

5/26/2021

XYZ Oil Co.  
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XX000  
OCS-G-XXXX



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SAMPLE TOTAL DEPTH: **xxxxx'**LATEST INTERVAL EXAMINED: **xxxxx'-xxxxx'** (Forams and Nannos)

### Preliminary Biostratigraphic Summary

Latest information in blue

Ages below are based on the Gradstein et al., (2012) calibrations, and may not be in exact agreement with the ages on the PDI strat charts, which incorporate Gradstein, (2004) calibrations

DEPTH	EPOCH	STAGE	Type	BIOSTRAT HORIZON	COMMENT	AGE	F ZONE	N ZONE
xxxxx	Early Paleocene-Middle Paleocene	Selandian-Danian	N	First Nanno sample examined.	Rubble zone below BOS. Mixed Middle/Early Paleocene	59.72	-	NP5
xxxxx	-	-	F	First foram sample examined	Rubble zone below BOS. Mixed Eocene persistent to xxxxx'	-	-	-
xxxxx	Late Miocene-Early Paleocene	Tortonian - Danian	N	Mixed Late Miocene - Early Paleocene	Rubble zone. Mixed Middle/Early Paleocene	-	-	-
xxxxx	Late Miocene	Tortonian	N	Mixed Late Miocene	Displaced section including Discoaster bollii and Minylithia convalis	-	-	-
xxxxx	Late Miocene	Messinian	N	Mixed Late Miocene	Displaced section including Discoaster A, Discoaster B, Discoaster C	-	-	-
xxxxx	Late Miocene	Messinian	F	Mixed Late Miocene	Displaced section including Sphaeroidinellopsis disjuncta, Sphaeroidinellopsis subdehiscens and Globoquadrina dehiscens.	-	-	-
xxxxx	Late Miocene	Messinian	N	Mixed Late Miocene	Displaced section including Reticulofenestra rotairia, Discoaster B, and Discoaster C	-	-	-
-	-	-	-	<b>LATE MIOCENE</b>		-	-	-
xxxxx	Late Miocene	Messinian	N	Possible Normal Section	Below Discoaster A	>5.59	-	NN11
xxxxx	Late Miocene	Messinian	F	Possible Normal Section	Below Globorotalia menardi R/L coiling change	>5.50	-	N19
xxxxx	Late Miocene	Messinian	N	<b>DISCOASTER B</b>	<b>very rare, becomes persistent at xxxxx'</b>	<b>5.72</b>	-	<b>NN11</b>
xxxxx	Late Miocene	Messinian	N	<b>RETICULOFENESTRA ROTAIRIA</b>	<b>rare, persistent</b>	<b>5.89</b>		<b>NN11</b>
xxxxx	Late Miocene	Messinian	F	SECONDARY MARKER (SPHAEROIDINELLOPSIS SUBDEHISCENS)	very rare, persistent	6.00	N17B	-
xxxxx	Late Miocene	Messinian	N	<b>DISCOASTER C</b>	<b>very rare, persistent</b>	<b>6.33</b>	-	<b>NN11</b>

DEPTH	EPOCH	STAGE	Type	BIOSTRAT HORIZON	COMMENT	AGE	F ZONE	N ZONE
xxxxx	Late Miocene	Messinian	F	SECONDARY MARKER (SPHAERODINELLOPSIS DISJUNCTA)	single, does not persist	6.58	N17B	-
xxxxx	Late Miocene	Tortonian	N	DISCOASTER LOEBLICHII	single specimen, persistent	7.53	-	NN11
xxxxx	Late Miocene	Tortonian	N	SECONDARY MARKER (MINYLITHA CONVALIS)	Rare, persistent with highest Catinaster mexicanus (several)	7.94	-	NN11
xxxxx	Late Miocene	Tortonian	N	DISCOASTER PREPENTARADIATUS LAD	single specimen, sporadic	8.04	-	NN11
xxxxx	Late Miocene	Tortonian	F	SECONDARY MARKER (SPHAERODINELLOPSIS KOCHI)	single specimen, sporadic occurrences below. Highest observed.	7.63	N17	-
xxxxx	Late Miocene	Tortonian	N	SECONDARY MARKER (RETICULOFENESTRA PSEUDOUNBILICA/GELIDA ACME)		8.04	-	NN11
xxxxx	Late Miocene	Tortonian	F	GLOBOROTALIA LENGUAENSIS	several, persistent	8.97	N16	-
xxxxx	Late Miocene	Tortonian	N	DISCOASTER PREPENTARADIATUS PERSISTENT	several	8.97	-	NN10
xxxxx	Late Miocene	Tortonian	N	DISCOASTER BOLLII	rare, persistent	9.22	-	NN10
xxxxx	Late Miocene	Tortonian	N	DISCOASTER HAMATUS	very rare, persistent	9.53	-	NN10
xxxxx	Late Miocene	Tortonian	N	CATINASTER COALITUS	several, persistent	9.69	-	NN09
xxxxx	Late Miocene	Tortonian	F	BOLIVINA L	single specimen, does not persist	9.56	N16	-
xxxxx	Late Miocene	Tortonian	F	GLOBOROTALIA MAYERI	single specimen, reoccurrence at xxxxx'	10.46	N14	-
xxxxx	Late Miocene	Tortonian	F	UVIGERINA 3	single specimen, reoccurrence at xxxxx' and xxxxx'	10.97	N14	-
xxxxx	Late Miocene	Tortonian	F	GLOBOROTALIA FOHSI ROBUSTA	single specimen, reoccurrence at xxxxx'	11.57	N14	-
xxxxx	Late Miocene	Tortonian	N	DISCOASTER KUGLERI	very rare, persistent	11.58	-	NN07
-	-	-	-	<b>MIDDLE MIOCENE</b>		-	-	-
xxxxx	Middle Miocene	Serravallian	N	DISCOASTER SANMIGUELENSIS	very rare, persistent to xxxxx', reoccurs at xxxxx	11.79	-	NN07
xxxxx	Middle Miocene	Serravallian	F	GLOBOROTALIA FOHSI FOHSI	very rare, persistent; Highest observed.	11.79	N12	-
xxxxx	Middle Miocene	Serravallian	N	SECONDARY MARKER (CATINASTER SP. A)	rare, persistent	12.18	-	NN06
xxxxx	Middle Miocene	Serravallian	F	GLOBOROTALIA FOHSI PERIPHEROACUTA	single specimen, persistent	13.10	N12	-
xxxxx	Middle Miocene	Serravallian	F	GLOBOROTALIA FOHSI PERIPHERORONDA	single specimen, persists to xxxxx.	13.80	N11	-
xxxxx	Middle Miocene	Serravallian	N	CYCLICARGOLITHUS FLORIDANUS PERSISTENT	very rare, persistent, sporadic occurrences as high as xxxxx'	>13.36	-	NN06

DEPTH	EPOCH	STAGE	Type	BIOSTRAT HORIZON	COMMENT	AGE	F ZONE	N ZONE
xxxxx	Middle Miocene	Serravallian	N	SPHENOLITHUS HETEROMORPHUS	single-specimen. Persist rare to very rare at xxxxx' and deeper. Sporadic occurrence at xxxxx' is probably reworked	>13.53	-	NN05
xxxxx	Middle Miocene	Langhian	N	SPHENOLITHUS HETEROMOPRHUS ACME	frequent; reoccurs numerous at xxxxx' and xxxxx'.	14.78	-	NN05
xxxxx	Middle Miocene	Langhian	N	DISCOASTER PETALIFORMIS PERSISTENT	very rare, persistent.	>14.78	-	NN05
xxxxx	Middle Miocene	Langhian	F	PRAEORBULINA SICANA	single specimen, persistent; below true stratigraphic top	>14.76	N09	-
xxxxx	Middle Miocene	Langhian	F	PRAEORBULINA GLOMEROSA	single specimen, does not persist; below true stratigraphic top. Single reoccurrence at xxxxx'.	>14.78	N09	-
xxxxx	Middle Miocene	Langhian	F	GLOBOQUADRINA DEHISCENS ACME	moderately well-developed	14.87	N09	-
xxxxx	Middle Miocene	Langhian	N	HELICOSPHAERA SCISSURA	single specimen. Also single specimen at xxxxx'	14.80	-	NN05
xxxxx	Middle Miocene	Langhian	F	GLOBIGERINATELLA INSUETA	Single specimen, single specimen reoccurrences at xxxxx' & xxxxx'. Possibly reworked.	14.91	N09	-
xxxxx	Middle Miocene	Langhian	N	HELICOSPHAERA AMPLIAPERTA	Single specimen, does not persist; Possibly reworked.	14.91	-	NN04
xxxxx	-	-	-		Foram & Nanno sample total depth	-	-	-

## COMMENTS

DATE/TIME

Nannopaleontologist name

Nannofossil samples have been examined over the interval of xxxxx'-xxxxx' and were of good quality and preservation. A single specimen of **Helicosphaera ampliaperta (14.91 Ma)** was observed at xxxxx', but does not persist. This specimen of *Helicosphaera ampliaperta* was observed high with regards to offset well. **Helicosphaera ampliaperta (14.91 Ma)** is now the oldest age diagnostic horizon to current sample TD of xxxxx'.

DATE/TIME

Micropaleontologist name

Foram samples have been examined over the interval xxxxx'-xxxxx' and were of good quality and preservation. **Globigerinatella insueta (14.91 Ma)** was observed at xxxxx' with single specimen reoccurrences at xxxxx' and xxxxx'. These specimens of *Globigerinatella insueta* were observed high with regards to the offset well and could represent a zone of reworking. **Globigerinatella insueta (14.91 Ma)**, last observed at xxxxx', is the oldest age diagnostic horizon to current sample depth of xxxxx'.

DATE/TIME

Micropaleontologist name

Foram samples have been examined over the interval xxxxx'-xxxxx' and were of good quality and preservation. The **Globoquadrina dehiscens Acme (14.87 Ma)** remains the oldest age horizon to TD. Ecologic Zone 5, middle bathyal.

DEPTH	EPOCH	STAGE	Type	BIOSTRAT HORIZON	COMMENT	AGE	F ZONE	N ZONE
DATE/TIME Nannopaleontologist name					Nanno samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. Nannofossil abundance was frequent to common over this interval with moderate to high diversity . <i>Helicosphaera scissura</i> (14.80Ma) was observed at xxxxx'. This occurrence may compare with the <i>Helicosphaera scissura</i> observed at xxxxx' in the offset well and xxxxx' in the other offset well . <i>Helicosphaera ampliapertura</i> (14.91Ma) was not observed to TD of samples examined.			
DATE/TIME Micropaleontologist name					Foram samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. <b>Globoquadrina dehiscens Acme (14.87 Ma)</b> was observed at xxxxx'. This acme is considered a moderate development and did not persist in significant numbers below this depth. At xxxxx', a significant faunal influx was noted with a reoccurrence of <i>G. dehscens</i> ; however, the abundance was not considered strong enough for an Acme. Ecologic Zone 5, middle bathyal.			
DATE/TIME Nannopaleontologist name					Nanno samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. Nannofossil abundance was frequent over this interval with moderate diversity . No older stratigraphic tops were observed in this interval. SPHENOLITHUS HETEROMOPRHUS ACME (14.78 Ma), first observed at xxxxx', remains the oldest nanno marker . <i>Helicosphaera ampliapertura</i> (14.91Ma) was not observed to TD of samples examined.			
DATE/TIME Micropaleontologist name					Foram samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. <b>Praeorbulina sicana (14.76 Ma or older)</b> single specimen, persistent was first observed at xxxxx'. <b>Praeorbulina glomerosa (14.78 Ma or older)</b> single specimen was first observed at xxxxx' and is the oldest age horizon noted to current TD of xxxxx'. Both markers are below true stratigraphic top. Ecologic Zone 5, middle bathyal.			
DATE/TIME Nannopaleontologist name					Nanno samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. Nannofossil abundance is relatively low over this interval, ranging from rare to abundant. No older nanno marker is observed in this interval. <b>SPHENOLITHUS HETEROMOPRHUS ACME (14.78 Ma)</b> , first observed at xxxxx', remains the oldest nanno marker to current TD of xxxxx'.			
DATE/TIME Micropaleontologist name					Foram samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. <b>Globorotalia fohsi peripheroronda (13.80 Ma)</b> was last observed at xxxxx' and is the oldest age horizon noted to current TD of xxxxx'.			
DATE/TIME Nannopaleontologist name					Nannofossil samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. <b>SPHENOLITHUS HETEROMOPRHUS ACME (14.78 Ma)</b> was observed at xxxxx', correlative to the same observation at xxxxx' in the offset well. Additional reoccurrences were observed in this well at xxxxx' and xxxxx' possibly correlating to xxxxx'' and xxxxx'' in the offset well. <b>Discoaster petaliformis persistent (14.78 Ma)</b> was observed at xxxxx''. <b>SPHENOLITHUS HETEROMOPRHUS ACME (14.78 Ma)</b> , observed at xxxxx'', is the oldest marker to the current TD of xxxxx''.			
DATE/TIME Micropaleontologist name					Foram samples have been examined for the interval of xxxxx'-xxxxx'' and were of good quality and preservation. The highest observed <b>Globorotalia fohsi fohsi (11.79 Ma)</b> was first observed at xxxxx'' and was persistent. <b>Globorotalia fohsi peripheroacuta (13.10 Ma)</b> was observed as a single specimen at xxxxx'' and was persistent. <b>Globorotalia fohsi peripheroronda (13.80 Ma)</b> was first observed at xxxxx'' and is the oldest age horizon noted to current TD of xxxxx'.			

DEPTH	EPOCH	STAGE	Type	BIOSTRAT HORIZON	COMMENT	AGE	F ZONE	N ZONE
DATE/TIME Nannopaleontologist name					Nannofossil samples have been examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. <b>Cyclicargolithus floridus Persistent (13.36Ma)</b> marker was observed at xxxxx' correlative to the same depth in the offset well. A single specimen of <b>Sphenolithus herteromorphus (13.53Ma)</b> was observed at xxxxx' and was not observed in deeper samples to current TD. This single occurrence may be reworked or represent a unconformable top. <b>Sphenolithus heteromorphus (13.53Ma)</b> was also noted very rare at this same depth xxxxx' in the offset well. However, S.heteromorphus persisted in every deeper sample of the offset well. Evaluation of deeper samples in the this well is necessary to confirm this top.			
DATE/TIME Micropaleontologist name					Nannofossil samples have been examined for the interval of xxxxx' - xxxxx' and were of good quality and preservation. Abundance throughout the interval ranged from rare to frequent, with abundance peaks at xxxxx' (abundant), xxxxx' (common, Discoaster kugleri biohorizon), and xxxxx' (frequent/common, Discoaster sanmiguelensis biohorizon). The majority of the biohorizons so far in this well appear in good correlation to the offset well, although biohorizons noted here are running approximately 200' high. The exception for this is D. sanmiguelensis, which is noted approximately 700' lower here. <b>Discoaster sanmiguelensis (11.79 MA)</b> , first observed at xxxxx', is the oldest age horizon noted to current sample TD of xxxxx'.			
DATE/TIME Nannopaleontologist name					Foram samples have been examined over the interval xxxxx' xxxxx' and were of good quality and preservation. A single, likely reworked <b>Globorotalia fohsi robusta (11.57 Ma)</b> was first oberseved at xxxxx' with a single reoccurrences at xxxxx' before becoming persistent at xxxxx'. <b>Globorotalia fohsi robusta</b> is the oldest age horizon noted to the current sample TD of xxxxx'.			
DATE/TIME Micropaleontologist name					Foram samples have been examined over the interval xxxxx'-xxxxx' and were of good quality and preservation. <b>Globorotalia linguaensis (8.97 Ma)</b> observed at xxxxx' is the oldest age horizon noted to current sample TD of xxxxx'.			
DATE/TIME Nannopaleontologist name					Foram samples were examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. Globorotalia linguaensis (8.97 Ma) was observed rare at xxxxx' and was persistent to xxxxx'. Globorotalia linguaensis (8.97 Ma), observed at xxxxx'', is the oldest age horizon noted in this interval. Higher section (xxxxx'-xxxxx') currently under examination.			
DATE/TIME Micropaleontologist name					Nanno samples were examined for the interval of xxxxx'-xxxxx' and were of good quality and preservation. DISCOASTER BOLLII (9.22 Ma) was observed in the first sample examined. It's stratigraphic top may be above the first sample examined. Examination of higher samples will provide verification. DISCOASTER HAMATUS (9.53 Ma) was observed at xxxxx', and CATINASTER COALITUS (9.69 Ma) was noted at xxxxx' and was the oldest nanno marker observed to the current TD of xxxxx'.			

End of Report