comments:

MUD PRODUCTS			
Product	Number of Units	Units	Qty Used
Blower Rental	1.00	each	1.00
Bulk Tank Rental	1.00	each	2.00

DAILY OPERATIONS PARTNER 30 HOUR REPORT

Event: DEV DRILLING
Prim. Reason: ORIG DRILL HORIZ

ST ANDREWS UNIT 320LH
 USA

Date: 11/24/2014
Report No: 30

OPERATIONS

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
0:00	1:30	1.50	31PRRC	WLHD	RWH	P	TORQUE WELLHEAD WITH PRECISION TORQUE CREW. TEST WELLHEAD TO 5000 PSI (GOOD) INSTALL CAP AND TIGHTEN SAME
1:30	2:00	0.50	31PRRC	SRFEQ	RIGUP	P	INSTALL MOUSEHOLE
2:00	2:30	0.50	31PRRC	CSG	RIGUP	P	RIG DOWN CASING BALE EXTENSIONS AND CASING ELEVATORS. RIG UP DRILLPIPE ELEVATORS
2:00	6:00	4.00	31PRRC	TRIP	PULD	P	LAY DOWN 1,000' OF DRILL PIPE OUT OF DERRICK FROM MOUSEHOLE. 7,300' OF DP LEFT IN DERRICK
6:00	10:00	4.00	31PRRC	TRIP	PULD	P	LAY DOWN DRILL PIPE OUT OF DERRICK IN MOUSEHOLE, AVG. 750' A HOUR. STILL CLEANING PITS AND BACKYARD.
10:00	18:00	8.00	31PRRC	TRIP	PULD	P	LAY DOWN DRILL PIPE OUT OF DERRICK IN MOUSEHOLE, AVG. 750' A HOUR. STILL CLEANING PITS AND BACKYARD. RIG DOWN BACK AS NEEDED. PITS ARE ALL THE WAY CLEAN @ 17:00 HRS. GETTING HEAVY WEIGHT DRILL PIPE INSPECTED. RELEASED RIG @ 18:00 HRS ON 11-24-2014
Total Time		18.50					

OPERATIONS - NEXT DAY

From	To	Hrs	Op Phase	Op Code	Op Sub	Op Type	Operation Details
Total Time		0.00					

Safety Incident?	N	Days since Last RI:	77.00	Weather Comments:
Environ Incident?	N	Days since Last LTA	77.00	
Incident Comments: No incidents reported last 24 hours.				

Other Remarks:

Driving Directions for St. Andrews Unit 320LH
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 SAFE ACTS: 5
 UNSAFE EQUIPMENT:
 SWA'S:0
 NEAR MISSES: 0

JSA'S: 12
 SAFETY MEETINGS: 4
 LO/TO'S: 2
 PERMIT'S TO WORK: 3
 POWER LINE CHECKLIST: 10/21/2014
 PRE SPUD/RIG INSPECTION:
 HAZARD ID'S: 0
 EP2 OBSERVATIONS: 0

NOTIFIED TRRC: KAYLEIGH ON 10/26/2014 @ 16:15 JOB# 18109
 NOTIFIED TRRC: KATIE ON 11/03/2014 @ 16:00 JOB# 18109
 NOTIFIED TRRC: SARAH ON 11-21-2014 @ 14:53 JOB# 18109

BEST STOP CARD: NOTICED EMPLOYEE WORKING UNDER A SUSPENDED LOAD, STOPPED JOB EXPLAINED DANGERS AND JOB CONTINUED INCIDENT FREE.
 24 HOUR GOAL: 90% MOVED AND 50% RIGGED UP BY 1800 HRS